		Registration No. 333-165821
	UNITED STATES	
SECI	URITIES AND EXCHANGE COMMISS	SION
SECC		SION
	Washington, D.C. 20549	
	Amendment No. 2	
	to	
	Form S-1	
	REGISTRATION STATEMENT	
	UNDER	
	THE SECURITIES ACT OF 1933	
	AMERESCO, INC.	
	(Exact name of registrant as specified in its charter)	
Delaware	4931	04-3512838
(State or other jurisdiction of	(Primary Standard Industrial	(I.R.S. Employer
incorporation or organization)	Classification Code Number)	Identification No.)
	111 Speen Street, Suite 410	
	Framingham, Massachusetts 01701 (508) 661-2200	
(Address, including zij	o code, and telephone number, including area code, of registrant's princ	ripal executive offices)
	George P. Sakellaris President and Chief Executive Officer 111 Speen Street, Suite 410 Framingham, Massachusetts 01701 (508) 661-2200	
(Name, addres.	s, including zip code, and telephone number, including area code, of age	ent for service)
	Copies to:	
Mark G. Borden, Esq.		Thomas R. Burton, III, Esq.
Patrick J. Rondeau, Esq.		Sahir Surmeli, Esq.
Wilmer Cutler Pickering Hale and I	Dorr LLP Mintz, Lev	in, Cohn, Ferris, Glovsky and Popeo, P.C. One Financial Center
60 State Street Boston, Massachusetts 0210	Q.	Boston, Massachusetts 02111
(617) 526-6000	,	(617) 542-6000
Approximate date of commencement of propo	osed sale to the public: As soon as practicable after this Re	gistration Statement is declared effective.
If any of the securities being registered on this for the "Securities Act") please check the following box. □	orm are offered on a delayed or continuous basis pursuant to	Rule 415 under the Securities Act of 1933, as amended
If this Form is filed to register additional securities Securities Act registration statement number of the earlier of	ies for an offering pursuant to Rule $462(b)$ under the Securiti effective registration statement for the same offering. $\Box$	es Act, please check the following box and list the
If this Form is a post-effective amendment filed statement number of the earlier effective registration statem	pursuant to Rule 462(c) under the Securities Act, please cheatent for the same offering. $\Box$	ck the following box and list the Securities Act registration
If this Form is a post-effective amendment filed registration statement number of the earlier effective registration.	pursuant to Rule 462(d) under the Securities Act, please cheration statement for the same offering.	ck the following box and list the Securities Act

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one): Large accelerated filer □ Accelerated filer □ Non-accelerated filer ☑ Smaller reporting company  $\square$ 

(Do not check if a smaller reporting company)

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to Section 8(a), may determine.

## EXPLANATORY NOTE

This Amendment No. 2 to the Registrant's Registrant's Registrant's Registration Statement on Form S-1 (File No. 333-165821) is being filed solely for the purpose of filing exhibits, and no changes or additions are being made hereby to the prospectus which forms a part of the Registration Statement. Accordingly, the prospectus has been omitted from this filing.

#### Part II

#### Information Not Required in Prospectus

#### Item 13. Other Expenses of Issuance and Distribution

The following table indicates the expenses to be incurred in connection with the offering described in this Registration Statement, other than underwriting discounts and commissions, all of which will be paid by Ameresco. All amounts are estimated except the Securities and Exchange Commission registration fee and the FINRA filing fee.

	A	mount	_
Securities and Exchange Commission registration fee	\$	8,91	.3
Financial Industry Regulatory Authority fee		13,00	00
listing fee			*
Accountants' fees and expenses			*
Legal fees and expenses			a)c
Blue Sky fees and expenses			*
Transfer Agent's fees and expenses			a)c
Printing and engraving expenses			aje
Miscellaneous			*
Total Expenses	\$		*

<sup>\*</sup> To be filed by amendment.

#### Item 14. Indemnification of Directors and Officers

Section 102 of the General Corporation Law of the State of Delaware permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our restated certificate of incorporation that will become effective upon the closing of this offering provides that no director of Ameresco shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as director, notwithstanding any provision of law imposing such liability, except to the extent that the Delaware General Corporation Law prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our restated certificate of incorporation provides that we will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other

than an action by or in the right of Ameresco) by reason of the fact that he or she is or was, or has agreed to become, a director or officer of Ameresco, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an Indemnitee), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our restated certificate of incorporation provides that we will indemnify any Indemnitee who was or is a party to an action or suit by or in the right of Ameresco to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer of Ameresco, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee or, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of Ameresco, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances

We have entered into indemnification agreements with each of our directors and our executive officers. These indemnification agreements may require us, among other things, to indemnify our directors and executive officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of his service as one of our directors or executive officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement we enter into in connection with the sale of our Class A common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, us, our directors, our officers and persons who control us with the meaning of the Securities Act of 1933, as amended, against certain liabilities.

#### Item 15. Recent Sales of Unregistered Securities

Set forth below is information regarding securities sold by us within the past three years. Also included is the consideration received by us for such sales and information relating to the section of the Securities Act, or rule of the Securities and Exchange Commission, under which exemption from registration was claimed.

Between January 1, 2007 and December 31, 2007, we granted options to purchase an aggregate of 703,500 shares of our Class A common stock with exercise prices ranging from \$6.82 to \$8.44 per share, pursuant to our 2000 stock plan. Between January 1, 2007 and December 31, 2007, we issued an aggregate of 76,000 shares of our Class A common stock upon exercise of options for aggregate consideration of \$74,015.

Between January 1, 2008 and December 31, 2008, we granted options to purchase an aggregate of 151,500 shares of our Class A common stock, with exercise prices ranging from \$8.44 to \$12.11 per share, pursuant to our 2000 stock plan. Between January 1, 2008 and December 31, 2008, we issued an aggregate of 14,000 shares of our Class A common stock upon exercise of options for aggregate consideration of \$67,250.

Between January 1, 2009 and December 31, 2009, we granted options to purchase an aggregate of 431,000 shares of our Class A common stock, with exercise prices ranging from \$12.11 to \$22.00 per share, pursuant to our 2000 stock plan. Between January 1, 2009 and December 31, 2009, we issued an aggregate of 869,000 shares of our Class A common stock upon exercise of options for aggregate consideration of \$874,760.

Between January 1, 2010 and April 30, 2010, we have granted options to purchase an aggregate of 398,000 shares of our Class A common stock, each with an exercise price of \$26.09 per share, pursuant to our 2000 stock plan. Between January 1, 2010 and April 30, 2010, we issued 225,000 shares of our Class A Common stock upon exercise of options for aggregate consideration of \$330,000.

The options and shares of our common stock described in this Item 15 were issued pursuant to written compensatory plans or arrangements with our employees, directors and consultants in reliance upon the exemption from the registration requirements of the Securities Act provided by Rule 701 promulgated under the Securities Act or, in some cases, in reliance upon the exemption from the registration requirements of the Securities Act provided by Section 4(2) of the Securities Act and Regulation D promulgated thereunder as sales by an issuer not involving any public offering.

No underwriters were involved in the foregoing issuances of securities. All of the foregoing securities are deemed restricted securities for purposes of the Securities Act. All certificates representing the issued shares of common stock described in this Item 15 included appropriate legends setting forth that the securities had not been registered and the applicable restrictions on transfer.

#### Item 16. Exhibits

The exhibits to the registration statement are listed in the Exhibit Index to this registration statement and are incorporated by reference herein.

#### Item 17. Undertakings

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that, in the opinion of the Securities and Exchange Commission, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

- (1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in the form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of the registration statement as of the time it was declared effective.
- (2) For purposes of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement

relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

- (3) For the purpose of determining liability under the Securities Act to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- (4) For the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
  - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
  - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
  - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
    - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

# SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this Amendment No. 2 to Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Framingham, Commonwealth of Massachusetts, on the 14th day of May, 2010.

AMERESCO, INC.

By: /s/ George P. Sakellaris
George P. Sakellaris
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act, this Amendment No. 2 to Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature		Date
/s/ George P. Sakellaris George P. Sakellaris	Chairman of the Board of Directors, President and Chief Executive Officer (Principal Executive Officer)	May 14, 2010
/s/ Andrew B. Spence Andrew B. Spence	Chief Financial Officer (Principal Financial and Accounting Officer)	May 14, 2010
* David J. Anderson	Director	May 14, 2010
/s/ David J. Corrsin David J. Corrsin	Director	May 14, 2010
* William M. Bulger	Director	May 14, 2010
* Michael E. Jesanis	Director	May 14, 2010
* Guy W. Nichols	Director	May 14, 2010
* Joseph W. Sutton	Director	May 14, 2010
By: /s/ David J. Corrsin David J. Corrsin Attorney-in-Fact		

## EXHIBIT INDEX

Exhibit	Post Co.
Number	<u>Description</u>
1.1**	Form of Underwriting Agreement
3.1**	Form of Amended and Restated Certificate of Incorporation of the Registrant, to be filed and effective prior to the closing of the offering
3.2**	Form of Amended and Restated Certificate of Incorporation of the Registrant, to be filed promptly following the closing of the offering
3.3**	Form of Amended and Restated By-Laws of the Registrant, to be effective prior to the closing of the offering
4.1**	Specimen Certificate evidencing shares of Class A common stock
5.1**	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP
10.1*	Lease dated November 20, 2000 between Ameresco, Inc. and BCIA New England Holdings, LLC
10.2*	First Amendment to Lease dated November 2001 by and between Ameresco, Inc. and BCIA New England Holdings, LLC
10.3*	Second Amendment to Lease and Extension Agreement dated April 8, 2005 by and between Ameresco, Inc. and BCIA New England Holdings, LLC
10.4*	Third Amendment to Lease dated April 17, 2007 by and between RREEF America REIT III-Z1 LLC and Ameresco, Inc.
10.5	Amended and Restated Credit and Security Agreement dated June 10, 2008 among Ameresco, Inc., certain guarantors party thereto, certain lenders
	party thereto from time to time and Bank of America, N.A. as Administrative Agent
10.6*	Ameresco, Inc. 2000 Stock Incentive Plan
10.7*	Form of Incentive Stock Option Agreement granted under Ameresco, Inc. 2000 Stock Incentive Plan
10.8*	Form of Non-Qualified Stock Option Agreement granted under Ameresco, Inc. 2000 Stock Incentive Plan
10.9*	Form of Restricted Stock Agreement granted under Ameresco, Inc. 2000 Stock Incentive Plan
10.10**	Ameresco, Inc. 2010 Stock Incentive Plan
10.11**	Form of Incentive Stock Option Agreement granted under Ameresco, Inc. 2010 Stock Incentive Plan
10.12**	Form of Non-Qualified Stock Option Agreement granted under Ameresco, Inc. 2010 Stock Incentive Plan
10.13**	Form of Restricted Stock Agreement granted under Ameresco, Inc. 2010 Stock Incentive Plan
10.14*	Stockholder Agreement dated as of September 25, 2008 by and among the Registrant, Samuel T. Byrne, AMCAP Holdings, Ltd., George P. Sakellaris and such other persons who from time to time become party thereto
10.15**	Form of Indemnification Agreement entered into between the Registrant and each director and executive officer
10.16+	Revised Final Proposal, DOE Savannah River Site, Biomass Cogeneration Facility and K and L Area Heating Plants, submitted by Ameresco Federal
	Solutions, under DOE Contract No. DE-AM36-02NT41457, May 11, 2009
21.1**	Subsidiaries of the Registrant
23.1*	Consent of Caturano and Company, P.C.
23.2**	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1)
23.3*	Consent of Frost & Sullivan
24.1*	Powers of Attorney of David J. Anderson, William M. Bulger, Guy W. Nichols and Joseph W. Sutton (included on signature page)
24.2*	Power of Attorney of Michael E. Jesanis

<sup>\*</sup> Previously filed

<sup>\*\*</sup> To be filed by amendment.

<sup>+</sup> Confidential treatment requested as to certain portions, which portions have been omitted and filed separately with the Securities and Exchange Commission.

# AMENDED AND RESTATED CREDIT AND SECURITY AGREEMENT

dated as of

June 10, 2008

among

AMERESCO, INC.,

as Borrower,

THE GUARANTORS PARTY HERETO,

# THE LENDERS FROM TIME TO TIME PARTY HERETO,

and

BANK OF AMERICA, N.A.

as Administrative Agent

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Exhibit H	Form of Opinion of Counsel to the Borrower
Exhibit I	Form of Solvency Certificate
Exhibit J	Form of Assignment and Assumption

### AMENDED AND RESTATED CREDIT AND SECURITY AGREEMENT

THIS AMENDED AND RESTATED CREDIT AND SECURITY AGREEMENT dated as of June 10, 2008 (this "Agreement") is by and among AMERESCO, INC., a Delaware corporation, as borrower, THE GUARANTORS PARTY HERETO, THE LENDERS FROM TIME TO TIME PARTY HERETO, and BANK OF AMERICA, N.A., as Administrative Agent.

This Agreement amends and restates that certain Credit and Security Agreement dated as of December 29, 2004, as amended (the "Prior Credit Agreement"), by and among the Borrower, the guarantors party thereto, the lenders party thereto and Bank of America, N.A. (as successor by merger to Fleet National Bank).

The parties hereto agree as follows:

## ARTICLE I

#### **Definitions**

- 1.1 **Defined Terms**. As used in this Agreement, the following terms have the meanings specified below:
- "Additional Mortgage" has the meaning assigned to such term in Section 7.13(a).
- "Additional Mortgaged Property" means any Real Property Asset that is now owned or leased, or hereinafter acquired, by the Credit Parties, which: (i) is of material value as Collateral or of material importance to the operations of the Credit Parties (taken as a whole), and (ii) the Agent determines to acquire a Mortgage on following the Restatement Date.
  - "Administrative Questionnaire" means an Administrative Questionnaire in a form supplied by the Agent.
- "Advance Request" means a request for a Borrowing satisfying the requirements of Section 2.1(b) and substantially in the form of Exhibit B annexed hereto.
- "Affiliate" means, with respect to a specified Person, another Person that Controls or is Controlled by or is under common Control with the Person specified; provided, that, for purposes of this Agreement, no Core Domestic Ameresco Company shall be deemed to be an Affiliate of any other Core Domestic Ameresco Company.
- "Agent" means Bank of America, N.A. in its capacity as administrative agent for the Lenders hereunder, together with its successors and assigns in such capacity.
  - "Aggregate Deficiency" shall have the meaning set forth in Section 2.8(c).
  - "Ameresco Canada" means Ameresco Canada, Inc., a company organized under the laws of Ontario, Canada.
  - "Ameresco Huntington Beach" means Ameresco Huntington Beach, LLC, a Delaware limited liability company.
  - "Ameresco Federal Solutions" means Ameresco Federal Solutions, Inc., a Delaware corporation.

"AmerescoSolutions" means AmerescoSolutions, Inc., a North Carolina corporation.

"Applicable Margin" and "Applicable Unused Fee Rate" means, for any Type of Loans the following percentages per annum:

Applicable Margin Base	(% per annum)	Applicable Unused Fee Rate
Rate Loans	LIBOR Loans	(% per annum)
0.25%	1.75%	0.375%

"Applicable Percentage" means when referenced with respect to any Lender, the percentage of the total Commitments represented by such Lender's Commitment.

"Applicable Recipient" has the meaning assigned to such term in Section 2.8(d).

"Assignee Group" means two or more Eligible Assignees that are Affiliates of one another.

"Assignment and Assumption" means an assignment and assumption entered into by a Lender and an assignee (with the consent of any party whose consent is required by Section 11.4), and accepted by the Agent, in the form of Exhibit J annexed hereto or any other form approved by the Agent which complies with the provisions of Section 11.4.

"AutoBorrow Agreement" means that certain agreement dated as of October 19, 2007 between the Borrower and Bank of America, N.A., a copy of which is attached as Schedule A hereto. For the avoidance of doubt, in the event that Bank of America, N.A. shall cease to be the sole Lender hereunder, the AutoBorrow Agreement shall be deemed to be terminated.

"Bank of America" means Bank of America, N.A. and its successors.

"Bank Product Obligations" means all present and future liabilities, obligations and Indebtedness of the Credit Parties owing to the Agent, any Affiliate of the Agent or any Lender under or in connection with any cash management or related services or products provided by the Agent, any Affiliate of the Agent or any Lender to or for the account of the Credit Parties, including, without limitation, liabilities, obligations or Indebtedness in respect of automated clearing house and other fund transfers, checks, money orders, drafts, instruments, funds, payments and other items and forms of remittances paid, deposited or otherwise credited to any deposit, disbursement or other account of any Credit Party, any overdraft or other extension of credit made to cover any funds transfer, check, draft, instrument or amount paid for the account or benefit of any Credit Party, and all fees, charges, indemnities, expenses and other amounts from time to time owing to the Agent, any Affiliate of the Agent or any Lender in connection therewith (all whether accruing before or after the commencement of any bankruptcy proceeding by or against any Credit Party and regardless of whether allowed as a claim in any such proceeding).

"Base Rate" means for any day a fluctuating rate per annum equal to the higher of (a) the Federal Funds Effective Rate plus 1/2 of 1% and (b) the rate of interest in effect for such day as publicly announced from time to time by Bank of America as its "prime rate." The "prime rate" is a rate set by Bank of America based upon various factors including Bank of America's costs and desired return, general economic conditions and other factors, and is used as a reference point for pricing some loans, which may be priced at, above, or below such announced rate. Any change in such rate announced by Bank of America shall take effect at the opening of business on the day specified in the public announcement of such change.

"Board" means the Board of Governors of the Federal Reserve System of the United States of America.

"Borrower" means Ameresco, Inc., a Delaware corporation.

"Borrowing" means Loans of the same Type, made, converted or continued on the same date and, in the case of LIBOR Loans, as to which a single Interest Period is in effect.

"Boston Capital" means Boston Capital Institutional Advisor, certain Affiliates thereof and investors therein.

"Business Day" means any day that is not a Saturday, Sunday or other day on which commercial banks in Boston, Massachusetts are authorized or required by law to remain closed; <u>provided</u> that, when used in connection with a LIBOR Loan, the term "<u>Business Day</u>" shall also exclude any day on which banks are not open for dealings in U.S. dollar deposits in the London interbank market.

"Canadian Subsidiaries" means each of Ameresco Canada, Ameresco Quebec, Inc. and any other subsidiary of the Borrower organized under the laws of Canada or any jurisdiction within Canada other than Non-Core Energy Subsidiaries.

"Capital Expenditures" means, for any period, the sum for the Core Ameresco Companies (determined on a consolidated basis without duplication in accordance with GAAP) of the aggregate amount of cash payments in respect of expenditures made during such period to acquire or construct fixed assets, plant and equipment (including renewals, improvements and replacements, but excluding repairs) computed in accordance with GAAP; provided that such term shall not include any such expenditures in connection with any replacement or repair of Property affected by a Casualty Event.

"Capital Lease Obligations" of any Person means the obligations of such Person to pay rent or other amounts under any lease of (or other arrangement conveying the right to use) real or personal property, or a combination thereof, which obligations are required to be classified and accounted for as capital leases on a balance sheet of such Person under GAAP, and the amount of such obligations shall be the capitalized amount thereof determined in accordance with GAAP.

"Cash Flow" means for any fiscal period, (a) EBITDA of the Core Ameresco Companies for such period minus (b) the sum of the following for the Core Ameresco Companies of (i) Capital Expenditures made during such fiscal period, (ii) the aggregate amount paid in cash in respect of income, franchise, real estate and other like taxes during such fiscal period, and (iii) dividends, withdrawals and other distributions paid in cash by the Core Ameresco Companies during such fiscal period.

"Casualty Event" means, with respect to any Property of any Person, any loss of or damage to, or any condemnation or other taking of, such Property for which such Person or any of its Subsidiaries receives insurance proceeds, or proceeds of a condemnation award or other compensation.

"Change in Law" means (a) the adoption of any law, rule or regulation after the Restatement Date, (b) any change after the Restatement Date in any law, rule or regulation or in the interpretation or application thereof by any Governmental Authority or (c) compliance by any Lender or the Issuing Lender (or, for purposes of subsection 2.11(b), by any lending office of such Lender or by such Lender's or the Issuing Lender's holding company, if any) with any request, guideline or directive (whether or not having the force of law), other than a request or directive to comply with any law, rule or regulation in effect on the Restatement Date, of any Governmental Authority made or issued after the Restatement Date.

"Change of Control" means the occurrence of any of the following: (a) any Person (or group of Persons acting in concert) other than the Sakellaris Group or Boston Capital shall acquire or own more than 10% of the outstanding capital stock of the Borrower; or (b) the failure of the Borrower to own, directly or indirectly through one or more Subsidiaries, 100% of the outstanding capital stock of each of the other Credit Parties; or (c) the failure of the Borrower to own, directly or indirectly through one or more Subsidiaries, at least 90% of the outstanding capital stock of each of the Canadian Subsidiaries; or (d) the sale of all or substantially all of the business or assets of any Credit Party or Canadian Subsidiary; or (e) George Sakellaris shall for any reason cease to serve in his present capacity as Chief Executive Officer of the Borrower and the Borrower shall fail within one hundred twenty (120) days of the date that Mr. Sakellaris ceases to serve in such capacity, to retain a replacement for Mr. Sakellaris who is reasonably acceptable to the Agent.

"Code" means the Internal Revenue Code of 1986, as amended from time to time.

"Collateral" means, collectively, all of the Property in which Liens are purported to be granted hereunder and under the other Loan Documents as security for the Obligations of the Credit Parties hereunder.

"Collateral Documents" means, collectively, the Pledge Agreement and all other agreements, instruments and documents (other than this Agreement) now or hereafter executed and delivered in connection with this Agreement pursuant to which Liens are granted or purported to be granted to the Agent in Collateral securing all or part of the Obligations, each in form and substance reasonably satisfactory to the Agent.

"Commitments" means (a) for all Lenders, the aggregate Revolving Credit Commitments of all Lenders, and (b) for each Lender the aggregate of such Lender's Revolving Credit Commitment.

"Competitor" means each of Siemens AG, Johnson Controls, Inc., Honeywell International, Inc. and Chevron Corporation and each of their Subsidiaries.

"Compliance Certificate" means a certificate signed by a Designated Financial Officer, in substantially the form of Exhibit D annexed hereto, (a) certifying as to whether a Default has occurred and, if a Default has occurred, specifying the details thereof and any action taken or proposed to be taken with respect thereto, (b) setting forth reasonably detailed calculations demonstrating compliance with Section 8.10, (c) setting forth in reasonable detail all adjustments to the consolidated financial statements of the Borrower and its Subsidiaries necessary to reflect the exclusion of all Subsidiaries of the Borrower other than the Core Ameresco Companies from the financial covenant calculations set forth therein, and (d) stating whether any change in GAAP or in the application thereof has occurred since the date of the audited financial statements referred to in Section 5.4 and, if any such change has occurred, specifying the effect of such change on the financial statements accompanying such certificate.

"Construction Completion and Cost Overrun Guaranty" means, in connection with any Renewable Energy Project, a guaranty of (i) the completion and operation of such Renewable Energy Project on or prior to the date set forth in such guaranty and (ii) the payment of all construction costs and expenses related to such Renewable Energy Project in excess of the proposed budget for such Renewable Energy Project.

"Control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of a Person, whether through the ability to exercise voting power, by contract or otherwise. "Controlling" and "Controlled" have meanings correlative thereto. A Person who owns or holds capital stock, beneficial interests or other securities representing ten percent (10%) or

more of the Total Voting Power of another Person shall be deemed, for purposes of this Agreement, to "control" such other Person.

"Control Agreement" means, with respect to any deposit or securities account of any Credit Party, a control agreement, in form and substance reasonably satisfactory to the Agent, executed and delivered by such Credit Party, the financial institution at which such account is maintained and the Agent, as any such agreement may be amended, supplemented or otherwise modified from time to time.

"Controlled Account" has the meaning assigned to such term in Section 4.3(a).

"Copyrights" means all copyrights, whether statutory or common law, owned by or assigned to the Credit Parties, and all exclusive and nonexclusive licenses to the Credit Parties from third parties or rights to use copyrights owned by such third parties, including, without limitation, the registrations, applications and licenses listed on Schedule 5.5 hereto, along with any and all (a) renewals and extensions thereof, (b) income, royalties, damages, claims and payments now and hereafter due and/or payable with respect thereto, including, without limitation, damages and payments for past, present or future infringements thereof, (c) rights to sue for past, present and future infringements thereof, and (d) foreign copyrights and any other rights corresponding thereto throughout the world.

"Core Ameresco Companies" means the Core Domestic Ameresco Companies and the Canadian Subsidiaries.

"Core Domestic Ameresco Companies" means each of the Credit Parties. "Credit Parties" means the Borrower and the Guarantors.

"Debt Service" means, for any period, the sum, for the Core Ameresco Companies (determined on a consolidated basis in accordance with GAAP) of (a) all regularly scheduled principal payments, as such amounts may be adjusted from time to time by reason of any prepayments, of Indebtedness (including the principal component of any payments in respect of Capital Lease Obligations), but excluding any prepayments pursuant to Section 2.9 made during such period and any principal payments in respect of the Revolving Loans made during such period, plus (b) all Interest Expense for such period.

"<u>Debtor Relief Laws</u>" means the Bankruptcy Code of the United States, and all other liquidation, conservatorship, bankruptcy, assignment for the benefit of creditors, moratorium, rearrangement, receivership, insolvency, reorganization, or similar debtor relief Laws of the United States or other applicable jurisdictions from time to time in effect and affecting the rights of creditors generally.

"<u>Default</u>" means any event or condition which constitutes an Event of Default or which upon notice, lapse of time or both would, unless cured or waived, become an Event of Default.

"<u>Designated Financial Officer</u>" means an individual holding one or more of the following offices with the Borrower or otherwise having executive responsibilities for financial matters and listed in <u>Schedule 1.4</u> hereto: chief financial officer, principal accounting officer, treasurer, assistant treasurer or controller.

"Disclosed Matters" means the actions, suits and proceedings and the environmental matters disclosed in Schedule 5.6.

"<u>Disposition</u>" means any sale, assignment, transfer or other disposition of any property (whether now owned or hereafter acquired) by any Credit Party to any Person other than to another Credit Party excluding (a) the granting of Liens to the Agent and Lenders and other Liens permitted hereunder, (b) any

sale, assignment, transfer or other disposition by any Credit Party of the equity interests of any Special Purpose Subsidiary (other than the Hawaii Joint Venture), and (c) any sale, assignment, transfer or other disposition of (i) any property sold or disposed of in the ordinary course of business and on ordinary business terms, (ii) any property no longer used or useful in the business of the Credit Parties and (iii) any Collateral pursuant to an exercise of remedies by the Agent hereunder or under any other Loan Document.

"EBITDA" means, for any period, (a) the net income of the Core Ameresco Companies (determined on a consolidated basis without duplication in accordance with GAAP) for such period, plus (b) to the extent deducted in calculating net income of the Core Ameresco Companies (i) income taxes accrued during such period, (ii) Interest Expense during such period, (iii) depreciation and amortization for such period, (iv) except to the extent paid in cash by the Core Ameresco Companies, loss attributable to equity in Affiliates which are not Subsidiaries for such period, (v) extraordinary or unusual losses during such period (it being understood that any payment required to be made by any Core Ameresco Company in respect of any Renewable Energy Project Guaranty Liability shall reduce net income of the Core Ameresco Companies and shall not be added back to EBITDA as an extraordinary loss), (vi) non-recurring items, fees and expenses associated with the transactions contemplated by this Agreement (provided, that the aggregate amount added back pursuant to this clause (b)(vi) shall not exceed \$600,000 after the Effective Time), and (vii) the aggregate amount received in cash by the Core Ameresco Companies during such fiscal period in respect of regularly scheduled dividends or distributions from the Special Purpose Subsidiaries, calculated and paid in accordance with the organizational documents of such Special Purpose Subsidiaries and included as net income of the Core Ameresco Companies under GAAP for such fiscal period (provided, that the amount added back pursuant to this clause (vii) shall not include any amounts received by the Core Ameresco Companies in connection with any sale, transfer or other disposition of assets or equity interests of any Special Purpose Subsidiary); minus (c) to the extent such items were added in calculating net income of the Core Ameresco Companies (i) extraordinary or unusual gains during such period and (ii) proceeds received during such period in respect of Casualty Events, Dispositions and any sale, assignment, transfer or other disposition by any Credit Party of the equity interests of any Special Purpose Subsidiary. For purposes of calculating EBITDA for any period during which a Permitted Acquisition is consummated, EBITDA shall be adjusted in a manner proposed by the Borrower and reasonably satisfactory to the Agent to reflect certain expense deductions in connection with such Permitted Acquisition.

"Effective Time" means the time at which the conditions specified in Section 6.1 are satisfied (or waived in accordance with Section 11.2).

"Eligible Assignee" means any Person that meets the requirements to be an assignee under Sections 11.4(b)(iii), 11.4(b)(v) and 11.4(b) (vi) (subject to consents, if any, as may be required under Section 11.4(b)(iii)).

"Energy Conservation Financing Collateral" means all rights of any Credit Party in and to task orders or contracts which are subject to a security interest in favor of the Energy Conservation Project Financing Agent in connection with any Energy Conservation Project Financing.

"Energy Conservation Projects" means (i) any energy conservation project conducted by any Credit Party pursuant to an Energy Savings Performance Contract between such Credit Party any governmental entity and/or an agency thereof and (ii) any energy conservation project conducted by a Credit Party for a non-governmental entity on terms substantially similar to the projects described in clause (i) of this definition.

"Energy Conservation Project Financing" means the bond financing arrangements or master purchase agreements and assignment schedules or similar financing arrangements entered into by any Credit Party from time to time with the Energy Conservation Project Financing Agent to finance the construction and completion of the Energy Conservation Projects.

"Energy Conservation Project Financing Agent" means the financial institution acting in the capacity of agent or trustee for itself and/or other lenders or bondholders in connection with any Energy Conservation Project Financing.

"Environmental Laws" means all applicable laws, rules, regulations, codes, ordinances, orders, decrees, judgments, injunctions, notices or binding agreements issued, promulgated or entered into by any Governmental Authority, relating in any way to the environment, preservation or reclamation of natural resources, the management, release or threatened release of any Hazardous Material or to health and safety matters.

"Environmental Liability" means any liability, contingent or otherwise (including any liability for damages, costs of environmental remediation, fines, penalties or indemnities), of any Credit Party directly or indirectly resulting from or based upon (a) violation of any Environmental Law, (b) the generation, use, handling, transportation, storage, treatment or disposal of any Hazardous Materials, (c) exposure to any Hazardous Materials, (d) the release or threatened release of any Hazardous Materials into the environment or (e) any contract, agreement or other consensual arrangement pursuant to which liability is assumed or imposed with respect to any of the foregoing.

"Equity Rights" means, with respect to any Person, any subscriptions, options, warrants, commitments, preemptive rights or agreements of any kind (including any stockholders' or voting trust agreements) for the issuance or sale of, or securities convertible into, any additional shares of capital stock of any class, or partnership or other ownership interests of any type in, such Person.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended from time to time.

"ERISA Affiliate" means any trade or business (whether or not incorporated) that, together with the Credit Parties, is treated as a single employer within the meaning of Section 414(b), (c), (m) or (o) of the Code. Notwithstanding the foregoing, for purposes of any liability related to a Multiemployer Plan under Title IV of ERISA, the term "ERISA Affiliate" means any trade or business that, together with the Credit Parties, is treated as a single employer within the meaning of Section 4001(b) of ERISA.

"ERISA Event" means (a) a "reportable event", as defined in Section 4043 of ERISA or the regulations issued thereunder for which the notice requirement has not been waived with respect to any Pension Plan, (b) the existence with respect to any Pension Plan of an "accumulated funding deficiency" (as defined in Section 412 of the Code or Section 302 of ERISA), whether or not waived, (c) the filing pursuant to Section 412(d) of the Code or Section 303(d) of ERISA of an application for a waiver of the minimum funding standard with respect to any Pension Plan, (d) the incurrence by any Credit Party or any ERISA Affiliate of any liability under Title IV of ERISA with respect to the termination of any Pension Plan, (e) the receipt by any Credit Party or any ERISA Affiliate from the PBGC or plan administrator of any notice relating to an intention to terminate any Pension Plan or Pension Plans or to appoint a trustee to administer any Pension Plan, or (f) the receipt by any Credit Party or any ERISA Affiliate of any notice, or the receipt by any Multiemployer Plan from any Credit Party or any ERISA Affiliate of any notice of Withdrawal Liability or a determination that a Multiemployer Plan is, or is expected to be, insolvent or in reorganization, within the meaning of Title IV of ERISA.

"Eurodollar Rate" means for any Interest Period with respect to a LIBOR Loan, a rate per annum determined by Agent pursuant to the following formula:

Eurodollar Rate =  $\frac{\text{Eurodollar Base Rate}}{1.00 - \text{Eurodollar Reserve Percentage}}$ 

Where,

"Eurodollar Base Rate" means, for such Interest Period the rate per annum equal to the British Bankers Association LIBOR Rate ("BBA LIBOR"), as published by Reuters (or other commercially available source providing quotations of BBA LIBOR as designated by Agent from time to time) at approximately 11:00 a.m., London time, two Business Days prior to the commencement of such Interest Period, for Dollar deposits (for delivery on the first day of such Interest Period) with a term equivalent to such Interest Period. If such rate is not available at such time for any reason, then the "Eurodollar Base Rate" for such Interest Period shall be the rate per annum determined by the Agent to be the rate at which deposits in U.S. Dollars for delivery on the first day of such Interest Period in same day funds in the approximate amount of the Eurodollar Rate Loan being made, continued or converted by Bank of America and with a term equivalent to such Interest Period would be offered by Bank of America's London Branch to major banks in the London interbank eurodollar market at their request at approximately 11:00 a.m. (London time) two Business Days prior to the commencement of such Interest Period.

"Eurodollar Reserve Percentage" means, for any day during any Interest Period, the reserve percentage (expressed as a decimal, carried out to five decimal places) in effect on such day, whether or not applicable to any Lender, under regulations issued from time to time by the Board of Governors of the Federal Reserve System of the United States for determining the maximum reserve requirement (including any emergency, supplemental or other marginal reserve requirement) with respect to Eurocurrency funding (currently referred to as "Eurocurrency liabilities"). The Eurodollar Rate for each outstanding Eurodollar Rate Loan shall be adjusted automatically as of the effective date of any change in the Eurodollar Reserve Percentage.

"Event of Default" has the meaning assigned to such term in Section 9.1.

"Excluded Taxes" means, with respect to the Agent, any Lender, the Issuing Lender or any other recipient of any payment to be made by or on account of any Obligation hereunder, (a) income, net worth or franchise taxes imposed on (or measured by) its net income or net worth by the United States of America, or by the jurisdiction under the laws of which such recipient is organized or in which its principal office is located or, in the case of any Lender, in which its lending office is located or in which it is taxable solely on account of some connection other than the execution, delivery or performance of this Agreement or the receipt of income hereunder, (b) any branch profits taxes imposed by the United States of America or any similar tax imposed by any other jurisdiction in which the Borrower is located and (c) in the case of a Foreign Lender, any withholding tax that is imposed on amounts payable to such Foreign Lender at the time such Foreign Lender becomes a party to this Agreement or is attributable to such Foreign Lender's failure or inability to comply with Section 2.12(e), except to the extent that such Foreign Lender's assignor (if any) was entitled, at the time of assignment, to receive additional amounts from the Borrower with respect to such withholding tax pursuant to Section 2.12(a).

"Exelon Acquisition Agreement" means the Agreement for Purchase of Membership Interests dated as of June 25, 2004 by and between the Borrower and Exelon Services, Inc. relating to the acquisition by the Borrower on or about June 25, 2004 of 100% of the outstanding membership interests of Solutions Holdings, LLC, a Delaware limited liability company, from Exelon Services, Inc.

"Existing Debt" means (i) Indebtedness of the Credit Parties existing as of the Effective Time which is being repaid in full with the proceeds of the Loans made by the Lenders at the Effective Time and (ii) Indebtedness of the Credit Parties existing as of the Effective Time which is permitted to remain outstanding after the Effective Time under Section 8.1 and is listed on Schedule 8.1 hereto.

"Existing Letters of Credit" shall have the meaning set forth in Section 2.4(a).

"FAC Regulations" shall have the meaning set forth in Section 5.24.

"FCPA" shall have the meaning set forth in Section 5.24.

"Federal Funds Effective Rate" means, for any day, the rate per annum equal to the weighted average of the rates on overnight Federal funds transactions with members of the Federal Reserve System arranged by Federal funds brokers on such day, as published by the Federal Reserve Bank of New York on the Business Day next succeeding such day; provided that (a) if such day is not a Business Day, the Federal Funds Effective Rate for such day shall be such rate on such transactions on the next preceding Business Day as so published on the next succeeding Business Day, and (b) if no such rate is so published on such next succeeding Business Day, the Federal Funds Effective Rate for such day shall be the average rate (rounded upward, if necessary, to a whole multiple of 1/100 of 1%) charged to Bank of America on such day on such transactions as determined by Agent.

"<u>Fee Letter</u>" means the letter agreement dated as of June 10, 2008 by and between the Borrower and the Agent, describing certain fees to be paid by the Credit Parties in connection with the credit facility established by this Agreement.

"<u>First Priority</u>" means, with respect to any Lien purported to be created in any Collateral pursuant to any Collateral Document, that such Lien is the most senior Lien (other than Permitted Liens) to which such Collateral is subject.

"Foreign Lender" means any Lender that is organized under the laws of a jurisdiction other than that in which the Borrower is located. For purposes of this definition, the United States of America, each State thereof and the District of Columbia shall be deemed to constitute a single jurisdiction.

"Foreign Office" means with respect to any Lender, an office of such Lender located outside of the United States of America.

"Foreign Subsidiaries" means each Subsidiary of the Borrower organized under the laws of a jurisdiction other than the United States of America.

"Funding Subsidiaries" means each of Ameresco Funding I, LLC, a Delaware limited liability company; Ameresco Funding II, LLC, a Delaware limited liability company; Ameresco Funding IV, LLC, a Delaware limited liability company; Ameresco Funding IV, LLC, a Delaware limited liability company; Speen Street Holdings I, LLC, a Delaware limited liability company; Speen Street Holdings III, LLC, a Delaware limited liability company; Speen Street Holdings III, LLC, a Delaware limited liability company; and Speen Street Holdings IV, LLC, a Delaware limited liability company.

"GAAP" means generally accepted accounting principles in the United States of America.

"Governmental Authority" means the government of the United States of America, any other nation or any political subdivision thereof, whether state or local, and any agency, authority,

instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government.

"Guarantee" means a guarantee, an endorsement, a contingent agreement to purchase or to furnish funds for the payment or maintenance of, or otherwise to be or become contingently liable under or with respect to, the Indebtedness, other obligations, net worth, working capital or earnings of any Person, or a guarantee of the payment of dividends or other distributions upon the stock or equity interests of any Person, or an agreement to purchase, sell or lease (as lessee or lessor) property, products, materials, supplies or services primarily for the purpose of enabling a debtor to make payment of such debtor's obligations or an agreement to assure a creditor against loss, and including, without limitation, causing a bank or other financial institution to issue a letter of credit or other similar instrument for the benefit of another Person, but excluding endorsements for collection or deposit in the ordinary course of business. The terms "Guarantee" and "Guaranteed" used as a verb shall have a correlative meaning. The amount of any Guarantee shall be deemed to be an amount equal to the stated or determinable amount of the primary obligations in respect of which such Guarantee is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof (assuming such Person is required to perform thereunder).

"Guarantors" means, collectively, each Subsidiary of the Borrower party hereto as a guarantor at the Effective Time and each other Person which becomes a guarantor hereunder after the Effective Time.

"Guaranty" means Article 3 of this Agreement.

"Hawaii Joint Venture" means the Investment by Ameresco Hawaii LLC, a Delaware limited liability company, in 99% of the equity interests of Ameresco/Pacific Energy JV, a Hawaii general partnership for the purpose of engaging in the performance of work and services related to the completion of the Hawaii Project.

"Hawaii Project" means the development, implementation and construction of energy performance measures and/or construction management services for the State of Hawaii or agencies or instrumentalities thereof, including, without limitation, the Housing & Community Development Corporation of Hawaii at one or more properties owned or operated by such entities.

"<u>Hazardous Materials</u>" means all explosive or radioactive substances or wastes and all hazardous or toxic substances, wastes or other pollutants, including petroleum or petroleum distillates, asbestos or asbestos containing materials, polychlorinated biphenyls, radon gas, infectious or medical wastes and all other substances or wastes of any nature, in each case regulated or subject to regulation pursuant to any Environmental Law.

"Hedging Agreement" means any interest rate protection agreement, foreign currency exchange agreement, commodity price protection agreement or other interest or currency exchange rate or commodity price hedging arrangement.

"Huntington Beach Receivables Financing" means the transaction pursuant to which (i) the Borrower and Ameresco Huntington Beach sold certain accounts receivable to the Funding Subsidiaries and (ii) the Funding Subsidiaries financed their acquisition of such accounts receivable by issuing \$12,279,000 principal amount of 4.875% Receivables-Backed Notes, Series Boeing-2004-1 pursuant to that certain Series Boeing-2004-1 Supplemental Indenture dated as of March 17, 2004 to Master Indenture Relating to Boeing Energy Service Projects dated as of March 17, 2004 between Ameresco Funding I, LLC and Wells Fargo Northwest, National Association as trustee.

"<u>Inactive Subsidiaries</u>" means each of the Subsidiaries of the Borrower designated by the Borrower as an inactive subsidiary on <u>Schedule 5.13</u> attached hereto as of the Effective Time and from time to time after the Effective Time.

"Indebtedness" means, for any Person, without duplication: (a) obligations created, issued or incurred by such Person for borrowed money (whether by loan, advance, the issuance and sale of debt securities or the sale of Property to another Person subject to an understanding or agreement, contingent or otherwise, to repurchase such Property from such Person); (b) obligations of such Person to pay the deferred purchase or acquisition price of Property or services, other than trade accounts payable (other than for borrowed money) arising, and accrued expenses and deferred taxes incurred and paid, in the ordinary course of business; (c) Capital Lease Obligations of such Person; (d) obligations of such Person in respect of Hedging Agreements; and (e) obligations of such Person in respect of letters of credit or similar instruments issued or accepted by banks and other financial institutions for the account of such Person. The Indebtedness of any Person shall include, without duplication, the Indebtedness of any other entity (including any partnership in which such Person is a general partner) to the extent such Person is liable therefor as a result of such Person's ownership interest in or other relationship with such entity, except to the extent the terms of such Indebtedness provide that such Person is not liable therefor.

"Indemnified Taxes" means all Taxes other than (a) Excluded Taxes and Other Taxes and (b) amounts constituting penalties or interest imposed with respect to Excluded Taxes or Other Taxes.

"ISP" means, with respect to any Letter of Credit, the "International Standby Practices 1998" published by the Institute of International Banking Law & Practice, Inc. (or such later version thereof as may be in effect at the time of issuance).

"Issuer Documents" means, with respect to any Letter of Credit, the LC Application and any other document, agreement and instrument entered into by the Issuing Lender and the Borrower or in favor of the Issuing Lender and relating to such Letter of Credit.

"Intercompany Indebtedness" has the meaning assigned to such term in Section 11.9.

"Interest Election Request" means a request by the Borrower to convert or continue a Borrowing in accordance with Section 2.3.

"Interest Expense" means, for any period, the sum, without duplication, for the Core Ameresco Companies (determined on a consolidated basis without duplication in accordance with GAAP), of the following: (a) all interest in respect of Indebtedness accrued during such period (whether or not actually paid during such period), but excluding capitalized debt acquisition costs (including fees and expenses related to this Agreement) and interest that by its terms is "paid in kind" plus (b) the net amounts payable (or minus the net amounts receivable) in respect of Hedging Agreements accrued during such period (whether or not actually paid or received during such period) excluding reimbursement of legal fees and other similar transaction costs and excluding payments required by reason of the early termination of Hedging Agreements in effect on the date hereof plus (c) all fees, including letter of credit fees and expenses, (but excluding reimbursement of legal fees) incurred hereunder during such period.

"Interest Period" means with respect to any LIBOR Borrowing, the period commencing on the date of such Borrowing and ending on the numerically corresponding day in the calendar month that is one, two, three or six months thereafter, as the Borrower may elect; provided, that (i) if any Interest Period would end on a day other than a Business Day, such Interest Period shall be extended to the next succeeding Business Day unless such next succeeding Business Day would fall in the next calendar month, in which case such Interest Period shall end on the next preceding Business Day and (ii) any

Interest Period that commences on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the last calendar month of such Interest Period) shall end on the last Business Day of the last calendar month of such Interest Period. For purposes hereof, the date of a Borrowing initially shall be the date on which such Borrowing is made and thereafter shall be the effective date of the most recent conversion or continuation of such Borrowing. Notwithstanding the foregoing,

- (x) if any Interest Period for any Revolving Credit Borrowing would otherwise end after the Revolving Credit Maturity Date, such Interest Period shall end on the Revolving Credit Maturity Date, and
- (y) notwithstanding the foregoing clause (x), no Interest Period shall have a duration of less than one month and, if the Interest Period for any LIBOR Loan would otherwise be a shorter period, such Loan shall not be available hereunder as a LIBOR Loan for such period.

"Investment" means, for any Person: (a) the acquisition (whether for cash, Property, services or securities or otherwise) of capital stock, bonds, notes, debentures, partnership, limited liability company or other ownership interests or other securities of any other Person or any agreement to make any such acquisition (including, without limitation, any "short sale" or any sale of any securities at a time when such securities are not owned by the Person entering into such short sale); (b) the making of any deposit with, or advance, loan or other extension of credit to, any other Person (including the purchase of Property from another Person subject to an understanding or agreement, contingent or otherwise, to resell such Property to such Person, but excluding any such advance, loan or extension of credit representing the purchase price of inventory or supplies sold by such Person in the ordinary course of business provided that in no event shall the term of any such inventory or supply advance, loan or extension of credit exceed 270 days); or (c) the entering into of any Guarantee of, or other contingent obligation with respect to, Indebtedness or other liability of any other Person and (without duplication) any amount committed to be advanced, loaned or extended to such Person. Notwithstanding the foregoing, Capital Expenditures shall not be deemed "Investments" for purposes hereof.

"IP Collateral" means, collectively, the Collateral relating to intellectual property rights of the Credit Parties hereunder or under any other Loan Document.

"Issuer Documents" means with respect to any Letter of Credit, the L/C Application and any other document, agreement or instrument entered into by the Issuing Lender and the Borrower (or any Subsidiary) or in favor of the Issuing Lender and relating to such Letter of Credit.

"Issuing Lender" means Bank of America or any other Lender designated by the Agent in its sole discretion, in each case, in its capacity as an issuer of Letters of Credit hereunder.

"Landlord's Waiver and Consent" means, with respect to any Leasehold Property, a letter, certificate or other instrument in writing from the lessor under the related lease, in form approved by the Agent in its sole discretion.

"LC Advance" means, with respect to each Lender, such Lender's funding of its participation in any LC Disbursement in accordance with its Applicable Percentage.

"<u>LC Application</u>" means an application and agreement for the issuance or amendment of a Letter of Credit in the form from time to time in use by the Issuing Lender.

- "LC Credit Extension" means, with respect to any Letter of Credit, the issuance thereof or extension of the expiry date thereof, or the increase of the amount thereof.
  - "LC Deficiency Amount" shall have the meaning set forth in Section 2.8(c).
  - "LC Disbursement" means a payment made by the Issuing Lender pursuant to a Letter of Credit.
- "LC Expiration Date" means the day that is thirty days prior to the Revolving Credit Maturity Date then in effect (or, if such day is not a Business Day, the next preceding Business Day).
- "<u>Leasehold Property</u>" means any leasehold interest of any Credit Party as lessee under any lease of real property, other than any such leasehold interest designated from time to time by the Agent in its sole discretion as not being required to be included in the Collateral and not being of material importance to the business or operations of the Credit Parties.
- "<u>Lenders</u>" means the Persons listed on <u>Schedule 2.1</u> (including, without limitation, the Issuing Lender and the Swing Loan Lender) and any other Person that shall have become a party hereto pursuant to an Assignment and Acceptance, other than any such Person that ceases to be a party hereto pursuant to an Assignment and Acceptance.
- "<u>Letter of Credit</u>" means any letter of credit issued on a standby basis or in support of trade obligations of the Credit Parties pursuant to this Agreement, including, without limitation, any Existing Letter of Credit.
- "LIBOR" when used in reference to any Loan or Borrowing, refers to whether such Loan, or the Loans comprising such Borrowing, are bearing interest at a rate determined by reference to the Eurodollar Rate.
- "Lien" means, with respect to any asset, (a) any mortgage, deed of trust, lien, pledge, hypothecation, encumbrance, charge or security interest in, on or of such asset, (b) the interest of a vendor or a lessor under any conditional sale agreement, capital lease or title retention agreement (or any financing lease having substantially the same economic effect as any of the foregoing), other than an operating lease, relating to such asset and (c) in the case of securities, any purchase option, call or similar right of a third party with respect to such securities.
- "Loan Documents" means this Agreement, the Revolving Credit Notes, the Collateral Documents, the Fee Letter, each Issuer Document, the Subordination Agreement and any other instruments or documents delivered or to be delivered from time to time pursuant to this Agreement, as the same may be supplemented and amended from time to time in accordance with their respective terms.
  - "Loans" means the Revolving Loans and the Swing Loans.
- "Material Adverse Effect" means, any event, circumstance, happening or condition, which, in the Agent's discretion, might reasonably be expected to result in a material adverse effect on (a) the business, assets, financial condition of the Credit Parties taken as a whole, (b) the ability of any Credit Party to pay or perform any of its obligations under this Agreement or the other Loan Documents or (c) any of the rights of or benefits available to the Lenders under this Agreement and the other Loan Documents.
- "<u>Material Canadian Subsidiary</u>" means any Canadian Subsidiary having assets with a total book value of greater than or equal to 10% of the total book value of all assets of the Core Ameresco Companies on a consolidated basis.

"<u>Material Indebtedness</u>" means Indebtedness (other than the Loans or Letters of Credit), including, without limitation, obligations in respect of one or more Hedging Agreements, in an aggregate principal amount exceeding \$1,000,000. For purposes of determining Material Indebtedness, the "principal amount" of the obligations of any Person in respect of a Hedging Agreement at any time shall be the maximum aggregate amount (giving effect to any netting agreements) that such Person would be required to pay if such Hedging Agreement were terminated at such time.

"Material Leasehold Property" means a Leasehold Property reasonably determined by the Agent to be of material value as Collateral or of material importance to the operations of the Credit Parties (taken as a whole).

"<u>Material Owned Property</u>" means any real property owned by any Credit Party that is reasonably determined by the Agent to be of material value as Collateral or of material importance to the operations of the Credit Parties (taken as a whole) and listed on <u>Schedule 1.1</u> hereto.

"<u>Material Rental Obligations</u>" means obligations of the Credit Parties to pay rent under any one or more operating leases with respect to any real or personal property that is material to the business of the Credit Parties (taken as a whole).

"Mortgage" means a security instrument (whether designated as a deed of trust or a mortgage, leasehold mortgage, assignment of leases and rents or by any similar title) executed and delivered by any Credit Party in such form as may be approved by the Agent in its sole and reasonable discretion, in each case with such changes thereto as may be recommended by the Agent's local counsel based on local laws or customary local practices, and (b) at the Agent's option, in the case of an Additional Mortgaged Property, an amendment to an existing Mortgage, in form satisfactory to the Agent, adding such Additional Mortgaged Property to the Real Property Assets encumbered by such existing Mortgage, in either cases as such security instrument or amendment may be amended, supplemented or otherwise modified from time to time.

"Multiemployer Plan" means a multiemployer plan as defined in Section 4001(a)(3) of ERISA.

## "Net Cash Payments" means,

- (a) with respect to any Casualty Event, the aggregate amount of cash proceeds of insurance, condemnation awards and other compensation received by the Credit Parties in respect of such Casualty Event net of (i) reasonable expenses incurred by the Credit Parties in connection therewith and (ii) contractually required repayments of Indebtedness to the extent secured by a Lien on such property and (iii) any income and transfer taxes payable by the Credit Parties in respect of such Casualty Event;
- (b) with respect to any Disposition, the aggregate amount of all cash payments received by the Credit Parties directly or indirectly in connection with such Disposition, whether at the time of such Disposition or after such Disposition under deferred payment arrangements or Investments entered into or received in connection with such Disposition, net of (i) the amount of any legal, title, transfer and recording tax expenses, commissions and other fees and expenses payable by the Credit Parties in connection therewith, (ii) any Federal, state and local income or other Taxes estimated to be payable by the Credit Parties as a result thereof, (iii) any repayments by the Credit Parties of Indebtedness to the extent that such Indebtedness is secured by a Lien on the property that is the subject of such Disposition and the transferee of (or holder of a Lien on) such property requires that such Indebtedness be repaid as a condition to the purchase of such

property, and (iv) any repayments by the Credit Parties to minority stockholders if and to the extent permitted hereby; and

(c) with respect to any incurrence of Indebtedness, the aggregate amount of all cash proceeds received by the Credit Parties therefrom less all legal, underwriting, registration, marketing, filing and similar fees and expenses incurred in connection therewith.

"Non-Core Energy Project" means (i) any Renewable Energy Project and (ii) any other small scale energy infrastructure project conducted by a Non-Core Energy Subsidiary other than projects of the type conducted by the Core Ameresco Companies as of the Restatement Date.

"Non-Core Energy Project Financing" means a credit facility entered into by one or more Non-Core Energy Subsidiaries to finance the construction of one or more Non-Core Energy Projects.

"Non-Core Energy Subsidiary" means (i) Ameresco Huntington Beach, (ii) any Renewable Energy Subsidiary and (ii) any other direct or indirect subsidiary of the Borrower formed for the purpose of constructing or operating any Non-Core Energy Project.

"Obligations" means (a) the aggregate outstanding principal balance of and all interest on the Loans made by the Lenders to the Borrower (including any interest accruing after the commencement of any proceeding by or against the Borrower under the federal bankruptcy laws, as now or hereafter constituted, or any other applicable federal or state bankruptcy, insolvency or other similar law, and any other interest that would have accrued but for the commencement of such proceeding, whether or not any such interest is allowed as a claim enforceable against the Borrower in any such proceeding), (b) all debts, liabilities, obligations, covenants and duties of the Borrower or any Credit Party with respect to any Loan or Letter of Credit and (c) all Bank Product Obligations and all fees, costs, charges, expenses and other obligations from time to time owing to the Lenders, the Issuing Lender, or the Agent by the Credit Parties hereunder or under any other Loan Document or in respect of any Hedging Agreement, cash management agreement, operating or deposit account or other banking product from time to time made available to the Credit Parties by the Agent, any affiliate of the Agent, the Issuing Lender, or any Lender.

"OFAC Regulations" shall have the meaning set forth in Section 5.23.

"Other Taxes" means any and all present or future stamp or documentary taxes or any other excise or property taxes, charges or similar levies arising from any payment made hereunder or from the execution, delivery or enforcement of, or otherwise with respect to, this Agreement and the other Loan Documents, provided that there shall be excluded from "Other Taxes" all Excluded Taxes.

"Patents" means all patents issued or assigned to and all patent applications made by the Credit Parties and, to the extent that the grant of a security interest does not cause a breach or termination thereof, all exclusive and nonexclusive licenses to the Credit Parties from third parties or rights to use patents owned by such third parties, including, without limitation, the patents, patent applications and licenses listed on Schedule 5.5 hereto, along with any and all (a) inventions and improvements described and claimed therein, (b) reissues, divisions, continuations, extensions and continuations-in-part thereof, (c) income, royalties, damages, claims and payments now and hereafter due and/or payable under and with respect thereto, including, without limitation, damages and payments for past or future infringements thereof, (d) rights to sue for past, present and future infringements thereof, and (e) any other rights corresponding thereto throughout the world.

"Patriot Act" shall have the meaning set forth in Section 11.18.

"Payment Amount" shall have the meaning set forth in Section 2.8(c).

"Pension Plan" means any Plan that is a defined benefit pension plan subject to the provisions of Title IV of ERISA or Section 412 of the Code or Section 302 of ERISA, and in respect of which any Credit Party or any ERISA Affiliate is (or, if such plan were terminated, would under Section 4069 of ERISA be deemed to be) an "employer" as defined in Section 3(5) of ERISA.

"Permitted Acquisitions" shall have the meaning set forth in Section 8.4. "Permitted Investments" means:

- (a) direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States of America (or by any agency thereof to the extent such obligations are backed by the full faith and credit of the United States of America), in each case maturing within one year from the date of acquisition thereof;
- (b) investments in commercial paper maturing within 270 days from the date of acquisition thereof and having, at such date of acquisition, the highest credit rating obtainable from Standard and Poor's Ratings Service or from Moody's Investors Service, Inc.;
- (c) investments in certificates of deposit, banker's acceptances and time deposits maturing within 180 days from the date of acquisition thereof issued or guaranteed by or placed with, and money market deposit accounts issued or offered by, any domestic office of any commercial bank organized under the laws of the United States of America or any State thereof which has a combined capital and surplus and undivided profits of not less than \$250,000,000;
- (d) fully collateralized repurchase agreements with a term of not more than 30 days for securities described in clause (a) above and entered into with a financial institution satisfying the criteria described in clause (c) above;
- (e) advances, loans and extensions of credit to any director, officer or employee of the Credit Parties, if the aggregate outstanding amount of all such advances, loans and extensions of credit (excluding travel advances in the ordinary course of business) does not at any time exceed \$750,000; and
  - (f) investments in money market mutual funds that are rated AAA by Standard & Poor's Rating Service.

"Permitted Liens" has the meaning set forth in Section 8.2.

"Person" means any natural person, corporation, limited liability company, trust, joint venture, association, company, partnership, Governmental Authority or other entity.

"<u>Plan</u>" means any employee benefit plan within the meaning of Section 3(3) of ERISA in which any Credit Party or any ERISA Affiliate is an "employer" as defined in Section 3(5) of ERISA, including, but not limited to, any Pension Plan or Multiemployer Plan.

"Platform" has the meaning set forth in Section 7.1.

"<u>Pledge Agreement</u>" means the Pledge Agreement originally dated as of December 29, 2004 as amended, modified and supplemented from time to time, as amended and restated by that certain Amended and Restated Pledge Agreement in the form of <u>Exhibit E</u> hereto by and between the Credit Parties and the Agent.

- "Post-Default Rate" means, a rate per annum equal to the Base Rate plus the Applicable Margin plus two percent (2%).
- "Prior Credit Agreement" has the meaning assigned to such term in the introductory paragraph hereto.
- "Property" means any interest of any kind in property or assets, whether real, personal or mixed, and whether tangible or intangible.
- "Proprietary Rights" has the meaning assigned to such term in Section 5.5(b).
- "PTO" means the United States Patent and Trademark Office or any successor or substitute office in which filings are necessary or, in the opinion of the Agent, desirable in order to create or perfect Liens on any IP Collateral.
  - "Quarterly Date" means the last day of any fiscal quarter of the Credit Parties.
  - "Real Property Asset" means, at any time of determination, any and all real property owned or leased by the Credit Parties.
- "Refunded Swing Loans" has the meaning assigned to such term in Section 2.6. "Register" has the meaning assigned to such term in Section 11.4.
  - "Registered Proprietary Rights" has the meaning assigned to such term in Section 5.5(c).
  - "Reimbursement Obligation" has the meaning assigned to such term in Section 2.4(c)(i).
- "<u>Related Parties</u>" means, with respect to any specified Person, such Person's Affiliates and the respective directors, officers, employees, agents and advisors of such Person and such Person's Affiliates.
- "Renewable Energy Project" means a project conducted by a Renewable Energy Subsidiary for (i) the construction and operation of a facility to process methane gas from a landfill site and/ or convert methane gas, sunlight, wind or biomass into useable energy and (ii) the sale of such methane gas and/ or energy produced from methane gas, sunlight, wind or biomass to one or more customers.
- "Renewable Energy Project Guaranty" means in connection with any Renewable Energy Project, (a) any Guarantee (other than a Construction Completion and Cost Overrun Guaranty) by the Borrower of the obligations of the Renewable Energy Subsidiary in connection with such Renewable Energy Project and (b) any indemnification by or from the Borrower of the owner of a landfill or other property used for such Renewable Energy Project or of a third party purchaser of landfill gas or energy produced from landfill gas, sunlight, wind or biomass in connection with such Renewable Energy Project; provided, however, that no Renewable Energy Project Guaranty shall guarantee the Indebtedness of any Person.
- "Renewable Energy Project Guaranty Liability" means, in connection with any Renewable Energy Project Guaranty, any liability required to be accrued on the consolidated balance sheet of the Core Ameresco Companies in accordance with GAAP.
- "Renewable Energy Subsidiaries" means (i) each of the Subsidiaries of the Borrower designated by the Borrower as a renewable energy subsidiary on Schedule 5.13 attached hereto as of the Effective Date and (ii) any other direct or indirect Subsidiary of the Borrower formed for the purpose of (x) constructing and/or operating any project for the construction and operation of a facility to process

methane gas from a landfill site and/or convert methane gas, sunlight, wind or biomass into useable energy and/or (y) selling such methane gas and/or energy produced from methane gas, sunlight, wind or biomass to one or more customers.

"Required Lenders" means, at any time when there is more than one Lender, at least two Lenders having Loans representing at least 66-2/3% of the sum of the aggregate Loans at such time, or at any time when there is only one Lender, such Lender.

"Restatement Date" means the date of the amendment and restatement of the Prior Credit Agreement, on which date the Effective Time shall occur.

"Restricted Junior Payment" means (i) any dividend or other distribution, direct or indirect, on account of any shares of any class of stock of, or other equity interest in, any Credit Party or any Subsidiary now or hereafter outstanding, except a dividend payable solely in shares of stock or other equity interests, (ii) any redemption, retirement, sinking fund or similar payment, purchase or other acquisition for value, direct or indirect, of any shares of any class of stock of, or other equity interest in, any Credit Party or any Subsidiary now or hereafter outstanding, (iii) any payment made to retire, or to obtain the surrender of, any outstanding warrants, options or other rights to acquire shares of any class of stock of, or other equity interest in, any Credit Party or any Subsidiary, (iv) any payment or prepayment of principal of, premium, if any, or interest on, or redemption purchase, retirement, defeasance (including economic or legal defeasance), sinking fund or similar payment with respect to, any Subordinated Indebtedness, and (v) any payment made to any Affiliates of any Credit Party or any Subsidiary in respect of management, consulting or other similar services provided to any Credit Party or any Subsidiary.

"Restrictive Agreements" has the meaning assigned to such term in Section 5.13(b).

"Revolving Credit Availability Period" means the period from and including the Effective Time to but excluding the earlier of (a) the Revolving Credit Maturity Date and (b) the date of termination of the Revolving Credit Commitments, as terminated by the Borrower pursuant to Section 2.7 or by the Agent pursuant to Section 9.2.

"Revolving Credit Commitment" means, with respect to each Lender, the commitment of such Lender to make Revolving Loans and to acquire participations in Letters of Credit hereunder, as such commitment may be (a) reduced from time to time pursuant to Sections 2.7 and 2.9, or reduced or increased from time to time pursuant to assignments by or to such Lender pursuant to Section 11.4. The initial maximum amount of each Lender's Revolving Credit Commitment is set forth on Schedule 2.1, or in the Assignment and Acceptance pursuant to which such Lender shall have assumed its Revolving Credit Commitment, as applicable. The aggregate original maximum amount of the Revolving Credit Commitments is equal to \$50,000,000.

"Revolving Credit Exposure" means, with respect to any Revolving Credit Lender at any time, the sum of the outstanding principal amount of such Lender's Revolving Loans at such time and such Lender's Applicable Percentage of the Total LC Exposure at such time, and in the case of the Swing Loan Lender, the aggregate outstanding principal amount of all Swing Loans which have not been refunded pursuant to Section 2.6(d).

"Revolving Credit Lender" means (a) initially, a Lender that has a Revolving Credit Commitment set forth opposite its name on Schedule 2.1 and (b) thereafter, the Lenders from time to time holding Revolving Loans and Revolving Credit Commitments, after giving effect to any assignments thereof permitted by Section 11.4.

"Revolving Loan" means a Loan made pursuant to Section 2.1 (a) that utilizes the Revolving Credit Commitments.

"Revolving Credit Maturity Date" means June 30, 2011.

"Revolving Credit Notes" means the promissory notes, substantially in the form of Exhibit A annexed hereto, issued by the Borrower in favor of the Revolving Credit Lenders.

"Sakellaris Group" means George Sakellaris, Mr. Sakellaris' family members and trusts established for the benefit of Mr. Sakellaris' family members.

"Settlement Date" has the meaning assigned to such term in subsection 2.5(d).

"Settlement Loan" has the meaning assigned to such term in subsection 2.5(e).

"SL Deficiency Amount" has the meaning assigned to such term in subsection 2.6(c).

"Special Counsel" means Edwards Angell Palmer & Dodge LLP, in its capacity as special counsel to Bank of America, N.A., as Agent of the credit facilities contemplated hereby.

"Special Purpose Subsidiaries" means the Hawaii Joint Venture, the Non-Core Energy Subsidiaries and the Funding Subsidiaries.

"Subordinated Debt Documents" means all instruments, agreements and other documents executed and delivered by the Credit Parties in connection with Subordinated Indebtedness.

"Subordinated Indebtedness" means (a) the Subordinated Note and (b) any other Indebtedness of the Core Ameresco Companies incurred after the Restatement Date with the consent of the Agent that by its terms (or by the terms of the instrument under which it is outstanding and to which appropriate reference is made in the instrument evidencing such Subordinated Indebtedness) is made subordinate and junior in right of payment to the Loans and to the other Obligations of the Credit Parties by provisions in form and substance reasonably satisfactory to the Agent and Special Counsel.

"Subordinated Note" means the Promissory Note issued by the Borrower to George Sakellaris on May 17, 2000 in the original principal amount of \$2,998,750.00, as amended from time to time.

"Subordination Agreement" means the Subordination Agreement dated as of December 29, 2004 (as amended and confirmed as of the Restatement Date), among George Sakellaris, the Credit Parties and the Agent, as such agreement may be further amended, supplemented or otherwise modified from time to time from and after the Restatement Date.

"Subsidiary" means, with respect to any Person (the "parent") at any date, any corporation, limited liability company, partnership, association or other entity the accounts of which would be consolidated with those of the parent in the parent's consolidated financial statements if such financial statements were prepared in accordance with GAAP as of such date, as well as any other corporation, limited liability company, partnership, association or other entity (a) of which securities or other ownership interests representing more than 50% of the ordinary voting power or, in the case of a partnership, more than 50% of the general partnership interests are, as of such date, owned, controlled or held, or (b) that is, as of such date, otherwise Controlled (as described in the first sentence of the definition of "Control"), by the parent and/or one or more subsidiaries of the parent. References herein to

"Subsidiaries" shall, unless the context requires otherwise, be deemed to be references to Subsidiaries of the Borrower.

"Swing Loan" has the meaning specified in Section 2.6.

"Swing Loan Commitment" means the commitment of the Swing Loan Lender to make Swing Loans, as such commitment may be (a) reduced from time to time pursuant to Sections 2.7 and 2.9 and (b) reduced or increased from time to time pursuant to assignments by the Swing Loan Lender pursuant to Section 11.4. The original amount of the Swing Loan Commitment is equal to \$3,000,000.

"Swing Loan Lender" means Bank of America, in its capacity as the Swing Loan Lender, together with its successors and assigns in such capacity.

"Swing Loan Note" means the promissory note, substantially in the form of Exhibit A-2, issued by the Borrower in favor of the Swing Loan Lender to evidence the Swing Loans.

"Swing Loan Request" has the meaning assigned to such term in Section 2.6.

"Tangible Capital Base" means, at any time an amount (determined on a consolidated basis without duplication in accordance with GAAP) equal to (a) the sum of (i) the book net worth of the Core Ameresco Companies on a consolidated basis, <u>plus</u> (ii) the outstanding principal amount of Subordinated Indebtedness, if any, <u>minus</u> (b) the total book value of all assets of the Core Ameresco Companies on a consolidated basis which would be treated as intangible assets under GAAP, including without limitation, such items as goodwill, customer lists, Patents, Copyrights and Trademarks, and rights (including rights under licenses) with respect to the foregoing, <u>minus</u> (c) all accounts receivable, notes receivable and other amounts due and owing to any Core Ameresco Company from any Affiliate of a Core Ameresco Company, <u>minus</u> (d) all Investments in Affiliates of any Core Ameresco Company, <u>minus</u> (e) any Renewable Energy Project Guaranty Liabilities.

"<u>Taxes</u>" means any and all present or future taxes, levies, imposts, duties, deductions, charges or withholdings imposed by any Governmental Authority.

"Total Funded Debt" means the outstanding principal amount of all Indebtedness of the Core Ameresco Companies determined on a consolidated basis (without duplication) in respect of borrowed money, including (i) all Indebtedness described in clauses (a), (b) and (c) of the definition of Indebtedness set forth herein and (ii) all Renewable Energy Project Guaranty Liabilities, but excluding any Indebtedness incurred by the Credit Parties in connection with any Energy Conservation Project Financing.

"<u>Total LC Exposure</u>" means, at any time, the sum of (a) 100% of the aggregate undrawn amount of all outstanding standby and documentary Letters of Credit at such time <u>plus</u> (b) the aggregate amount of all LC Disbursements that have not yet been reimbursed by or on behalf of the Borrower at such time.

"<u>Total Voting Power</u>" means, with respect to any Person, the total number of votes which holders of securities having the ordinary power to vote, in the absence of contingencies, are entitled to cast in the election of directors of such Person.

"<u>Trademarks</u>" means all trademarks (including service marks), federal and state trademark registrations and applications made by the Credit Parties, common law trademarks and trade names owned by or assigned to the Credit Parties, all registrations and applications for the foregoing and all exclusive and nonexclusive licenses from third parties of the right to use trademarks of such third parties,

including, without limitation, the registrations, applications, unregistered trademarks, service marks and licenses listed on Schedule 5.5 hereto, along with any and all (a) renewals thereof, (b) income, royalties, damages and payments now and hereafter due and/or payable with respect thereto, including, without limitation, damages, claims and payments for past or future infringements thereof, (c) rights to sue for past, present and future infringements thereof, and (d) foreign trademarks, trademark registrations, and trade name applications for any thereof and any other rights corresponding thereto throughout the world.

"Type" when used in reference to any Loan or Borrowing, refers to whether the rate of interest on such Loan, or on the Loans comprising such Borrowing, is determined by reference to the Eurodollar Rate or the Base Rate.

"UCC" means the Uniform Commercial Code (or any similar or equivalent legislation) as in effect in any applicable jurisdiction.

"Unreimbursed Amount" has the meaning set forth in Section 2.4(c)(i).

"U.S. Dollars" or "\$" refers to lawful money of the United States of America.

"Wholly Owned Subsidiary" means, with respect to any Person at any date, any corporation, limited liability company, partnership, association or other entity of which securities or other ownership interests representing 100% of the equity or ordinary voting power (other than directors' qualifying shares) or, in the case of a partnership, 100% of the general partnership interests are, as of such date, directly or indirectly owned, controlled or held by such Person or one or more Wholly Owned Subsidiaries of such Person or by such Person and one or more Wholly Owned Subsidiaries of such Person.

"Withdrawal Liability" means liability to a Multiemployer Plan as a result of a complete or partial withdrawal from such Multiemployer Plan, as such terms are defined in Part I of Subtitle E of Title IV of ERISA.

- 1.2 **Terms Generally**. The definitions of terms herein shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words "include", "includes" and "including" shall be deemed to be followed by the phrase "without limitation". The word "will" shall be construed to have the same meaning and effect as the word "shall". Unless the context requires otherwise (a) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein), (b) any reference herein to any Person shall be construed to include such Person's successors and assigns, (c) the words "herein", "hereof" and "hereunder", and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof, (d) all references herein to Articles, Sections, Exhibits and Schedules shall be construed to refer to Articles and Sections of, and Exhibits and Schedules to, this Agreement and (e) the words "asset" and "property" shall be construed to have the same meaning and effect and to refer to any and all tangible and intangible assets and properties, including cash, securities, accounts and contract rights.
- 1.3 **Accounting Terms; GAAP**. Except as otherwise expressly provided herein, all terms of an accounting or financial nature shall be construed in accordance with GAAP, as in effect from time to time; provided that, if the Borrower notifies the Agent that the Borrower requests an amendment to any provision hereof to eliminate the effect of any change occurring after the date hereof in GAAP or in the application thereof on the operation of such provision (or if the Agent notifies the Borrower that the

Required Lenders request an amendment to any provision hereof for such purpose), regardless of whether any such notice is given before or after such change in GAAP or in the application thereof, then such provision shall be interpreted on the basis of GAAP as in effect and applied immediately before such change shall have become effective until such notice shall have been withdrawn or such provision shall have been amended in accordance herewith.

### 1.4 Joint and Several Obligations; Designated Financial Officers.

- (a) All Obligations of the Credit Parties hereunder shall be joint and several. Any notice, request, waiver, consent or other action made, given or taken by any Credit Party shall bind all Credit Parties.
- (b) Each Credit Party hereby authorizes each of the Designated Financial Officers listed in Schedule 1.4 hereto to act as agent for each Credit Party and to execute and deliver on behalf of each Credit Party such notices, requests, waivers, consents, certificates and other documents, and to take any and all actions required or permitted to be delivered or taken by any Credit Party hereunder. The Borrower may replace any of the Designated Financial Officers listed in Schedule 1.4 hereto or add any additional Designated Financial Officers by delivering written notice to the Agent specifying the names of each new Designated Financial Officer and the offices held by each such Person. Each Credit Party hereby agrees that any such notices, requests, waivers, consents, certificates and other documents executed, delivered or sent by any Designated Financial Officer and any such actions taken by any Designated Financial Officer shall bind each Credit Party.
- 1.5 **Letter of Credit Amounts**. Unless otherwise specified herein the amount of a Letter of Credit at any time shall be deemed to be the stated amount of such Letter of Credit in effect at such time; provided, however, that with respect to any Letter of Credit that, by its terms or the terms of any Issuer Document related thereto, provides for one or more automatic increases or decreases, as the case may be, in the stated amount thereof, the amount of such Letter of Credit shall be deemed to be the maximum stated amount of such Letter of Credit after giving effect to all such increases or decreases, as the case may be, whether or not such maximum stated amount is in effect at such time.

#### **ARTICLE II**

#### The Credits

### 2.1 Revolving Loans.

(a) Revolving Credit Commitments. Subject to the terms and conditions set forth herein, each Revolving Credit Lender agrees to make Revolving Loans to the Borrower from time to time during the Revolving Credit Availability Period in an aggregate principal amount that will not result in such Lender's Revolving Credit Exposure exceeding such Lender's Revolving Credit Commitment at such time; provided that the total Revolving Credit Exposure (after giving effect to any requested Revolving Credit Borrowing and any repayment of Swing Loans effected by any requested Revolving Credit Borrowing) shall not at any time exceed the total Revolving Credit Commitments of all Revolving Credit Lenders at such time. Within the foregoing limits and subject to the terms and conditions set forth herein, the Borrower may borrow, prepay and reborrow Revolving Loans.

### (b) Funding of Revolving Loans.

(i) At all times when the AutoBorrow Agreement is in effect, subject to the satisfaction of the conditions set forth in Section 6.2 with respect to the funding of such

Revolving Loan, each Revolving Loan shall be made in accordance with the terms of the AutoBorrow Agreement; <u>provided</u> that (x) the aggregate amount of Revolving Loans made in accordance with the terms of the AutoBorrow Agreement shall not exceed \$10,000,000 at any time and (y) Revolving Loans made to finance the reimbursement of an LC Disbursement shall be made in accordance with the terms of Section 2.1(b)(ii).

- (ii) To request a Borrowing at any time following the termination of the AutoBorrow Agreement, (except requests for Swing Loan Borrowings which are subject to Section 2.6(b)), the Borrower shall notify the Agent of such request by telephone (i) in the case of a LIBOR Borrowing, not later than 1:00 p.m., Boston, Massachusetts time, three Business Days before the date of the proposed Borrowing or (ii) in the case of a Base Rate Borrowing not later than 1:00 p.m., Boston, Massachusetts time, one Business Day before the date of the proposed Borrowing; provided that any such notice of a Base Rate Borrowing to finance the reimbursement of an LC Disbursement as contemplated by Section 2.4(c) may be given not later than 11:00 a.m., Boston, Massachusetts time, on the date of the proposed Borrowing provided further that the Borrower shall use Swing Loan Borrowings to finance the reimbursement of an LC Disbursement except to the extent that such Borrowings would cause the aggregate principal balance of all Swing Loans outstanding to exceed the Swing Loan Commitment, in which case the Borrower may use Base Rate Revolving Credit Borrowings to finance such reimbursement, but only to the extent of such excess. Each such telephonic Advance Request shall be irrevocable and shall be confirmed promptly by hand delivery, telecopy or electronic transmission to the Agent of a written Advance Request in the form of Exhibit B hereto, setting forth all of the information required to be set forth therein, and signed by a Designated Financial Officer of the Borrower. Promptly following receipt of an Advance Request in compliance with this subsection 2.1(b), the Agent shall advise each Lender of the details thereof and of the amount of such Lender's Revolving Loan to be made as part of the requested Borrowing, and provided that no Default under Section 9.1(a)(ii) or Event of Default shall have occurred and be continuing or shall result therefrom, (i) in the case of a LIBOR Borrowing, on the date three Business Days after such Advance Request is delivered to the Agent and (ii) in the case of a Base Rate Borrowing, on the date one Business Day thereafter, such Advance Request is delivered to the Agent, the Lenders shall make a Revolving Loan to the Borrower in accordance with the terms of Section 2.5 in an amount equal to the amount set forth in such Advance Request.
- (c) Interest on Revolving Loans. Subject to Section 2.3 hereof, each Revolving Loan made to the Borrower by the Lenders hereunder shall bear interest at a rate per annum equal to the Base Rate plus the Applicable Margin; provided that all Revolving Loans made in accordance with the AutoBorrow Agreement shall bear interest at a rate per annum equal to the Eurodollar Rate applicable to Revolving Loans having an Interest Period of one month, plus the Applicable Margin. Notwithstanding the foregoing, (i) all Revolving Loans which are not paid when due shall automatically bear interest until paid in full at the Post-Default Rate, (ii) during the period when any Event of Default of the type described in clauses (g), (h) or (i) of Section 9.1 shall have occurred and be continuing, the principal of all Revolving Loans hereunder shall automatically bear interest, after as well as before judgment, at the Post-Default Rate, (iii) if there shall occur and be continuing any Event of Default (other than an Event of Default of the type described in clauses (g), (h) or (i) of Section 9.1), following written notice delivered to the Borrower from the Agent at the request of the Required Lenders, the principal of all Revolving Loans hereunder shall bear interest, after as well as before judgment, at the Post-Default Rate during the period beginning on the date such Event of Default first occurred, and ending on the date such Event of Default is cured or waived. Except as otherwise provided in Section 2.3(b) hereof, accrued interest on each Revolving Loan shall be payable in arrears on the first day of each month; provided that interest accrued at the Post-Default Rate shall be payable on demand, and all accrued interest on Revolving Loans shall be payable upon expiration of the Revolving Credit Availability Period. All interest hereunder shall be

computed on the basis of a year of 360 days, and in each case shall be payable for the actual number of days elapsed (including the first day but excluding the last day). The applicable Base Rate shall be determined by the Agent, and such determination shall be conclusive absent manifest error.

- (d) Repayment of Revolving Loans. The Borrower unconditionally promises to pay to the Agent for the account of each Revolving Credit Lender the then unpaid principal amount of such Lender's Revolving Loans on the Revolving Credit Maturity Date. In addition, if following any reduction in the Revolving Credit Commitments or at any other time the Revolving Credit Exposure shall exceed the Revolving Credit Commitment at such time, the Borrower shall first, repay Swing Loans, second, repay Revolving Loans, and third, to the extent necessary, provide cash collateral for Total LC Exposure as specified in Section 2.4(h), in an aggregate amount equal to such excess. In addition, at all times when the AutoBorrow Agreement is in effect, the Borrower shall repay outstanding Revolving Loans in accordance with the terms of the AutoBorrow Agreement.
- (e) <u>Loan Accounts</u>. Each Revolving Credit Lender shall maintain in accordance with its usual practice an account evidencing the indebtedness of the Borrower to such Lender resulting from each Revolving Loan made by such Lender, including the amounts of principal and interest payable and paid to such Lender from time to time hereunder. The Agent shall maintain accounts in which it shall record the amount of each Revolving Loan made hereunder, the amount of any principal or interest due and payable or to become due and payable from the Borrower to each Revolving Credit Lender hereunder and the amount of any sum received by the Agent hereunder for the account of the Revolving Credit Lenders and each Revolving Credit Lender's share thereof. The entries made in the account maintained by the Agent pursuant to this subsection 2.1(e) shall absent manifest error be prima facie evidence of the existence and amounts of the obligations recorded therein; <u>provided</u> that the failure of the Agent to maintain such account or any error therein shall not in any manner affect the obligation of the Borrower to repay the Revolving Loans in accordance with the terms of this Agreement.
- (f) <u>Revolving Credit Notes</u>. Prior to the Restatement Date, the Borrower shall prepare, execute and deliver to each Revolving Credit Lender a Revolving Credit Note in the principal amount of such Lender's Revolving Credit Commitment. Thereafter, the Revolving Loans of each Revolving Credit Lender evidenced by such Revolving Credit Note and interest thereon shall at all times (including after assignment pursuant to Section 11.4) be represented by one or more promissory notes in such form payable to the order of the payee named therein.
  - 2.2 [Reserved.]

# 2.3 LIBOR Borrowings.

- (a) <u>General</u>. Each Revolving Loan initially shall be a Base Rate Loan. Thereafter, the Borrower may elect to convert any portion of the outstanding Revolving Loans to a LIBOR Borrowing. The Borrower may elect different options for continuations and conversions with respect to different portions of the affected Borrowing, except with respect to Swing Loans, in which case the Loans comprising each such portion shall be considered a separate Borrowing. The Borrower shall not be permitted to select any Interest Period for any LIBOR Borrowing that ends after the Revolving Credit Maturity Date.
- (b) <u>Interest on LIBOR Borrowings</u>. Each LIBOR Borrowing shall bear interest during the applicable Interest Period at a rate per annum equal to the Eurodollar Rate plus the Applicable Margin. Notwithstanding the foregoing, (i) all LIBOR Borrowings which are not paid when due shall automatically be converted into Base Rate Borrowings and shall bear interest until paid in full at the Post-Default Rate, (ii) during the period when any Event of Default of the type described in clauses (g), (h) or

- (i) of Section 9.1 shall have occurred and be continuing, all LIBOR Borrowings shall automatically be converted into Base Rate Borrowings and shall bear interest, after as well as before judgment, at the Post-Default Rate, (iii) if there shall occur and be continuing any Event of Default (other than an Event of Default of the type described in clauses (g), (h) or (i) of Section 9.1), following written notice delivered to the Borrower from the Agent at the request of the Required Lenders, all LIBOR Borrowings shall automatically be converted into Base Rate Borrowings and shall bear interest, after as well as before judgment, at the Post-Default Rate during the period beginning on the date such Event of Default first occurred, and ending on the date such Event of Default is cured or waived. Accrued interest on each LIBOR Borrowing shall be payable in arrears on the last Business Day of the Interest Period applicable to such LIBOR Borrowing; provided that (a) in the case of a LIBOR Borrowing with a Interest Period of more than three months' duration, accrued interest shall be due on the last Business Day of such Interest Period and on the last Business Day of each three month period, and (b) interest accrued at the Post-Default Rate shall be payable on demand. All interest hereunder shall be computed on the basis of a year of 360 days, and in each case shall be payable for the actual number of days elapsed (including the first day but excluding the last day). The applicable Eurodollar Rate or Eurodollar Base Rate shall be determined by the Agent, and such determination shall be conclusive absent manifest error.
- (c) Procedure for Requesting LIBOR Borrowings. To request that any portion of the outstanding Revolving Loans be converted into a LIBOR Borrowing, or, to request that any LIBOR Borrowing continue as a LIBOR Borrowing for an additional Interest Period, the Borrower shall notify the Agent of such request by telephone (i) in the case of a LIBOR Borrowing, not later than 1:00 p.m., Boston, Massachusetts time, three Business Days before the date of the proposed conversion or continuation of such Borrowing. Each such Interest Election Request made by the Borrower shall be irrevocable and shall be confirmed promptly by hand delivery, telecopy or electronic transmission to the Agent of a written Advance Request in the form of Exhibit B hereto, setting forth all of the information required to be set forth therein, and signed by a Designated Financial Officer of the Borrower. No Swing Loan shall be converted from a Base Rate Borrowing to a LIBOR Borrowing. Promptly following receipt of an Interest Election Request, the Agent shall advise each affected Lender of the details thereof and of such Lender's portion of each resulting Borrowing. Subject to the provisions of subsection 2.3(f) and provided that no Default or Event of Default shall have occurred and be continuing and the Agent, at the request of the Required Lenders shall have so notified the Borrower, upon receipt of an Interest Election Request, the Lenders shall on the requested date of conversion or continuation (i) convert the Base Rate Loan requested to be converted into a LIBOR Loan for the Interest Period set forth in such Interest Election Request and/or (ii) continue the LIBOR Loan requested to be continued as a LIBOR Loan for the additional Interest Period set forth in such Interest Election Request. Each Lender at its option may make any LIBOR Loan by causing any domestic or foreign branch of any Affiliate of such Lender to make such Loan; provided that any exercise of such option shall not affect the obligation of the Borrower to repay such Loan in accordance with the terms of this Agreement.
- (d) <u>Incomplete Interest Election Requests</u>. If any Interest Election Request is incomplete in any respect, then such Interest Election Request shall be void and the Borrowing which was the subject matter of such Interest Election Request shall continue as a Base Rate Borrowing. If, with respect to any existing LIBOR Borrowing, the Borrower fails to deliver an Interest Election Request to continue such LIBOR Borrowing at least three Business Days prior to the expiration of the Interest Period for such existing LIBOR Borrowing, such LIBOR Borrowing shall automatically convert to a Base Rate Borrowing at the expiration of such Interest Period.
- (e) <u>Limit on LIBOR Borrowings</u>. At the commencement of each Interest Period for a LIBOR Borrowing, such Borrowing shall be in an aggregate amount at least equal to \$500,000 or any greater multiple of \$100,000. Borrowings of more than one Type may be outstanding at the same time; <u>provided</u> that there shall not at any time be more than a total of seven (7) LIBOR Borrowings outstanding.

- (f) Alternate Rate of Interest. If prior to the commencement of any Interest Period for a LIBOR Borrowing, (i) the Agent determines (which determination shall be conclusive absent manifest error) that adequate and reasonable means do not exist for ascertaining the Eurodollar Rate or the Eurodollar Base Rate for such Interest Period, (ii) the Agent is advised by the Required Revolving Credit Lenders that the Eurodollar Rate or the Eurodollar Base Rate for such Interest Period will not adequately and fairly reflect the cost to such Lenders of making or maintaining their Loans included in such LIBOR Borrowing, or (iii) if the Agent or any Lender shall have determined in good faith that as a result of any Change in Law it is unlawful or impossible for any Lender to make or maintain any LIBOR Borrowing; then in each case the Agent shall give notice thereof to the Borrower and the affected Lenders by telephone or telecopy as promptly as practicable thereafter and, until the Agent notifies the Borrower and such Lenders that the circumstances giving rise to such notice no longer exist, any Interest Election Request submitted by the Borrower shall be ineffective; provided that if as a result of a Change in Law the Lenders are prohibited from maintaining any outstanding LIBOR Borrowing, upon notice from the Agent, the Borrower shall immediately (A) convert such LIBOR Borrowing to a Base Rate Loan, or (B) repay such LIBOR Borrowing in full, together with all interest accrued thereon and all fees and other amounts payable to the Lenders hereunder (in either case, subject to the provisions of subsection 2.3(g) of this Agreement with respect to redeployment costs).
- (g) <u>Break Funding Payments</u>. In the event of (i) the payment of any principal of any LIBOR Loan other than on the last day of the Interest Period applicable thereto (including as a result of an Event of Default), (ii) the conversion of any LIBOR Loan other than on the last day of the Interest Period applicable thereto, or (iii) the failure to borrow, convert, continue or prepay any LIBOR Loan on the date specified in any notice delivered pursuant hereto (regardless of whether such notice is permitted to be revocable and is revoked in accordance herewith), then, in any such event, the Borrower shall compensate each Lender for the loss, cost and expense attributable to such event, as determined by such Lender in a manner consistent with its customs and practices. In the event that any Lender is entitled to receive compensation pursuant to this subsection 2.3(g), such Lender shall deliver a certificate to the Borrower setting forth the amount or amounts that such Lender is entitled to receive, and the Borrower shall pay such Lender such amount or amounts within three (3) days after receipt of such certificate.

#### 2.4 Letters of Credit.

(a) General. Subject to the terms and conditions set forth herein, in addition to the Revolving Loans provided for in Section 2.6(a), the Borrower may request the issuance of Letters of Credit for its own account by the Issuing Lender, in a form reasonably acceptable to the Issuing Lender, at any time and from time to time during the Revolving Credit Availability Period. Letters of Credit issued hereunder shall constitute utilization of the Revolving Credit Commitments and, without limitation of the provisions of Section 2.1 (a), in no event shall the Total LC Exposure at any time exceed \$10,000,000. In the event of any inconsistency between the terms and conditions of this Agreement and the terms and conditions of any form of letter of credit application or other agreement submitted by the Borrower to, or entered into by the Borrower with, the Issuing Lender relating to any Letter of Credit, the terms and conditions of this Agreement shall control. Each of the letters of credit identified on Schedule 2.4 (collectively, the "Existing Letters of Credit") shall be deemed to have been issued pursuant hereto, and from and after the Restatement Date shall be subject to and governed by the terms and conditions hereof so long as they remain outstanding.

### (b) Procedures for Issuance, Amendment and Extension of Letters of Credit.

(i) Each Letter of Credit shall be issued or amended, as the case may be, upon the request of the Borrower delivered to the Issuing Lender (with a copy to the Agent) in the form of an LC Application, appropriately completed and signed by a Designated Financial

Officer of the Borrower. Such LC Application must be received by the Issuing Lender and the Agent not later than 11:00 a.m. Boston, Massachusetts time at least two Business Days (or such later date and time as the Agent and the Issuing Lender may agree in a particular instance in their sole discretion) prior to the proposed issuance date or date of amendment, as the case may be. In the case of a request for an initial issuance of a Letter of Credit, such LC Application shall specify in form and detail satisfactory to the Issuing Lender: (A) the proposed issuance date of the requested Letter of Credit (which shall be a Business Day); (B) the amount thereof; (C) the expiry date thereof; (D) the name and address of the beneficiary thereof; (E) the documents to be presented by such beneficiary in case of any drawing thereunder; (F) the full text of any certificate to be presented by such beneficiary in case of any drawing thereunder; (G) the purpose and nature of the requested Letter of Credit; and (H) such other matters as the Issuing Lender may reasonably require. In the case of a request for an amendment of any outstanding Letter of Credit, such LC Application shall specify in form and detail reasonably satisfactory to the Issuing Lender (A) the Letter of Credit to be amended; (B) the proposed date of amendment thereof (which shall be a Business Day); (C) the nature of the proposed amendment; and (D) such other matters as the Issuing Lender may reasonably require. Additionally, the Borrower shall furnish to the Issuing Lender and the Agent such other documents and information pertaining to such requested Letter of Credit issuance or amendment, including any Issuer Documents, as the Issuing Lender or the Agent may require.

- (ii) Promptly after receipt of any LC Application, the Issuing Lender will confirm with the Agent (by telephone or in writing) that the Agent has received a copy of such LC Application from the Borrower and, if not, the Issuing Lender will provide the Agent with a copy thereof. Unless the Issuing Lender has received written notice from any Lender, the Agent or any Loan Party, at least one Business Day prior to the requested date of issuance or amendment of the applicable Letter of Credit, that one or more applicable conditions in Article 6 shall not then be satisfied, then, subject to the terms and conditions hereof, the Issuing Lender shall, on the requested date, issue a Letter of Credit for the account of the Borrower or enter into the applicable amendment, as the case may be, in each case in accordance with the Issuing Lender's usual and customary business practices. Immediately upon the issuance of each Letter of Credit, each Lender shall be deemed to, and hereby irrevocably and unconditionally agrees to, purchase from the Issuing Lender a risk participation in such Letter of Credit in an amount equal to the product of such Lender's Applicable Percentage multiplied by the amount of such Letter of Credit.
- (iii) Promptly after its delivery of any Letter of Credit or any amendment to a Letter of Credit to an advising bank with respect thereto or to the beneficiary thereof, the Issuing Lender will also deliver to the Borrower and the Agent a true and complete copy of such Letter of Credit or amendment.
- (iv) If the Borrower so requests in any applicable LC Application, the Issuing Lender may, in its sole and absolute discretion, agree to issue a Letter of Credit that has automatic extension provisions (each, an "<u>Auto-Extension Letter of Credit</u>"); <u>provided</u> that any such Auto-Extension Letter of Credit must permit the Issuing Lender to prevent any such extension at least once in each twelve-month period (commencing with the date of issuance of such Letter of Credit) by giving prior notice to the beneficiary thereof not later than a day (the "<u>Non-Extension Notice Date</u>") in each such twelve-month period to be agreed upon at the time such Letter of Credit is issued. Unless otherwise directed by the Issuing Lender, the Borrower shall not be required to make a specific request to the Issuing Lender for any such extension. Once an Auto-Extension Letter of Credit has been issued, the Lenders shall be deemed to have authorized (but may not require) the Issuing Lender to permit the extension of such Letter of Credit at any time to

an expiry date not later than the L/C Expiration Date; <u>provided</u>, however, that the Issuing Lender shall not permit any such extension if (A) the Issuing Lender has determined that it would not be permitted, or would have no obligation, at such time to issue such Letter of Credit in its revised form (as extended) under the terms hereof (by reason of the provisions of clause (ii) or (iii) of Section 2.03(a) or otherwise), or (B) it has received notice (which may be by telephone or in writing) on or before the day that is five Business Days before the Non-Extension Notice Date (1) from the Agent that the Required Lenders have elected not to permit such extension or (2) from the Agent, any Lender or the Borrower that one or more of the applicable conditions specified in Section 4.02 is not then satisfied, and in each such case directing the Issuing Lender not to permit such extension.

# (c) Drawings and Reimbursements; Funding of Participations.

- (i) Upon receipt from the beneficiary of any Letter of Credit of any notice of a drawing under such Letter of Credit, the Issuing Lender shall notify the Borrower and the Agent thereof. Not later than 11:00 a.m. Boston, Massachusetts time on the date of any payment by the Issuing Lender under a Letter of Credit (each such date, an "Honor Date"), the Borrower shall reimburse the Issuing Lender through the Agent in an amount equal to the amount of such drawing (each such obligation of the Borrower, a "Reimbursement Obligation"). If the Borrower fails to pay any Reimbursement Obligation to the Issuing Lender by such time, the Agent shall promptly notify each Lender of the Honor Date, the amount of the unreimbursed drawing (the "Unreimbursed Amount"), and the amount of such Lender's Applicable Percentage thereof. In such event, the Borrower shall be deemed to have requested a Borrowing of Base Rate Loans to be disbursed on the Honor Date in an amount equal to the Unreimbursed Amount, but subject to the amount of the unutilized portion of the Commitments and the conditions set forth in Section 6.2 (other than the delivery of an Advance Request). Any notice given by the Issuing Lender or the Agent pursuant to this Section 2.4(c)(i) may be given by telephone if immediately confirmed in writing; provided that the lack of such an immediate confirmation shall not affect the conclusiveness or binding effect of such notice.
- (ii) Each Lender shall upon any notice pursuant to Section 2.4(c)(i) make funds available to the Agent for the account of the Issuing Lender in an amount equal to its Applicable Percentage of the Unreimbursed Amount not later than 1:00 p.m. Boston, Massachusetts time on the Business Day specified in such notice by the Agent, whereupon, subject to the provisions of Section 2.4(c) (iii), each Lender that so makes funds available shall be deemed to have made a Base Rate Loan to the Borrower in such amount. The Agent shall remit the funds so received to the Issuing Lender.
- (iii) With respect to any Unreimbursed Amount that is not fully refinanced by a Borrowing of Base Rate Loans because the conditions set forth in Section 6.2 cannot be satisfied or for any other reason, the Borrower shall be deemed to have incurred from the Issuing Lender an LC Disbursement in the amount of the Unreimbursed Amount that is not so refinanced, which LC Disbursement shall be due and payable on demand (together with interest) and shall bear interest at the Default Rate. In such event, each Lender's payment to the Agent for the account of the Issuing Lender pursuant to Section 2.4(c)(ii) shall be deemed payment in respect of its participation in such LC Disbursement and shall constitute an LC Advance from such Lender in satisfaction of its participation obligation under this Section 2.4.
- (iv) Until each Lender funds its Base Rate Loan or LC Advance pursuant to this Section 2.4(c) to reimburse the Issuing Lender for any amount drawn under any Letter of

Credit, interest in respect of such Lender's Applicable Percentage of such amount shall be solely for the account of the Issuing Lender.

- (v) Each Lender's obligation to make Base Rate Loans or LC Advances to reimburse the Issuing Lender for amounts drawn under Letters of Credit, as contemplated by this Section 2.4(c), shall be absolute and unconditional and shall not be affected by any circumstance, including (A) any setoff, counterclaim, recoupment, defense or other right which such Lender may have against the Issuing Lender, the Borrower or any other Person for any reason whatsoever; (B) the occurrence or continuance of a Default, or (C) any other occurrence, event or condition, whether or not similar to any of the foregoing; provided, however, that each Lender's obligation to make Committed Loans pursuant to this Section 2.4(c) is subject to the conditions set forth in Section 6,2 (other than delivery by the Borrower of an Advance Request). No such making of an LC Advance shall relieve or otherwise impair the obligation of the Borrower to reimburse the Issuing Lender for the amount of any payment made by the Issuing Lender under any Letter of Credit, together with interest as provided herein.
- (vi) If any Lender fails to make available to the Agent for the account of the Issuing Lender any amount required to be paid by such Lender pursuant to the foregoing provisions of this Section 2.4(c) by the time specified in Section 2.4(c)(ii), the Issuing Lender shall be entitled to recover from such Lender (acting through the Agent), on demand, such amount with interest thereon for the period from the date such payment is required to the date on which such payment is immediately available to the Issuing Lender at a rate per annum equal to the greater of the Federal Funds Effective Rate and a rate determined by the Issuing Lender in accordance with banking industry rules on interbank compensation, plus any administrative, processing or similar fees customarily charged by the Issuing Lender in connection with the foregoing. If such Lender pays such amount (with interest and fees as aforesaid), the amount so paid shall constitute such Lender's Loan included in the relevant Borrowing or LC Advance in respect of the relevant LC Disbursement, as the case may be. A certificate of the Issuing Lender submitted to any Lender (through the Agent) with respect to any amounts owing under this clause (vi) shall be conclusive absent manifest error.

# (d) Repayment of Participations.

- (i) At any time after the Issuing Lender has made a payment under any Letter of Credit and has received from any Lender such Lender's LC Advance in respect of such payment in accordance with Section 2.4(c), if the Agent receives for the account of the Issuing Lender any payment in respect of the related Unreimbursed Amount or interest thereon (whether directly from the Borrower or otherwise, including proceeds of cash collateral applied thereto by the Agent), the Agent will distribute to such Lender its Applicable Percentage thereof in the same funds as those received by the Agent.
- (ii) If any payment received by the Agent for the account of the Issuing Lender pursuant to Section 2.4(c)(i) is required to be returned under any of the circumstances described in Section 11.15 (including pursuant to any settlement entered into by the Issuing Lender in its discretion), each Lender shall pay to the Agent for the account of the Issuing Lender its Applicable Percentage thereof on demand of the Agent, plus interest thereon from the date of such demand to the date such amount is returned by such Lender, at a rate per annum equal to the Federal Funds Effective Rate from time to time in effect. The obligations of the Lenders under this clause shall survive the payment in full of the Obligations and the termination of this Agreement.

- (e) <u>Obligations Absolute</u>. The obligation of the Borrower to reimburse the Issuing Lender for Reimbursement Obligations and to repay each LC Disbursement shall be absolute, unconditional and irrevocable, and shall be paid strictly in accordance with the terms of this Agreement under all circumstances, including the following:
  - (i) any lack of validity or enforceability of such Letter of Credit, this Agreement, or any other Loan Document;
  - (ii) the existence of any claim, counterclaim, setoff, defense or other right that the Borrower or any Subsidiary may have at any time against any beneficiary or any transferee of such Letter of Credit (or any Person for whom any such beneficiary or any such transferee may be acting), the Issuing Lender or any other Person, whether in connection with this Agreement, the transactions contemplated hereby or by such Letter of Credit or any agreement or instrument relating thereto, or any unrelated transaction;
  - (iii) any draft, demand, certificate or other document presented under such Letter of Credit proving to be forged, fraudulent, invalid or insufficient in any respect or any statement therein being untrue or inaccurate in any respect; or any loss or delay in the transmission or otherwise of any document required in order to make a drawing under such Letter of Credit;
  - (iv) any payment by the Issuing Lender under such Letter of Credit against presentation of a draft or certificate that does not strictly comply with the terms of such Letter of Credit; or any payment made by the Issuing Lender under such Letter of Credit to any Person purporting to be a trustee in bankruptcy, debtor-in-possession, assignee for the benefit of creditors, liquidator, receiver or other representative of or successor to any beneficiary or any transferee of such Letter of Credit, including any arising in connection with any proceeding under any Debtor Relief Law; or
  - (v) any other circumstance or happening whatsoever, whether or not similar to any of the foregoing, including any other circumstance that might otherwise constitute a defense available to, or a discharge of, the Borrower or any Subsidiary, except any circumstance or happening caused by the gross negligence or willful misconduct of the Issuing Lender.

The Borrower shall promptly examine a copy of each Letter of Credit and each amendment thereto that is delivered to it in accordance with the procedures set forth herein and, in the event of any claim of noncompliance with the Borrower's instructions or other irregularity, the Borrower will promptly notify the Issuing Lender. The Borrower shall be deemed to have waived any such claim against the Issuing Lender and its correspondents unless such notice is given as aforesaid.

(f) Role of Issuing Lender. Each Lender and the Borrower agree that, in paying any drawing under a Letter of Credit, the Issuing Lender shall not have any responsibility to obtain any document (other than any sight draft, certificates and documents expressly required by the Letter of Credit) or to ascertain or inquire as to the validity or accuracy of any such document or the authority of the Person executing or delivering any such document. None of the Issuing Lender, the Agent, any of their respective Related Parties nor any correspondent, participant or assignee of the Issuing Lender shall be liable to any Lender for (i) any action taken or omitted in connection herewith at the request or with the approval of Lenders or the Required Lenders, as applicable; (ii) any action taken or omitted in the absence of gross negligence or willful misconduct; or (iii) the due execution, effectiveness, validity or enforceability of any document or instrument related to any Letter of Credit or Issuer Document. The Borrower hereby assumes all risks of the acts or omissions of any beneficiary or transferee with respect to

its use of any Letter of Credit; provided, however, that this assumption is not intended to, and shall not, preclude the Borrower's pursuing such rights and remedies as it may have against the beneficiary or transferee at law or under any other agreement. None of the Issuing Lender, the Agent, any of their respective Related Parties nor any correspondent, participant or assignee of the Issuing Lender, shall be liable or responsible for any of the matters described in clauses (i) through (v) of Section 2.4(e); provided, however, that anything in such clauses to the contrary notwithstanding, the Borrower may have a claim against the Issuing Lender, and the Issuing Lender may be liable to the Borrower, to the extent, but only to the extent, of any direct, as opposed to consequential or exemplary, damages suffered by the Borrower which were caused by the Issuing Lender's willful misconduct or gross negligence or the Issuing Lender's willful failure to pay under any Letter of Credit after the presentation to it by the beneficiary of a sight draft and certificate(s) strictly complying with the terms and conditions of a Letter of Credit. In furtherance and not in limitation of the foregoing, the Issuing Lender may accept documents that appear on their face to be in order, without responsibility for further investigation, and the Issuing Lender shall not be responsible for the validity or sufficiency of any instrument transferring or assigning or purporting to transfer or assign a Letter of Credit or the rights or benefits thereunder or proceeds thereof, in whole or in part, which may prove to be invalid or ineffective for any reason.

- (g) <u>Cash Collateral</u>. If either (i) an Event of Default shall occur and be continuing and the Borrower receives notice from the Agent or the Required Lenders demanding the deposit of cash collateral pursuant to this paragraph, or (ii) the Borrower shall be required to provide cash collateral for Total LC Exposure pursuant to subsections 2.1(d) or 2.9(b), the Borrower shall immediately deposit with the Agent an amount in cash equal to, in the case of an Event of Default, the Total LC Exposure as of such date plus any accrued and unpaid interest thereon and, in the case of any cash collateral required to be provided pursuant to subsections 2.1(d) or 2.9(b), the amount required under subsections 2.1(d) or 2.9(b), as the case may be; <u>provided</u> that the obligation to deposit such cash collateral shall become effective immediately, and such deposit shall become immediately due and payable, without demand or other notice of any kind, upon the occurrence of any Event of Default described in clause (g) or (h) of Section 9.1. Such deposit shall be held by the Agent as collateral in the first instance for the Total LC Exposure under this Agreement and thereafter for the payment of any other obligations of the Credit Parties hereunder. Cash collateral shall be maintained in blocked, non-interest bearing deposit accounts at Bank of America.
- (h) <u>Applicability of ISP and UCP</u>. Unless otherwise expressly agreed by the Issuing Lender and the Borrower when a Letter of Credit is issued (including any such agreement applicable to an Existing Letter of Credit), (i) the rules of the ISP shall apply to each standby Letter of Credit, and (ii) the rules of the Uniform Customs and Practice for Documentary Credits, as most recently published by the International Chamber of Commerce at the time of issuance shall apply to each commercial Letter of Credit.
- (i) <u>Confirmation of Existing Letters of Credit Issued Under Prior Credit Agreement</u>. All Existing Letters of Credit (including those issued under the Prior Credit Agreement) outstanding on the Restatement Date shall be deemed to be Letters of Credit issued hereunder.

#### 2.5 Loans and Borrowings; Funding of Borrowings.

(a) <u>Loans and Borrowings</u>. Each Loan shall be made as part of a Borrowing consisting of Loans made by the Lenders ratably in accordance with their respective Commitments. The Failure of any Lender to make any Loan required to be made by it shall not relieve any other Lender of its obligations hereunder; provided that the Commitments of the Lenders are several and no Lender shall be responsible for any other Lender's failure to make Loans as required herein.

- (b) <u>Funding of Borrowings</u>. Each Lender shall make each Loan (other than a Swing Loan) to be made by it hereunder on the proposed date thereof by wire transfer of immediately available funds by 2:00 p.m., Boston, Massachusetts time to the account of the Agent most recently designated by it for such purpose by notice to the Lenders. The Agent will make such Loans (other than Swing Loans) available to the Borrower by promptly crediting the amounts so received, in like funds, to one or more accounts of the Borrower maintained with the Agent in Boston, Massachusetts; provided that (i) Revolving Base Rate Loans made to finance the reimbursement of an LC Disbursement under any Letter of Credit as provided in subsection 2.4(c) shall be remitted by the Agent to the Issuing Lender and (ii) Revolving Credit Base Rate Loans made to finance the refunding of Swing Loans as provided in Section 2.6(d)(i) shall be remitted by the Agent to the Swing Loan Lender.
- (c) <u>Agent's Assumption that Each Lender will Make Loans</u>. Unless the Agent shall have received notice from a Lender prior to the proposed date of any Borrowing (other than a Swing Loan Borrowing) that such Lender will not make available to the Agent such Lender's share of such Borrowing, the Agent may assume that such Lender has made such share available on such date in accordance with paragraph (b) of this Section 2.5 and may, in reliance upon such assumption, make available to the Borrower a corresponding amount. In such event, if a Lender has not in fact made its share of the applicable Borrowing available to the Agent, then the applicable Lender agrees to pay to the Agent forthwith on demand in immediately available funds such corresponding amount with interest thereon, for each day from and including the date such amount is made available to the Borrower but excluding the date of payment to the Agent, at the greater of the Federal Funds Effective Rate and a rate determined by the Agent in accordance with banking industry rules on interbank compensation, plus any administrative, processing or similar fees customarily charged by the Agent in connection with the foregoing. If such Lender pays such amount to the Agent, then such amount shall constitute such Lender's Loan included in such Borrowing.

#### 2.6 Swing Loan Facility.

(a) The Swing Loan. Subject to the terms and conditions hereinafter set forth, upon notice by the Borrower made to the Swing Loan Lender in accordance with Section 2.6(b)(i), the Swing Loan Lender hereby agrees to make Swing Loans to the Borrower from time to time on any Business Day during the period between the Restatement Date and the Business Day immediately prior to the expiration of the Revolving Credit Availability Period in an aggregate principal amount not to exceed the Swing Loan Commitment. The Swing Loans shall be payable with interest accrued thereon on the Business Day immediately prior to the expiration of the Revolving Credit Availability Period. Amounts borrowed by the Borrower under this Section 2.6 may be repaid and reborrowed, subject to the conditions hereof. At the time that each Swing Loan Borrowing is made, such Borrowing shall be in an aggregate amount that is at least equal to \$100,000 or any greater multiple of \$100,000. Notwithstanding any other provisions of this Agreement and in addition to the Swing Loan Commitment limitation set forth above at no time shall the sum of (i) the aggregate principal amount of all outstanding Swing Loans (after giving effect to all amounts requested and the application of the proceeds thereof) plus (ii) the aggregate principal amount of all outstanding Revolving Loans (after giving effect to all amounts requested and the application of the proceeds thereof), plus (iii) the aggregate LC Exposure, exceed the aggregate amount of the Revolving Credit Commitments of all the Lenders; provided, however, that subject to the limitations set forth in this Section 2.6(a) from time to time the ratio of (x) the sum of the aggregate Revolving Credit Exposure of the Swing Loan Lender (both in its capacity as the Swing Loan Lender and in its capacity as a Revolving Credit Lender) to (y) the sum of the aggregate Revolving Credit Exposure of all Lenders (including the Swing Loan Lender both in its capacity as the Swing Loan Lender and in its capacity as a Revolving Credit Lender) may exceed its Applicable Percentage.

### (b) Requests for Swing Loans.

- (i) When the Borrower desires the Swing Loan Lender to make a Swing Loan, it shall send to the Agent and the Swing Loan Lender a written request (or telephonic notice, if thereafter promptly confirmed in writing) (a "Swing Loan Request"), which request shall set forth (x) the principal amount of the proposed Swing Loan, and (y) the proposed date of Borrowing of such Swing Loan (which date shall be a Business Day). Each such Swing Loan Request must be received by the Swing Loan Lender not later than 1:00 p.m. (Boston, Massachusetts time) on the proposed date of Borrowing of the Swing Loan being requested. Each Swing Loan Request shall be irrevocable and binding on the Borrower and shall obligate the Borrower to borrow the Swing Loan from the Swing Loan Lender on the proposed date of Borrowing.
- (ii) Upon satisfaction of the applicable conditions set forth in this Agreement, at or before the close of business on the proposed date of Borrowing, the Swing Loan Lender shall make the Swing Loan available to the Borrower by crediting the amount of the Swing Loan to an account designated by the Borrower to the Swing Loan Lender; provided that Swing Loans made to finance the reimbursement of an LC Disbursement under any Letter of Credit as provided in Section 2.4(c) shall be remitted by the Agent to the Issuing Lender.
- (iii) Notwithstanding the foregoing, the Swing Loan Lender shall not advance any Swing Loans after it has received notice from any Lender or any Credit Party that a Default under Section 9.1(a)(ii) or an Event of Default has occurred and is continuing and stating that no new Swing Loans are to be made until such Default or Event of Default has been cured or waived in accordance with the provisions of this Agreement.
- (c) <u>Interest on Swing Loans</u>. Each Swing Loan shall be a Base Rate Loan and shall bear interest for the account of the Swing Loan Lender thereof until repaid in full at the rate per annum equal to the Base Rate <u>plus</u> the Applicable Margin for Base Rate Loans. The Borrower promises to pay interest on the Swing Loans in arrears on each Interest Payment Date with respect thereto. All such interest payable with respect to the Swing Loans shall be payable for the account of the Swing Loan Lender.

# (d) Refundings of Swing Loans; Participations in Swing Loans.

- (i) The Swing Loan Lender, at any time in its sole and absolute discretion, may, on behalf of the Borrower (which hereby irrevocably directs the Swing Loan Lender to act on its behalf) request each Revolving Credit Lender, including the Swing Loan Lender, in its capacity as a Revolving Credit Lender, to make a Revolving Loan in an amount equal to such Revolving Credit Lender's Applicable Percentage of the amount of the Swing Loans (the "Refunded Swing Loans") outstanding on the date such notice is given. Upon such request, unless any of the Events of Default described in Section 9.1 (g) or (h) shall have occurred (in which event the procedures of Section 2.6(d)(ii) shall apply), each Revolving Credit Lender shall make the proceeds of its Revolving Loan available to the Agent, for the account of the Swing Loan Lender, at the Agent's office prior to 11:00 a.m. Boston, Massachusetts time in funds immediately available on the Business Day next succeeding the date such notice is given. The proceeds of such Revolving Loans shall be immediately applied to repay the Refunded Swing Loans.
- (ii) If, prior to the making of a Revolving Loan pursuant to Section 2.6(d)(i), an Event of Default described in Section 9.1 (g) or (h) shall have occurred, each Revolving Credit Lender will, on the date such Revolving Loan was to have been made, purchase an undivided participation interest in the Refunded Swing Loan in an amount equal to its Applicable

Percentage of such Refunded Swing Loan. Each Revolving Credit Lender will immediately transfer to the Swing Loan Lender, in immediately available funds, the amount of its participation in such Refunded Swing Loan.

- (iii) Whenever, at any time after the Swing Loan Lender has received from any Revolving Credit Lender such Revolving Credit Lender's participation interest in a Refunded Swing Loan pursuant to Section 2.6(d)(ii) above, the Swing Loan Lender receives any payment on account thereof, the Swing Loan Lender will distribute to such Revolving Credit Lender its participation interest in such amount (appropriately adjusted, in the case of interest payments, to reflect the period of time during which such Revolving Credit Lender's participation interest was outstanding and funded); provided, however, that in the event that such payment received by the Swing Loan Lender is required to be returned, such Revolving Credit Lender will return to the Swing Loan Lender any portion thereof previously distributed by the Swing Loan Lender to it as such payment is required to be returned by the Swing Loan Lender.
- (iv) If any Revolving Credit Lender does not make available to the Swing Loan Lender any amounts for the purpose of refunding a Swing Loan pursuant to Section 2.6(d)(i) above or to purchase a participation interest in a Swing Loan pursuant to Section 2.6(d)(ii) above (any such amounts payable by any Revolving Credit Lender being referred to herein as "Refunding or Participation Amounts") on the applicable due date with respect thereto, then the applicable Revolving Credit Lender shall pay to the Swing Loan Lender forthwith on demand such Refunding or Participation Amounts with interest thereon for each day from and including the date such amount is made available to the Swing Loan Lender but excluding the date of payment to the Swing Loan Lender, at the Federal Funds Effective Rate. If such Lender pays such amount to the Swing Loan Lender, then such amount shall constitute such Revolving Credit Lender's Loan included in such refunding Borrowing or the consideration for the purchase of such participation interest, as the case may be.
- (v) The failure or refusal of any Revolving Credit Lender to make available to the Swing Loan Lender at the aforesaid time and place the amount of its Refunding or Participation Amounts (x) shall not relieve any other Revolving Credit Lender from its several obligations hereunder to make available to the Swing Loan Lender the amount of such other Revolving Credit Lender's Refunding or Participation Amounts and (y) shall not impose upon such other Revolving Credit Lender any liability with respect to such failure or refusal or otherwise increase the Revolving Credit Commitment of such other Revolving Credit Lender.
- (vi) Each Revolving Credit Lender severally agrees that its obligation to make available to the Swing Loan Lender its Refunding or Participation Amount as described above shall (except to the extent expressly set forth in Section 2.6(d)(iv)) be absolute and unconditional and shall not be affected by any circumstance, including (A) any set-off, counterclaim, recoupment, defense or other right which such Revolving Credit Lender may have against the Swing Loan Lender, the Borrower or any other Person for any reason whatsoever, (B) the occurrence or continuance of any Default, the termination of the Revolving Credit Commitments or any other condition precedent whatsoever, (C) any adverse change in the condition (financial or otherwise) of any Credit Party or any other Person, (D) any breach of any of the Loan Documents by any of the Credit Parties or any other Lender, or (E) any other circumstance, happening or event, whether or not similar to any of the foregoing; provided, however, that the obligation of each Revolving Credit Lender to make available to the Swing Loan Lender its Refunding or Participation Amount in respect of any Swing Loan is subject to the condition that the Swing Loan Lender believes in good faith that all conditions under Section 6.2 were satisfied at the time such Swing Loan was made; provided further that the Swing Loan

Lender shall have been deemed to have believed in good faith that such conditions were satisfied unless, prior to the making of such Swing Loan, either (1) the Swing Loan Lender shall have received notice from any other Lender or any Credit Party that a Default existed as such time, or (2) the most recent Compliance Certificate received from the Borrower indicating that a Default has occurred and is continuing and, in either case, such Default had not been cured or waived at the time of the making of such Swing Loan.

# 2.7 Expiration, Termination or Reduction of Commitments.

- (a) Expiration of Revolving Credit Commitments. Unless previously terminated, the Revolving Credit Commitments shall expire at the close of business on the Revolving Credit Maturity Date.
- (b) Reduction of Revolving Credit Commitments. The Borrower may at any time and from time to time reduce the Revolving Credit Commitments or the Swing Loan Commitment; provided that (i) each reduction of the Revolving Credit Commitments or the Swing Loan Commitment shall be in an amount that is at least equal to \$500,000 or any greater multiple of \$100,000, and (ii) the Borrower shall not reduce (A) the Revolving Credit Commitments if, after giving effect to any concurrent repayment, the total Revolving Credit Exposure would exceed the total Revolving Credit Commitments or (B) the Swing Loan Commitment if, after giving effect to any concurrent repayment of the Swing Loans in accordance with Section 2.6 or prepayment of the Loans in accordance with Section 2.9, the aggregate principal amount of outstanding Swing Loans would exceed the Swing Loan Commitment, after giving effect to such termination or reduction. The Borrower shall notify the Agent of any election to reduce the Revolving Credit Commitment or the Swing Loan Commitment at least three Business Days prior to the effective date of such reduction, specifying the effective date thereof. Each notice of reduction of the Revolving Credit Commitment or the Swing Loan Commitment shall be irrevocable. Each reduction of the Revolving Credit Commitment shall be permanent and shall be made ratably among the Revolving Credit Lenders in accordance with their respective Revolving Credit Commitments.
- (c) Optional Termination of Commitments. The Borrower shall have the right at any time to terminate the Commitments. The Borrower shall notify the Agent of any election to terminate Commitments under this Section 2.7(c) at least three Business Days prior to the effective date of such termination, specifying such election and the effective date thereof. Promptly following receipt of any notice, the Agent shall advise the Lenders of the contents thereof. Each notice delivered by the Borrower pursuant to this Section 2.7(e) shall be irrevocable; provided that a notice of termination of Commitments delivered by the Borrower may state that such notice is conditioned upon the effectiveness of other credit facilities, in which case such notice may be revoked by the Borrower (by notice to the Agent on or prior to the specified effective date) if such condition is not satisfied. Any termination of Commitments shall be permanent.

### 2.8 Payments Generally; Pro Rata Treatment; Sharing of Set-Offs; Collection.

(a) <u>Payments Generally</u>. The Borrower shall be obligated to make each payment required to be made by the Borrower hereunder (whether of principal, interest, fees or reimbursement of LC Disbursements, or otherwise) prior to 1:00 p.m. Boston, Massachusetts time, on the date when due, in immediately available funds, in U.S. dollars, without set-off or counterclaim. Any amounts received after such time on any date may, in the discretion of the Agent, be deemed to have been received on the next succeeding Business Day for purposes of calculating interest thereon. All payments shall be made to the Agent at its offices in Boston, Massachusetts, except that payments pursuant to Sections 2.4, 2.11, 2.12, 11.3 and subsection 2.3(g) shall be made directly to the Persons entitled thereto. The Agent shall distribute any such payments received by it for the account of any other Person to the appropriate

recipient promptly following receipt thereof, and the Borrower shall have no liability in the event timely or correct distribution of such payments is not so made. If any payment shall be due on a day that is not a Business Day, the date for payment shall be extended to the next succeeding Business Day, and, in the case of any payment accruing interest, interest thereon shall be payable for the period of such extension. Notwithstanding anything to the contrary set forth herein, all payments of interest, fees and other amounts (including, without limitation, payments of principal) due to be paid by the Borrower hereunder shall be made through the automatic withdrawal from the Borrower's deposit account with the Agent of amounts equal to the amounts of such interest, fees or other amounts due to be paid by the Borrower hereunder, and the Borrower hereby irrevocably authorizes and directs the Agent to take such actions as may be necessary to effectuate such automatic withdrawals, and, upon funding of any such withdrawal in an amount sufficient to make a payment of interest, fees or other amounts due hereunder, the Borrower's obligation to make such payment shall be discharged. The Borrower expressly acknowledges and agrees that if any such withdrawal is not in an amount sufficient to satisfy the amount of any interest, fees or other amounts (including, without limitation, principal payments) due hereunder, the Borrower shall remain obligated to pay the full amount of such interest, fees or other amounts as and when the same shall become due.

- (b) Application of Payments. If at any time insufficient funds are received by and available to the Agent to pay fully all amounts of principal, unreimbursed LC Disbursements, interest and fees then due hereunder under any circumstances, including, without limitation during, or as a result of the exercise by the Agent or the Lenders of remedies hereunder or under any other Loan Document and applicable law, such funds shall be applied (i) first, to pay fees, costs and expenses then due hereunder ratably among the parties entitled thereto under the Loan Documents in accordance with the amounts of fees, costs and expenses then due to such parties, (ii) second, to pay interest then due hereunder ratably among the parties entitled thereto under the Loan Documents in accordance with the amount of interest then due to such parties; (iii) third, to pay principal and unreimbursed LC Disbursements then due hereunder ratably among the parties entitled thereto in accordance with the amounts of principal and unreimbursed LC Disbursements then due to such parties, and (iv) fourth, to any other Obligations then due from the Credit Parties to the Agent, the Issuing Lender or the Lenders.
- (c) Pro Rata Treatment. If any Lender shall obtain any payment (whether voluntary, involuntary, through the exercise of set-off or otherwise) on account of the Loans made by it (other than pursuant to Sections 2.4, 2.6, 2.11 or 2.12), then, if there is any Unreimbursed Amount outstanding in respect of which the Issuing Lender has not received payment in full from such Lender pursuant to Section 2.4(c) (the amount of such Unreimbursed Amount being such Revolving Credit Lender's "LC <u>Deficiency Amount</u>") or if there is any Swing Loan outstanding in respect of which, pursuant to Section 2.6(d)(i) or (ii), the Swing Loan Lender has not received payment in full from such Lender pursuant to Section 2.6(d)(i) or (ii) (the amount of such Swing Loan being such Lender's "SL Deficiency Amount"), such Lender shall both (a) purchase a participation in such Unreimbursed Amount in an amount equal to the amount obtained by multiplying the amount of such payment obtained by such Lender (the "Payment Amount") by a fraction, the numerator of which is such LC Deficiency Amount and the denominator of which is the sum of such LC Deficiency Amount plus such SL Deficiency Amount (such sum being the "Aggregate Deficiency" with respect to such Payment Amount), and (b) purchase a participation in such Swing Loan in an amount equal to the amount obtained by multiplying such Payment Amount by a fraction, the numerator of which is such SL Deficiency and the denominator of which is such Aggregate Deficiency. If, after giving effect to the foregoing, any Lender shall, by exercising any right of set-off or counterclaim or otherwise, obtain payment in respect of any principal of or interest on any of its Loans (or participations in LC Disbursements) (other than pursuant to Sections 2.4, 2.6, 2.11 or 2.12), resulting in such Lender receiving payment of a greater proportion of the aggregate principal amount of its Loans (and participations in LC Disbursements) and accrued interest thereon than the proportion of such amounts received by any other Lender, then the Lender receiving such greater proportion shall purchase

(for cash at face value) participations in the Loans (and LC Disbursements) of the other Lenders to the extent necessary so that the benefit of such payments shall be shared by all the Lenders ratably in accordance with the aggregate amount of principal of and accrued interest on their respective Loans (and participations in LC Disbursements); provided that (i) if any such participations are purchased and all or any portion of the payment giving rise thereto is recovered, such participations shall be rescinded and the purchase price restored to the extent of such recovery, without interest, and (ii) the provisions of this paragraph shall not be construed to apply to any payment obtained by a Lender as consideration for the assignment of or sale of a participation in any of its Loans (or participations in LC Disbursements) to any assignee or participant, other than to any Credit Party or any Subsidiary or Affiliate thereof (as to which the provisions of this paragraph shall apply). The Borrower consents to the foregoing and agrees, to the extent it may effectively do so under applicable law, that any Lender acquiring a participation pursuant to the foregoing arrangements may exercise against the Borrower rights of set-off and counterclaim with respect to such participation as fully as if such Lender were a direct creditor of the Borrower in the amount of such participation.

- (d) Agent's Assumption that Borrower will Make Payments. Unless the Agent shall have received notice from the Borrower prior to the date on which any payment is due to the Agent for the account of the Lenders or the Issuing Lender entitled thereto (the "Applicable Recipient") hereunder that the Borrower will not make such payment, the Agent may assume that the Borrower has made such payment on such date in accordance herewith and may, in reliance upon such assumption, distribute to the Applicable Recipient the amount due. In such event, if the Borrower has not in fact made such payment, then each Applicable Recipient severally agrees to repay to the Agent forthwith on demand the amount so distributed to such Applicable Recipient with interest thereon, for each day from and including the date such amount is distributed to it to but excluding the date of payment to the Agent, at the Federal Funds Effective Rate.
- (e) <u>Lender's Failure to Make Payment</u>. If any Lender shall fail to make any payment required to be made by it pursuant to subsections 2.4(c), 2.5(c), 2.6(d)(i) or (ii), or 2.8(d), then the Agent may, in its discretion (notwithstanding any contrary provision hereof), apply any amounts thereafter received by the Agent for the account of such Lender to satisfy such Lender's obligations under such subsection until all such unsatisfied obligations are fully paid.

# 2.9 Prepayment of Loans.

- (a) Optional Prepayments of Loans. The Borrower shall have the right at any time and from time to time to prepay the Revolving Loans (including the Swing Loans) in whole or in part, subject to prior notice in accordance with subsection 2.9(d) in the case of LIBOR Loans, and subject to the payment of any amounts due under subsection 2.3(g). The amount of any optional prepayment in respect of the Revolving Loans shall be applied first, to the repayment of Swing Loans and, second, to the repayment of Revolving Loans.
- (b) <u>Mandatory Prepayments</u>. The Borrower shall be obligated to, and shall, make prepayments of the Loans hereunder (and, if applicable as provided in Section 2.9(c), reduce the Revolving Credit Commitments hereunder) as follows:
  - (i) <u>Incurrence of Debt</u>. Without limiting the obligation of the Borrower to obtain the consent of the Required Lenders to any incurrence of Indebtedness not otherwise permitted hereunder, the Borrower agrees, on the closing of any incurrence of Indebtedness by any Credit Party (other than Indebtedness permitted pursuant to Section 8.1) to prepay the Loans hereunder (and provide cash collateral for Total LC Exposure as specified in subsection 2.4(h)), and, if applicable as provided in Section 2.9(c), the Revolving Credit Commitments hereunder

shall be subject to automatic reduction, upon the date of such incurrence of Indebtedness, in an aggregate amount equal to 100% of the amount of the Net Cash Payments from such incurrence of Indebtedness received by any Credit Party, such prepayment and reduction to be effected in each case in the manner and to the extent specified in subsection 2.9(c) below.

- (ii) Sale of Assets. Without limiting the obligation of the Borrower to obtain the consent of the Required Lenders to any Disposition not otherwise permitted hereunder, the Borrower agrees, on or prior to the occurrence of any Disposition by any Credit Party, to deliver to the Agent a statement certified by a Designated Financial Officer of the Borrower, in form and detail reasonably satisfactory to the Agent, of the estimated amount of the Net Cash Payments of such Disposition that will (on the date of such Disposition) be received by any Credit Party in cash, indicating on such certificate, whether the Borrower intends to reinvest such Net Cash Payments (to the extent Net Cash Payments from Dispositions do not exceed \$1,000,000 in the aggregate after the Effective Time) or will be prepaying the Loans, as hereinafter provided, and the Borrower will be obligated to either (A) cause the applicable Credit Party to reinvest such Net Cash Payments (to the extent Net Cash Payments from Dispositions do not exceed \$1,000,000 in the aggregate after the Effective Time) within 180 days after receipt (or, if within such 180 day period the Borrower or any Credit Party enters into contracts related to the reinvestment of such Net Cash Payments, such longer period not to exceed 365 days after the original date of receipt of such Net Cash Payments as is contemplated by such contracts) into replacement assets or the repair of existing assets or (B) to the extent such Net Cash Payments exceed \$1,000,000 in the aggregate after the Effective Time, prepay the Loans hereunder (and provide cover for Total LC Exposure as specified in Section 2.4(h)), and, if applicable, as provided in Section 2.9(c), the Revolving Credit Commitments hereunder shall be subject to automatic reduction, as follows:
  - (x) upon the date of such Disposition, or on the date (the "Reinvestment Date") which is 180 days after such date (or such longer period not to exceed 365 days as contemplated by contracts related to the reinvestment of such Net Cash Payments) if the Borrower had indicated on the certificate delivered as hereinabove required that it intended to reinvest the Net Cash Payments of such Disposition, in an aggregate amount equal to 100% of the amount of such Net Cash Payments, to the extent received by any Credit Party in cash on the date of such Disposition or, if applicable, the Reinvestment Date to the extent of any Net Cash Payments not so reinvested; and
  - (y) thereafter, quarterly, on the date of the delivery by the Borrower to the Administrative Agent pursuant to Section 7.1 of the financial statements for any quarterly fiscal period or fiscal year, to the extent any Credit Party shall receive Net Cash Payments during the quarterly fiscal period ending on the date of such financial statements in cash under deferred payment arrangements or Investments entered into or received in connection with any Disposition, an amount equal to (A) 100% of the aggregate amount of such Net Cash Payments minus (B) any transaction expenses associated with Dispositions and not previously deducted in the determination of Net Cash Payments plus (or minus, as the case may be) (C) any other adjustment received or paid by any Credit Party pursuant to the respective agreements giving rise to Dispositions and not previously taken into account in the determination of the Net Cash Payments.

Prepayments of Loans (and cover for Total LC Exposure) shall be effected in each case in the manner and to the extent specified in paragraph (c) of this Section 2.9; <u>provided</u> that if at the time of any such Disposition a Default shall have occurred and be continuing, the Credit Parties shall not have the right to

reinvest any Net Cash Payments and shall instead prepay the Loans by 100% of the amount of Net Cash Payments received from such Disposition.

(iii) Proceeds of Casualty Events. Upon the date 180 days following the receipt by any Credit Party of the proceeds of insurance, condemnation award or other compensation in respect of any Casualty Event affecting any property of any Credit Party (or upon such earlier date as such Credit Party, as the case may be, shall have determined not to repair or replace the property affected by such Casualty Event), except to the extent Net Cash Payments from Casualty Events do not exceed \$1,500,000 in the aggregate after the Effective Time, the Borrower shall prepay the Loans (and provide cover for Total LC Exposure as specified in Section 2.4(h)), and, if applicable as provided in Section 2.9(c), the Revolving Credit Commitments shall be subject to automatic reduction, in an aggregate amount, if any, equal to 100% of the Net Cash Payments from such Casualty Event not theretofore applied or committed to be applied to the repair or replacement of such property (it being understood that if Net Cash Payments committed to be applied are not in fact applied within twelve months after receipt thereof, then such Net Cash Payments shall be applied to the prepayment of Loans and cover for Total LC Exposure and reduction of Commitments as provided in this clause (iii) at the expiration of such 180 day period), such prepayment and reduction to be effected in each case in the manner and to the extent specified in paragraph (c) of this Section 2.9; provided that if a Default has occurred and is continuing, no Net Cash Payments from any Casualty Event may be applied to the repair or replacement of any property and such Net Cash Payments shall be applied in stead to prepay the Loans by 100% of the amount of Net Cash Payments received from such Casualty Event.

### (c) Application.

- (i) In the event of any mandatory prepayment of Loans pursuant to subsection (b) of this Section 2.9, the proceeds shall be applied as follows:
  - (A) first, to the extent that a repayment of Swing Loans shall at such time be required pursuant to Section 2.9(a), to the repayment of Swing Loans, but only to such extent (with no reduction in the Commitments);
  - (B) second, to the extent that total Revolving Credit Exposure shall at such time exceed the total Revolving Credit Commitments at such time, such prepayment shall be applied to the repayment of Revolving Loans to be shared and applied ratably among the Revolving Credit Lenders in proportion to their respective Revolving Credit Commitments (with no reduction in the Commitments); and
  - (C) third, the amount of any mandatory prepayment shall be applied to repay Revolving Loans, and, second, to provide cash collateral for Total LC Exposure as specified in Section 2.4(h), with a corresponding permanent reduction in the Revolving Credit Commitments.
- (d) Notification of Certain Prepayments. The Borrower shall notify the Agent by telephone (confirmed by telecopy) of any voluntary prepayment of any LIBOR Loan not later than 1:00 p.m., Boston, Massachusetts time, three Business Days before the date of such prepayment. The Borrower shall notify the Agent of any mandatory prepayment of the Loans pursuant to subsection 2.9(b) hereunder as soon as practicable. The Borrower shall notify the Agent by telephone (confirmed by telecopy) of any prepayment of Swing Loans under Sections 2.9(a) or 2.9(b) not later than 1:00 p.m., Boston, Massachusetts time, on the date of such prepayment, which date shall be a Business Day. Each

such notice shall be irrevocable and shall specify the prepayment date and the principal amount of each Borrowing or portion thereof to be prepaid. Promptly following receipt of any such notice relating to a Borrowing (other than a Swing Loan Borrowing), the Agent shall advise the Lenders of the contents thereof.

(e) <u>Prepayments Accompanied by Interest</u>. All prepayments shall be accompanied by accrued interest through the date of prepayment.

#### 2.10 Fees.

- (a) <u>Unused Fee.</u> The Borrower shall pay to the Agent for the account of each Lender unused fees in respect of the Revolving Credit Commitments, in an aggregate amount equal to the product of (x) the Applicable Unused Fee Rate, <u>multiplied by</u> (y) the daily average unused amounts of the respective Revolving Credit Commitment of such Lender (excluding with respect to the Swing Loan Lender the amount of any Swing Loans) during the period from and including the date on which the Effective Time shall occur to but excluding the date on which the Revolving Credit Commitments terminate; <u>provided</u>, that at any time when the Swing Loan Lender is the only Lender hereunder, the amount of any Swing Loans outstanding shall be applied to reduce the daily average unused amounts of the Revolving Credit Commitment of such Lender for purposes of this Section 2.10(b). Accrued unused fees shall be payable monthly in arrears on the first day of each month and on the date on which the Revolving Credit Commitments terminate. All unused fees shall be computed on the basis of a year of 360 days and shall be payable for the actual number of days elapsed (including the first day but excluding the last day).
  - (b) Letter of Credit Fees. The Borrower shall pay with respect to Letters of Credit issued hereunder the following fees:
  - (i) with respect to each standby or documentary Letter of Credit issued hereunder, to the Agent for the accounts of the Revolving Credit Lenders a participation fee with respect to their participations in such Letters of Credit which fee shall accrue at a rate per annum equal to the Applicable Margin then used in determining interest on LIBOR Loans on the average daily amount of such Lender's LC Exposure (excluding any portion thereof attributable to unreimbursed LC Disbursements) during the period from and including the Restatement Date to but excluding the later of the date on which there shall no longer be any Letters of Credit outstanding hereunder, and
  - (ii) with respect to each documentary or standby Letter of Credit issued hereunder, to the Issuing Lender, a fronting fee equal to 0.25% per annum of the face amount of each Letter of Credit, along with the Issuing Lender's standard fees with respect to the issuance, amendment, renewal or extension of any Letter of Credit or processing of drawings thereunder.

Accrued fees for Letters of Credit shall be computed on the basis of a year of 360 days and shall be payable for the actual number of days elapsed (including the first day but excluding the last day), and shall be payable monthly in arrears on the first day of each month and on the date the Revolving Credit Commitments terminate, commencing on the first such date to occur after the date hereof, <u>provided</u> that any such fees accruing after the date on which the Revolving Credit Commitments terminate shall be payable on demand.

(c) The Borrower agrees to pay to the Agent, for its own account, fees payable in the amounts and at the times set forth in the Fee Letter and as otherwise separately agreed in writing between the Borrower and the Agent.

(d) All fees payable hereunder shall be paid on the dates due, in immediately available funds. Fees paid shall not be refundable under any circumstances, absent manifest error in the determination thereof.

#### 2.11 Increased Costs.

- (a) If any Change in Law shall:
- (i) impose, modify or deem applicable any reserve, special deposit or similar requirement against assets of, deposits with or for the account of, or credit extended by, any Lender or the Issuing Lender; or
- (ii) impose on any Lender or the Issuing Lender or the London interbank market any other condition affecting this Agreement or LIBOR Loans made by such Lender or any Letter of Credit or participation therein;

and the result of any of the foregoing shall be to increase the cost to such Lender of making or maintaining any LIBOR Loan (or of maintaining its obligation to make any such Loan) or to increase the cost to such Lender or the Issuing Lender of participating in, issuing or maintaining any Letter of Credit or to reduce the amount of any sum received or receivable by such Lender or the Issuing Lender hereunder (whether of principal, interest or otherwise), then the Borrower will pay to such Lender or the Issuing Lender, as the case may be, such additional amount or amounts as will compensate such Lender or the Issuing Lender, as the case may be, for such additional costs incurred or reduction suffered.

- (b) If any Lender or the Issuing Lender reasonably determines that any Change in Law regarding capital requirements has or would have the effect of reducing the rate of return on such Lender's or the Issuing Lender's capital or on the capital of such Lender's or the Issuing Lender's holding company, if any, as a consequence of this Agreement or the Loans made by, or participations in Letters of Credit held by, such Lender, or the Letters of Credit issued by the Issuing Lender, to a level below that which such Lender or the Issuing Lender or such Lender's or the Issuing Lender's holding company could have achieved but for such Change in Law (taking into consideration such Lender's or the Issuing Lender's policies and the policies of such Lender's or the Issuing Lender's holding company with respect to capital adequacy), then from time to time the Borrower will pay to such Lender or the Issuing Lender, as the case may be, such additional amount or amounts as will compensate such Lender or the Issuing Lender's or the Issuing Lender's holding company, for any such reduction suffered.
- (c) A certificate of a Lender or the Issuing Lender setting forth the amount or amounts necessary to compensate such Lender or the Issuing Lender or its holding company, as the case may be, as specified in subsections 2.11(a) or 2.11(b) above shall be delivered to the Borrower and shall be conclusive so long as it reflects a reasonable basis for the calculation of the amounts set forth therein and does not contain any manifest error. The Borrower shall pay such Lender or the Issuing Lender the amount shown as due on any such certificate within 10 days after receipt thereof.
- (d) Failure or delay on the part of any Lender or the Issuing Lender to demand compensation pursuant to this Section 2.11 shall not constitute a waiver of such Lender's or the Issuing Lender's right to demand such compensation; <u>provided</u> that the Borrower shall not be required to compensate a Lender or the Issuing Lender pursuant to this Section 2.11 for any increased costs or reductions incurred more than six months prior to the date that such Lender or the Issuing Lender, as the case may be, notifies the Borrower of the Change in Law giving rise to such increased costs or reductions and of such Lender's or the Issuing Lender's intention to claim compensation therefor; <u>provided</u> further that, if the Change in Law giving rise to such increased costs or reductions is (i) retroactive and (ii)

occurred within such six-month period, then the six-month period referred to above may be extended to include the period of retroactive effect thereof, but in no event any period prior to the Restatement Date.

#### 2.12 Taxes

- (a) Any and all payments by or on account of any Obligations of the Borrower hereunder shall be made free and clear of and without deduction for any Indemnified Taxes or Other Taxes; provided that if the Borrower shall be required to deduct any Indemnified Taxes or Other Taxes from such payments, then (i) the sum payable shall be increased as necessary so that after making all required deductions (including deductions applicable to additional sums payable under this Section 2.12) the Agent, any Lender or the Issuing Lender (as the case may be) receives an amount equal to the sum it would have received had no such deductions been made, (ii) the Borrower shall make such deductions and (iii) the Borrower shall pay the full amount deducted to the relevant Governmental Authority in accordance with applicable law.
  - (b) In addition, the Borrower shall pay all Other Taxes to the relevant Governmental Authority in accordance with applicable law.
- (c) The Borrower shall indemnify the Agent, each Lender and the Issuing Lender, within 10 days after written demand therefor, for the full amount of any Indemnified Taxes or Other Taxes (including Indemnified Taxes or Other Taxes imposed or asserted on or attributable to amounts payable under this Section 2.12) paid by the Agent, such Lender or the Issuing Lender, as the case may be (and any penalties, interest and reasonable expenses arising therefrom or with respect thereto during the period prior to the Borrower making the payment demanded under this paragraph (c)), whether or not such Indemnified Taxes or Other Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to the Borrower by a Lender or the Issuing Lender, or by the Agent on its own behalf or on behalf of a Lender or the Issuing Lender shall be conclusive absent manifest error.
- (d) As soon as practicable after any payment of Indemnified Taxes or Other Taxes by the Borrower to a Governmental Authority, the Borrower shall deliver to the Agent the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to the Agent.
- (e) Any Foreign Lender that is entitled to an exemption from or reduction of withholding tax under the law of a jurisdiction in which the Borrower is located, or any treaty to which such jurisdiction is a party, with respect to payments under this Agreement shall deliver to the Borrower (with a copy to the Agent), at the time or times prescribed by applicable law or reasonably requested by the Borrower, such properly completed and executed documentation prescribed by applicable law as will permit such payments to be made without withholding or at a reduced rate.

### 2.13 Mitigation Obligations; Replacement of Lenders

(a) <u>Designation of a Different Lending Office</u>. If any Lender requests compensation under Section 2.11, or if the Borrower is required to pay any additional amount to any Lender or any Governmental Authority for the account of any Lender pursuant to Section 2.12, then such Lender shall use reasonable efforts to designate a different lending office for funding or booking its Loans hereunder, or to assign its rights and obligations hereunder to another of its offices, branches or Affiliates, if, in the judgment of such Lender, such designation or assignment (i) would eliminate or reduce amounts payable pursuant to Section 2.11 or 2.12, as the case may be, in the future and (ii) would not subject such Lender to any material unreimbursed cost or expense and would not otherwise be materially disadvantageous to

such Lender. The Borrower hereby agrees to pay all reasonable costs and expenses incurred by any Lender in connection with any such designation or assignment.

(b) Replacement of Lenders. If any Lender requests compensation under Section 2.11, or if the Borrower is required to pay any additional amount to any Lender or any Governmental Authority for the account of any Lender pursuant to Section 2.11, or if any Lender defaults in its obligation to fund Loans hereunder, then the Borrower may, at its sole expense and effort, upon notice to such Lender and the Agent, require such Lender to assign and delegate, without recourse (in accordance with and subject to the restrictions contained in Section 11.4, all its interests, rights and obligations under this Agreement to an assignee that shall assume such obligations (which assignee may be another Lender, if a Lender accepts such assignment); provided that (i) the Borrower shall have received the prior written consent of the Agent and the Issuing Lender, which consents shall not unreasonably be withheld or delayed, (ii) such Lender shall have received payment of an amount equal to the outstanding principal of its Loans (and participations in LC Disbursements), accrued interest thereon, accrued fees and all other amounts payable to it hereunder, from the assignee (to the extent of such outstanding principal and accrued interest and fees) or the Borrower (in the case of all other amounts) and (iii) in the case of any such assignment resulting from a claim for compensation under Section 2.11 or payments required to be made pursuant to Section 2.12, such assignment will result in a reduction in such compensation or payments. A Lender shall not be required to make any such assignment and delegation if, prior thereto, as a result of a waiver by such Lender or otherwise, the circumstances entitling the Borrower to require such assignment and delegation cease to apply.

#### ARTICLE III

#### **Guarantee by Guarantors**

- 3.1 **The Guarantee**. The Guarantors hereby guarantee to each Lender, the Issuing Lender and the Agent and their respective successors and permitted assigns the prompt payment in full when due (whether at stated maturity, by acceleration or otherwise) of the Obligations. The Guarantors hereby further agree that if the Borrower shall fail to pay in full when due (whether at stated maturity, by acceleration or otherwise) any of the Obligations, the Guarantors will promptly pay the same, without any demand or notice whatsoever, and that in the case of any extension of time of payment or renewal of any of the Obligations, the same will be promptly paid in full when due (whether at extended maturity, by acceleration or otherwise) in accordance with the terms of such extension or renewal.
- 3.2 **Obligations Unconditional**. The obligations of the Guarantors under Section 3.1 are absolute and unconditional irrespective of the value, genuineness, validity, regularity or enforceability of this Agreement, the other Loan Documents or any other agreement or instrument referred to herein or therein, or any substitution, release or exchange of any other guarantee of or security for any of the Obligations, and, to the fullest extent permitted by applicable law, irrespective of any other circumstance whatsoever that might otherwise constitute a legal or equitable discharge or defense of a surety or guarantor, it being the intent of this Section 3.2 that the obligations of the Guarantors hereunder shall be absolute and unconditional under any and all circumstances. Without limiting the generality of the **[text missing]** 
  - (i) at any time or from time to time, without notice to such Guarantors, the time for any performance of or compliance with any of the Obligations shall be extended, or such performance or compliance shall be waived;

- (ii) any of the acts mentioned in any of the provisions hereof or of the other Loan Documents or any other agreement or instrument referred to herein or therein shall be done or omitted;
- (iii) the maturity of any of the Obligations shall be accelerated, or any of the Obligations shall be modified, supplemented or amended in any respect, or any right hereunder or under the other Loan Documents or any other agreement or instrument referred to herein or therein shall be waived or any other guarantee of any of the Obligations or any security therefor shall be released or exchanged in whole or in part or otherwise dealt with; or
- (iv) any lien or security interest granted to, or in favor of, the Agent, the Issuing Lender or any Lender or Lenders as security for any of the Obligations shall fail to be perfected.

This Guarantee is a guaranty of payment and not of collection. The Guarantors hereby expressly waive diligence, presentment, demand of payment, protest and all notices whatsoever, and any requirement that the Agent, the Issuing Lender or any Lender exhaust any right, power or remedy or proceed against the Borrower hereunder or under the other Loan Documents or any other agreement or instrument referred to herein or therein, or against any other Person under any other guarantee of, or security for, any of the Obligations.

- 3.3 **Reinstatement**. The obligations of the Guarantors under this Article 3 shall be automatically reinstated if and to the extent that for any reason any payment by or on behalf of the Borrower in respect of the Obligations is rescinded or must be otherwise restored by any holder of any of the Obligations, whether as a result of any proceedings in bankruptcy or reorganization or otherwise, and each Guarantor agrees that it will indemnify the Agent, the Issuing Lender and each Lender on demand for all reasonable costs and expenses (including fees and expenses of counsel) incurred by the Agent, any Lender or the Issuing Lender in connection with such rescission or restoration, including any such costs and expenses incurred in defending against any claim alleging that such payment constituted a preference, fraudulent transfer or similar payment under any bankruptcy, insolvency or similar law.
- 3.4 **Subrogation**. Until such time as the Obligations shall have been indefensibly paid in full, each of the Guarantors hereby waives all rights of subrogation or contribution, whether arising by contract or operation of law (including, without limitation, any such right arising under the Federal Bankruptcy Code of 1978, as amended) or otherwise by reason of any payment by it pursuant to the provisions of this Article 3 and further agrees with the Borrower for the benefit of each creditor of the Borrower (including, without limitation, the Agent, the Issuing Lender and each Lender) that any such payment by it shall constitute a contribution of capital by such Guarantor to the Borrower.
- 3.5 **Remedies**. The Guarantors agree that, as between the Guarantors and the Lenders, the Obligations of the Borrower hereunder may be declared to be forthwith due and payable as provided in Section 9.2 (and shall be deemed to have become automatically due and payable in the circumstances provided in Section 9.2) for purposes of Section 3.1 notwithstanding any stay, injunction or other prohibition preventing such declaration (or such Obligations from becoming automatically due and payable) as against the Borrower and that, in the event of such declaration (or such Obligations being deemed to have become automatically due and payable), such Obligations (whether or not due and payable by the Borrower) shall forthwith become due and payable by the Guarantors for purposes of Section 3.1.
- 3.6 **Instrument for the Payment of Money**. Each of the Guarantors hereby acknowledges that the guarantee in this Article 3 constitutes an instrument for the payment of money, and consents and

agrees that the Agent, the Issuing Lender, or any Lender, at its sole option, in the event of a dispute by such Guarantor in the payment of any moneys due hereunder, shall have the right to summary judgment or such other expedited procedure as may be available for a suit on a note or other instrument for the payment of money.

- 3.7 **Continuing Guarantee**. The guarantee in this Article 3 is a continuing guarantee, and shall apply to all Obligations whenever arising.
- 3.8 General Limitation on Amount of Obligations Guaranteed. In any action or proceeding involving any state or non-U.S. corporate law, or any state or Federal or non-U.S. bankruptcy, insolvency, reorganization or other law affecting the rights of creditors generally, if the obligations of the Guarantors under Section 3.1 would otherwise be held or determined to be void, invalid or unenforceable, or subordinated to the claims of any other creditors, on account of the amount of its liability under Section 3.1, then, notwithstanding any other provision hereof to the contrary, the amount of such liability shall, without any further action by the Guarantors, any Lender, Agent or other Person, be automatically limited and reduced to the highest amount that is valid and enforceable and not subordinated to the claims of other creditors as determined in such action or proceeding.

#### ARTICLE IV

#### The Collateral

- 4.1 **Grant of Security Interest**. As security for due and punctual payment and performance of the Obligations, each Credit Party hereby grants to the Agent for the ratable benefit of the Lenders and the Issuing Lender a continuing security interest in and lien on all tangible and intangible property and assets of such Credit Party, whether now owned or existing or hereafter acquired or arising, together with any and all additions thereto and replacements therefor and proceeds and products thereof (collectively referred to for purposes of this Article 4 as "Collateral"), including without limitation the property described below:
- (a) all tangible personal property, including without limitation all present and future goods, inventory (including, without limitation, all merchandise, raw materials, work in process, finished goods and supplies), machinery, equipment, motor vehicles, rolling stock, tools, furniture, fixtures, office supplies, computers, computer software and associated equipment, whether now owned or hereafter acquired, including, without limitation, all tangible personal property used in the operation of the business of such Credit Party;
- (b) all rights under all present and future authorizations, permits, licenses and franchises issued, granted or licensed to such Credit Party for the operation of its business;
  - (c) all Patents of such Credit Party;
  - (d) all Trademarks of such Credit Party;
  - (e) all Copyrights of such Credit Party;
- (f) the entire goodwill of business of such Credit Party and all other general intangibles (including know-how, trade secrets, customer lists, proprietary information, inventions, domain names, methods, procedures and formulae) connected with the use of and symbolized by any Patents, Trademarks or Copyrights of such Credit Party;

(g) all rights under all present and future vendor or customer contracts and all franchise, distribution, design, consulting, construction, engineering, management and advertising and related agreements;

(h) all rights under all present and future leases of real and personal property; and all other personal property, including, without limitation, all present and future accounts, accounts receivable, cash, cash equivalents, deposits, deposit accounts, loss carry back, tax refunds, insurance proceeds, premiums, rebates and refunds, choses in action, investment property, securities, partnership interests, limited liability company interests, contracts, contract rights, general intangibles (including without limitation, all customer and advertiser mailing lists, intellectual property, patents, copyrights, trademarks, trade secrets, trade names, domain names, goodwill, customer lists, advertiser lists, catalogs and other printed materials, publications, indexes, lists, data and other documents and papers relating thereto, blueprints, designs, charts, and research and development, whether on paper, recorded electronically or otherwise), all websites (including without limitation, all content, HTML documents, audiovisual material, software, data, hardware, access lines, connections, copyrights, trademarks, patents and trade secrets relating to such websites) and domain names, any information stored on any medium, including electronic medium, related to any of the personal property of such Credit Party, all financial books and records and other books and records relating, in any manner, to the business of such Credit Party, all proposals and cost estimates and rights to performance, all instruments and promissory notes, documents and chattel paper, and all debts, obligations and liabilities in whatever form owing to such Credit Party from any person, firm or corporation or any other legal entity, whether now existing or hereafter arising, now or hereafter received by or belonging or owing to such Credit Party; and all guaranties and security therefor, and all letters of credit and other supporting obligations in respect of such debts, obligations and liabilities.

Any of the foregoing terms which are defined in the Uniform Commercial Code shall have the meaning provided in the Uniform Commercial Code, as amended and in effect from time to time, as supplemented and expanded by the foregoing.

The term "Collateral" shall in no event include (a) any Energy Conservation Financing Collateral or (b) any rights under any license or lease, in each case, to the extent (and only to the extent) the grant of a security interest pursuant to this Agreement and the other Loan Documents (i) would invalidate the underlying rights of such Credit Party under such license or lease, (ii) is prohibited by such license or lease, without the consent of any other party thereto, (iii) would give any other party to such license or lease the right to terminate its obligations thereunder, or (iv) is not permitted without consent, unless in each case, all necessary consents to such grant of a security interest have been obtained from the other parties thereto; provided, however, that, notwithstanding the foregoing provisions of this paragraph, (x) the foregoing grant of security interest shall extend to, and the Collateral hereunder shall include, any and all proceeds of any such license or lease to the extent that the assignment or encumbering of such proceeds is not prohibited by applicable law, (y) immediately upon the ineffectiveness, lapse, waiver or termination of any such provision or restriction referred to above in this sentence, the Collateral hereunder shall include, and such Credit Party shall be deemed to have granted a security interest in, all such rights and interests in and to each and every license or lease to which such provision or restriction pertained as if such provision or restriction had never been in effect and (z) the Collateral shall include, and the Credit Party shall be deemed to have granted a security interest in, any of such Credit Party's rights, interests, licenses or leases and any other rights and assets that would not constitute Collateral if the foregoing provisions of this sentence governed, if and to the extent that the issuer of or other party to such license or lease has consented to such grant or to the extent that any term of any such rights, interests, licenses or leases would be rendered ineffective pursuant to the Uniform Commercial Code or any other applicable law (including any federal, state or foreign bankruptcy, insolvency or similar law).

- 4.2 **Special Warranties and Covenants of the Credit Parties**. Each Credit Party hereby warrants and covenants to the Agent and the Lenders that:
- (a) Such Credit Party has delivered to the Agent a Perfection Certificate in substantially the form of Exhibit C hereto. All information set forth in such Perfection Certificate is true and correct in all material respects and the facts contained in such Perfection Certificate are accurate in all material respects as of the date of this Agreement. Each Credit Party agrees to supplement its Perfection Certificate promptly after obtaining information which would require a material correction or addition to such Perfection Certificate.
- (b) No Credit Party will change its jurisdiction of organization, principal or any other place of business, or the location of any Collateral from the locations set forth in the Perfection Certificate delivered by such Credit Party, or make any change in its name or conduct its business operations under any fictitious business name or trade name, without, in any such case, at least fifteen (15) days' prior written notice to the Agent; provided that the inventory of such Credit Party may be in the possession of manufacturers or processors in any jurisdiction in which all necessary UCC financing statements have been filed by the Agent and with respect to which the Agent has received waiver letters from all landlords, warehousemen and processors in form and substance acceptable to the Agent.
- (c) Except for Collateral that is obsolete or no longer used in their business, the Credit Parties will keep the Collateral in good order and repair (normal wear excepted) and adequately insured at all times in accordance with the provisions of Section 7.5. The Credit Parties will pay promptly when due all taxes and assessments on the Collateral or for its use or operation, except for taxes and assessments permitted to be contested as provided in Section 7.4. Following the occurrence and during the continuance of an Event of Default, the Agent may at its option discharge any taxes or Liens to which any Collateral is at any time subject (other than Permitted Liens), and may, upon the failure of the Credit Parties to do so in accordance with this Agreement, purchase insurance on any Collateral and pay for the repair, maintenance or preservation thereof, and each Credit Party agrees to reimburse the Agent on demand for any payments or expenses incurred by the Agent or the Lenders pursuant to the foregoing authorization and any unreimbursed amounts shall constitute Obligations for all purposes hereof.
  - (d) The Agent may at reasonable times request and each Credit Party shall deliver copies of all customer lists and vendor lists.
- (e) To the extent, if any, that such Credit Party's signature is required therefor, each Credit Party will promptly execute and deliver to the Agent such financing statements and amendments thereto, certificates and other documents or instruments as may be necessary to enable the Agent to perfect or from time to time renew the security interest granted hereby, including, without limitation, such financing statements and amendments thereto, certificates and other documents as may be necessary to perfect a security interest in any additional Collateral hereafter acquired by such Credit Party or in any replacements or proceeds thereof. Each Credit Party authorizes and appoints the Agent, in case of need, to execute such financing statements, certificates and other documents pertaining to the Agent's security interest in the Collateral in its stead if such Credit Party's signature is required therefor and such Credit Party fails to so execute such documents, with full power of substitution, as such Debtor's attorney in fact. Each Credit Party further agrees that a carbon, photographic or other reproduction of a security agreement or financing statement is sufficient as a financing statement under this Agreement and the other Loan Documents.
- (f) Each Credit Party hereby irrevocably authorizes the Agent, at any time and from time to time, to file in any jurisdiction financing statements and amendments thereto that (i) indicate the Collateral (x) as all assets of such Credit Party or words of similar effect, regardless of whether any

particular asset falls within the scope of Article 9 of the Uniform Commercial Code of the Commonwealth of Massachusetts or such jurisdiction or (y) as being of an equal or lesser scope or with greater detail and (ii) which contain any other information required by Article 9 of the Uniform Commercial Code (including Part 5 thereof) for the sufficiency or filing office acceptance of any financing statement or amendment, including whether (A) any Credit Party is an organization, the type of organization and any organization identification number issued to such Credit Party and (B) in the case of a financing statement filed as a fixture filing or indicating Collateral as as-extracted collateral or timber to be cut, a sufficient description of the real property to which the Collateral relates. The Credit Parties agree to furnish any such information to the Agent promptly upon reasonable request. Each Credit Party also ratifies its authorization for the Agent to have filed in any Uniform Commercial Code jurisdiction any like initial financing statements or amendments thereto if filed prior to the date hereof.

- (g) Each Credit Party agrees that it will join with the Agent in executing and, at its own expense, will file and refile, or permit the Agent to file and refile such financing statements, continuation statements and other documents (including, without limitation, this Agreement and licenses to use software and other property protected by copyright), in such offices (including, without limitation, the PTO, the United States Copyright Office, and appropriate state patent, trademark and copyright offices), as the Agent may reasonably deem necessary or appropriate, wherever required or permitted by law in order to perfect and preserve the rights and interests granted to the Agent in Patents, Trademarks and Copyrights hereunder. Each Credit Party will give the Agent notice of each office at which records of such Credit Party pertaining to all intangible items of Collateral are kept. Except as may be provided in such notice, the records concerning all intangible Collateral are and will be kept at the address shown in the respective Perfection Certificate for such Credit Party as the principal place of business of such Credit Party.
- (h) The Credit Parties are the sole and exclusive owners of the websites and domain names listed on <u>Schedule 4.2</u> hereto and have registered such domain names with the applicable authority for registration of the same which provides for the exclusive use by the Credit Parties of such domain names. The websites do not contain, to the knowledge of the Credit Parties, any material, the publication of which may result in (a) the violation of rights of any person or (b) a right of any person against the publisher or distributor of such material.
- (i) The Credit Parties shall, annually by the end of the first calendar quarter following the previous calendar year, provide written notice to the Agent of all applications for registration of Patents, Trademarks or Copyrights, to the extent such applications exist, made during the preceding calendar year. The Credit Parties shall file and prosecute diligently all applications for registration of Patents, Trademarks or Copyrights now or hereafter pending that would be necessary to the business of the Credit Parties to which any such applications pertain, and to do all acts, in any such instance, necessary to preserve and maintain all rights in such registered Patents, Trademarks or Copyrights unless such Patents, Trademarks or Copyrights are not material to the business of the Credit Parties, as reasonably determined by the Credit Parties consistent with prudent and commercially reasonable business practices. Any and all costs and expenses incurred in connection with any such actions shall be borne by the Credit Parties. Except in accordance with prudent and commercially reasonable business practices, the Credit Parties shall not abandon any right to file a Patent, Trademark or Copyright application or any pending Patent, Trademark or Copyright application or any registered Patent, Trademark or Copyright, in each case material to its business, without the consent of the Agent.
- (j) The domain name servers used in connection with the domain names of the Credit Parties and all other relevant information pertaining to such domain names, and the administrative contacts used in connection with the registration of such domain names are identified on <a href="Schedule 4.2">Schedule 4.2</a> hereof. No Credit Party will change such domain name servers without 10 days' prior notice to the

Agent. No Credit Party will cause a change in the identity of any domain name administrative contact without 10 days' prior notice to the Agent.

- (k) If any Credit Party is, now or at any time hereafter, a beneficiary under a letter of credit in an amount equal to or greater than \$100,000, such Credit Party shall promptly notify the Agent thereof and, at the request and option of the Agent, such Credit Party shall, pursuant to an agreement in form and substance satisfactory to the Agent, either (i) arrange for the issuer and any confirmer or other nominated person of such letter of credit to consent to an assignment to the Agent of the proceeds of the letter of credit or (ii) arrange for the Agent to become the transferee beneficiary of the letter of credit, with the Agent agreeing, in each case, that the proceeds of the letter of credit are to be applied by the Agent against the Obligations as provided in this Agreement.
- (l) To the extent any Credit Party shall, now or at any time hereafter, hold or acquire any promissory note or other instrument or tangible chattel paper (other than a construction contract entered into by any Credit Party in the ordinary course of such Credit Party's business) in an amount equal to or greater than \$100,000, such Credit Party will promptly notify the Lender thereof and, at the request and option of the Lender, such Debtor will deliver such promissory note or other instrument or tangible chattel paper to the Lender to be held as Collateral hereunder, together with an endorsement thereof reasonably satisfactory in form and substance to the Lender.
- (m) If, now or at any time hereafter, any Credit Party shall obtain or hold any investment property or electronic chattel paper in an amount equal to or greater than \$100,000, such Credit Party will promptly notify the Lender thereof and, at the request and option of the Lender, such Credit Party will take or cause to be taken such steps as the Lender may reasonably request for the Lender to obtain "control" (as provided in Sections 9-105 and 9-106 of the Uniform Commercial Code of the Commonwealth of Massachusetts, as amended and in effect from time to time) of such Collateral.
- (n) No Credit Party holds any commercial tort claims, as defined in Article 9 of the Uniform Commercial Code, except as indicated in the Perfection Certificates attached hereto as Exhibit C. If any of the Credit Parties shall at any time acquire a commercial tort claim, such Credit Party shall immediately notify the Lender in a writing signed by such Credit Party of the brief details thereof and grant to the Lender in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to the Lender.
- (o) If any Credit Party has accounts receivable in respect of which the account debtor is located in Minnesota, the Credit Parties represent and warrant that the applicable Credit Party has filed and shall file all legally-required Notice of Business Activities Reports and comparable reports with the appropriate government authorities.
- 4.3 **Fixtures, etc.** It is the intention of the parties hereto that none of the Collateral shall become fixtures and, except as set forth on Schedule 4.3 attached hereto and except for Collateral which becomes a fixture pursuant to any construction contract entered into by a Credit Party the ordinary course of such Credit Party's business, each Credit Party will take all such reasonable action or actions as may be necessary to prevent any of the Collateral from becoming fixtures. Without limiting the generality of the foregoing, each Credit Party will, if requested by the Agent, use commercially reasonable efforts to obtain waivers of Liens, in form satisfactory to the Agent, from each lessor of real property on which any of the Collateral is or is to be located to the extent requested by the Agent.
- 4.4 **Right of Agent to Dispose of Collateral, etc**. Upon the occurrence and during the continuance of any Event of Default, but subject to the provisions of the Uniform Commercial Code or

other applicable law, in addition to all other rights under applicable law and under the Loan Documents, the Agent shall have the right to take possession of the Collateral and, in addition thereto, the right to enter upon any premises on which the Collateral or any part thereof may be situated and remove the same therefrom. The Agent may require the Credit Parties to make the Collateral (to the extent the same is moveable) available to the Agent at a place to be designated by the Agent or transfer any information related to the Collateral to the Agent by electronic medium. Unless the Collateral is perishable or threatens to decline speedily in value or is of a type customarily sold on a recognized market, the Agent will give the Credit Parties at least ten (10) days' prior written notice of the time and place of any public sale thereof or of the time after which any private sale or any other intended disposition thereof is to be made. Any such notice shall be deemed to meet any requirement hereunder or under any applicable law (including the Uniform Commercial Code) that reasonable notification be given of the time and place of such sale or other disposition.

- 4.5 Right of Agent to Use and Operate Collateral, etc. Upon the occurrence and during the continuance of any Event of Default, subject to the provisions of the Uniform Commercial Code or other applicable law, the Agent shall have the right and power (a) to take possession of all or any part of the Collateral, and to exclude the Credit Parties and all persons claiming under the Credit Parties wholly or partly therefrom, and thereafter to hold, store, and/or use, operate, manage and control the same, and (b) to grant a license to use, or cause to be granted a license to use, any or all of the Patents, Trademarks and Copyrights (in the case of Trademarks, along with the goodwill associated therewith), but subject to the terms of any licenses. Upon any such taking of possession, the Agent may, from time to time, at the expense of the Credit Parties, make all such repairs, replacements, alterations, additions and improvements to and of the Collateral as the Agent may deem proper. In any such case the Agent shall have the right to manage and control the Collateral and to carry on the business and to exercise all rights and powers of the Credit Parties in respect thereto as the Agent shall deem best, including the right to enter into any and all such agreements with respect to the operation of the Collateral or any part thereof as the Agent may see fit; and the Agent shall be entitled to collect and receive all rents, issues, profits, fees, revenues and other income of the same and every part thereof. Such rents, issues, profits, fees, revenues and other income shall be applied to pay the expenses of holding and operating the Collateral and of conducting the business thereof, and of all maintenance, repairs, replacements, alterations, additions and improvements, and to make all payments which the Agent may be required or may elect to make, if any, for taxes, assessments, insurance and other charges upon the Collateral or any part thereof, and all other payments which the Agent may be required or authorized to make under any provision of this Agreement (including reasonable legal costs and attorneys' fees). The Agent shall apply the remainder of such rents, issues, profits, fees, revenues and other income as provided in Section 4.6.
- 4.6 **Proceeds of Collateral**. After deducting all reasonable costs and expenses of collection, storage, custody, sale or other disposition and delivery (including reasonable legal costs and attorneys' fees) and all other charges against the Collateral, the Agent shall apply the residue of the proceeds of any such sale or disposition to the Obligations in accordance with the terms hereof and any surplus shall be returned to the Credit Parties or to any Person or party lawfully entitled thereto (including, if applicable, any holders of Subordinated Indebtedness). In the event the proceeds of any sale, lease or other disposition of the Collateral are insufficient to pay all of the Obligations in full, the Credit Parties will be liable for the deficiency, together with interest thereon at the Post-Default Rate, and the cost and expenses of collection of such deficiency, including (to the extent permitted by law), without limitation, reasonable attorneys' fees, expenses and disbursements.

#### ARTICLE V

### **Representations and Warranties**

Each Credit Party represents and warrants to the Lenders, the Issuing Lender and the Agent, as to itself and each other Credit Party, that:

- 5.1 **Organization**; **Powers**. Each Credit Party has been duly formed or organized and is validly existing and in good standing under the laws of its jurisdiction of organization. Each Credit Party has all requisite power and authority to carry on its business as now conducted and is qualified to do business in, and is in good standing in, every jurisdiction where such qualification is required, except where the failure to have such power or authority or to be so qualified or in good standing, individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect.
- 5.2 **Authorization; Enforceability**. The borrowing of the Loans and the grant of security interests pursuant to the Loan Documents are within the power and authority of the Credit Parties and have been duly authorized by all necessary action on the part of the Credit Parties. This Agreement and the other Loan Documents have been duly authorized, executed and delivered by the Credit Parties and constitute legal, valid and binding obligations of the Credit Parties, enforceable in accordance with their respective terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium or other laws affecting creditors' rights generally and subject to general principles of equity, regardless of whether considered in a proceeding in equity or at law.
- 5.3 **Governmental Approvals; No Conflicts**. The borrowing of the Loans and the grant of the security interests pursuant to the Loan Documents (a) do not require any consent or approval of, registration or filing with, or any other action by, any Governmental Authority which has not been obtained, except as disclosed on <u>Schedule 5.3</u>, (b) will not violate any applicable law, policy or regulation or the organizational documents of the Credit Parties or any order of any Governmental Authority, (c) will not violate or result in a default under any indenture, agreement or other instrument binding upon the Credit Parties, or any assets, or give rise to a right thereunder to require any payment to be made by the Credit Parties, and such violation or default or right to payment would have a Material Adverse Effect, and (d) except for the Liens created by the Loan Documents, will not result in the creation or imposition of any Lien on any asset of the Credit Parties.

### 5.4 Financial Condition; No Material Adverse Change.

- (a) The Credit Parties have heretofore delivered to the Lenders the following financial statements:
- (i) the consolidated balance sheets and statements of operations, shareholders' equity and cash flows of the Borrower and all Subsidiaries of the Borrower, as of and for the fiscal years ended December 31, 2005, December 31, 2006 and December 31, 2007, in each case, audited and accompanied by an opinion of the Borrower's independent public accountants;
- (ii) the unaudited consolidated balance sheet and statements of operations, shareholders' equity and cash flows of the Borrower and all Subsidiaries of the Borrower, as of and for the fiscal year-to-date period ended March 31, 2008, certified by a Designated Financial Officer that such financial statements fairly present in all material respects the financial condition of the Borrower and all Subsidiaries of the Borrower as at such date and the results of the operations of the Borrower and all Subsidiaries of the Borrower

for the period ended on such date and that all such financial statements, including the related schedules and notes thereto have been prepared in all material respects in accordance with GAAP applied consistently throughout the periods involved, except as disclosed on Schedule 5.4; and

(iii) the projected consolidated balance sheets, statements of operations and cash flows for the Borrower and all Subsidiaries of the Borrower on a monthly basis for fiscal year 2008.

Except as disclosed on <u>Schedule 5.4</u>, such financial statements (except for the projections) present fairly, in all material respects, the respective consolidated financial position and results of operations and cash flows of the respective entities as of such respective dates and for such periods in accordance with GAAP, subject to year-end audit adjustments and the absence of footnotes in the case of such unaudited or *pro forma* statements. The projections were prepared by the Borrower in good faith and were based on assumptions that were reasonable when made, it being understood, that actual results during the periods covered thereby may differ from the projected results.

- (b) Except as disclosed on Schedule 5.4, since December 31, 2007, there has been no material adverse change in the business, assets, operations or condition, financial or otherwise, of the Credit Parties (taken as a whole) from that set forth in the December 31, 2007 financial statements referred to in clause (ii) of paragraph (a) above.
- (c) None of the Credit Parties has on the date hereof any contingent liabilities, liabilities for taxes, unusual forward or long-term commitments or unrealized or anticipated losses from any unfavorable commitments in each case that are material and would need to be disclosed on financial statements in accordance with GAAP, except (i) as referred to or reflected or provided for in the financial statements described in this Section 5.4, (ii) as provided for in <u>Schedule 5.4</u> annexed hereto, or (iii) as otherwise permitted pursuant to this Agreement.

## 5.5 Properties.

- (a) Each Credit Party has good and marketable title to, or valid, subsisting and enforceable leasehold interests in, all its Property material to its business. All machinery and equipment of the Credit Parties material to their business is in good operating condition and repair (ordinary wear and tear excepted), and all necessary replacements of and repairs thereto have be made so as to preserve and maintain the value and operating efficiency of such machinery and equipment.
- (b) Set forth on Schedule 5.5 hereto is a complete list of all Patents, Trademarks and Copyrights. Each Credit Party owns, or is licensed to use, all Patents, Trademarks and Copyrights and other intellectual property material to its business ("Proprietary Rights"), and to the knowledge of the Borrower, the use thereof by the Credit Parties does not infringe upon the rights of any other Person, except for any such infringements that, individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect.
- (c) <u>Schedule 5.5</u> clearly identifies all Patents, Trademarks and Copyrights that have been duly registered in, filed in or issued by the PTO or the United States Register of Copyrights (collectively, the "<u>Registered Proprietary Rights</u>"). The Registered Proprietary Rights have been properly maintained and renewed in accordance with all applicable provisions of law and administrative regulations in the United States, as applicable. The Credit Parties have taken commercially reasonable steps to protect the Registered Proprietary Rights material to their businesses and to maintain the confidentiality of all Proprietary Rights that are not generally in the public domain.

(d) As of the date hereof, <u>Schedule 5.5</u> annexed hereto contains a true, accurate and complete list of (i) all Real Property Assets, whether owned or leased, and (ii) all leases, subleases or assignments of leases (together with all amendments, modifications, supplements, renewals or extensions of any thereof) affecting each Leasehold Property, regardless of whether such Credit Party is the landlord or tenant (whether directly or as an assignee or successor in interest) under such lease, sublease or assignment. Except as specified in <u>Schedule 5.5</u>, each agreement listed in clause (ii) of the immediately preceding sentence is in full force and effect and the Borrower has no knowledge of any default that has occurred and is continuing thereunder, and each such agreement constitutes the legal, valid and binding obligation of each applicable Credit Party, enforceable against such Credit Party in accordance with its terms, except as enforcement may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or limiting creditors' rights generally or by equitable principles.

# 5.6 Litigation and Environmental Matters.

- (a) There are no actions, suits or proceedings by or before any arbitrator or Governmental Authority pending against or, to the knowledge of the Credit Parties, threatened against or affecting any Credit Party as to which there is a reasonable possibility of an adverse determination and that, if adversely determined, could reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect (other than the Disclosed Matters set forth in part (a) of Schedule 5.6).
- (b) Except for the Disclosed Matters set forth in <u>Schedule 5.6</u> and except with respect to any other matters that, individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect, the Credit Parties (i) have not failed to comply with any Environmental Law or to obtain, maintain or comply with any permit, license or other approval required in connection with the operation of the Credit Parties' business to be in compliance with all applicable Environmental Laws, (ii) have not become subject to any Environmental Liability; (iii) have not received notice of any claim with respect to any Environmental Liability or any inquiry, allegation, notice or other communication from any Governmental Authority which is currently outstanding or pending concerning its compliance with any Environmental Law or (iv) do not know of any basis for any Environmental Liability.
- (c) Since the date of this Agreement, there has been no change in the status of the Disclosed Matters that, individually or in the aggregate, has resulted in, or materially increased the likelihood of, a Material Adverse Effect.
- 5.7 **Compliance with Laws and Agreements**. Except as set forth on <u>Schedule 5.7</u>, each Credit Party is in compliance with all laws, regulations, policies and orders of any Governmental Authority applicable to it or its property and all indentures, agreements and other instruments binding upon it or its property, except where the failure to do so, individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect.
- 5.8 **Investment and Holding Company Status**. No Credit Party is (a) an "investment company" as defined in, or subject to regulation under, the Investment Company Act of 1940, as amended, (b) a "holding company" as defined in, or subject to regulation under, the Public Utility Holding Company Act of 1935, as amended or (c) a "bank holding company" as defined in, or subject to regulation under, the Bank Holding Company Act of 1956, as amended.
- 5.9 **Taxes**. Except as set forth on <u>Schedule 5.9</u>, each Credit Party has timely filed or caused to be filed all Tax returns and reports required to have been filed and has paid or caused to be paid all Taxes required to have been paid by it, except (a) Taxes that are being contested in good faith by appropriate proceedings and for which such Credit Party has set aside on its books adequate reserves with

respect thereto in accordance with GAAP, which reserves shall be acceptable to Agent, or (b) to the extent that the failure to do so could not reasonably be expected to result in a Material Adverse Effect.

- 5.10 ERISA. Except as set forth on Schedule 5.10, no Credit Party has any Pension Plans. No ERISA Event has occurred or is reasonably expected to occur that, when taken together with all other such ERISA Events for which liability is reasonably expected to occur, could reasonably be expected to result in a Material Adverse Effect. No Credit Party has a present intention to terminate any Pension Plan with respect to which any Credit Party would incur a cost of more than \$100,000 to terminate such Plan, including amounts required to be contributed to fund such Plan on Plan termination and all costs and expenses associated therewith, including without limitation attorneys' and actuaries' fees and expenses in connection with such termination and a reasonable estimate of expenses and settlement or judgment costs and attorneys' fees and expenses in connection with litigation related to such termination.
- 5.11 **Disclosure**. As of the Effective Time, the Credit Parties have disclosed to the Agent all material agreements, instruments and corporate or other restrictions to which any Credit Party is subject after the Effective Time, and all other matters known to the Credit Parties, that, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Effect. The organizational structure of the Credit Parties is as set forth on Schedule 5.12 annexed hereto. The information, reports, financial statements, exhibits and schedules furnished at or prior to the Effective Time in writing by or on behalf of the Credit Parties to the Agent in connection with the negotiation, preparation or delivery of this Agreement and the other Loan Documents or included herein or therein or delivered pursuant hereto or thereto, at the Effective Time, when taken as a whole do not contain any untrue statement of material fact or omit to state any material fact necessary to make the statements herein or therein, in light of the circumstances under which they were made, not materially misleading. All written information furnished after the Effective Time by the Credit Parties to the Agent and/or the Lenders in connection with this Agreement and the other Loan Documents and the transactions contemplated hereby and thereby will be true, complete and accurate in every material respect, or (in the case of pro-forma information and projections) prepared in good faith based on assumptions reasonable as of the date when such information is stated or certified. There is no fact known to the Credit Parties that could reasonably be expected to have a Material Adverse Effect that has not been disclosed herein, in the other Loan Documents or in a report, financial statement, exhibit, schedule, disclosure letter or other writing furnished to the Agent for use in connection with the transactions contemplated hereby or thereby.
- 5.12 **Capitalization**. As of the Effective Time, the capital structure and ownership of the Borrower and its Subsidiaries are correctly described on Schedule 5.12. As of the Effective Time, the authorized, issued and outstanding capital stock of the Borrower and each Subsidiary of the Borrower consists of the capital stock described on Schedule 5.12, all of which is duly and validly issued and outstanding, fully paid and nonassessable. Except as set forth on Schedule 5.12, as of the date hereof, (x) there are no outstanding Equity Rights with respect to the Borrower or any Subsidiary of the Borrower and, (y) there are no outstanding obligations of the Borrower or any Subsidiary of the Borrower, nor are there any outstanding obligations of the Borrower or any Subsidiary of the Borrower, nor are there any outstanding obligations of the Borrower or any Subsidiary of the Borrower to make payments to any Person, such as "phantom stock" payments, where the amount thereof is calculated with reference to the fair market value or equity value of the Borrower or any Subsidiary of the Borrower or any Subsidiary of the Borrower or any Subsidiary of the Borrower.

#### 5.13 Subsidiaries.

(a) Set forth on <u>Schedule 5.13</u> is a complete and correct list of all Subsidiaries of the Borrower as of the date hereof, together with, for each such Subsidiary, (i) the jurisdiction of organization of such Subsidiary, (ii) each Person holding ownership interests in such Subsidiary, (iii) the nature of the

ownership interests held by each such Person and the percentage of ownership of such Subsidiary represented by such ownership interests and (iv) a statement with respect to each Subsidiary as to whether such Subsidiary is a Renewable Energy Subsidiary or other Non-Core Energy Subsidiary, a Special Purpose Subsidiary (other than Non-Core Energy Subsidiary), a Foreign Subsidiary, an Inactive Subsidiary, or a Subsidiary engaged in the line of business activity engaged in by the Core Ameresco Group. Except as disclosed in Schedule 5.13, (x) each Credit Party and its respective Subsidiaries owns, free and clear of Liens (other than Liens permitted hereunder), and has the unencumbered right to vote, all outstanding ownership interests in each Person shown to be held by it in Schedule 5.13, (y) all of the issued and outstanding capital stock of each such Person organized as a corporation is validly issued, fully paid and nonassessable and (z) there are no outstanding Equity Rights with respect to such Person.

(b) Except as set forth on <u>Schedule 8.8</u>, as of the date of this Agreement none of the Credit Parties is subject to any indenture, agreement, instrument or other arrangement containing any provision of the type described in Section 8.8 ("<u>Restrictive Agreements</u>"), other than any such provision the effect of which has been unconditionally, irrevocably and permanently waived.

#### 5.14 Material Indebtedness, Liens and Agreements.

- (a) <u>Schedule 5.14</u> hereto contains a complete and correct list, as of the date of this Agreement, of all Material Indebtedness or any extension of credit (or commitment for any extension of credit) to, or guarantee by, any Credit Party the aggregate principal or face amount of which equals or exceeds (or may equal or exceed) \$500,000, and the aggregate principal or face amount outstanding or that may become outstanding with respect thereto is correctly described on <u>Schedule 5.14</u>.
- (b) <u>Schedule 5.14</u> hereto is a complete and correct list, as of the date of this Agreement, of each Lien (other than the Liens in favor of the Agent and Lenders) securing Indebtedness of any Person and covering any property of the Credit Parties, and the aggregate Indebtedness secured (or which may be secured) by each such Lien and the Property covered by each such Lien is correctly described in the appropriate part of <u>Schedule 5.14</u>.
- (c) <u>Schedule 5.14</u> hereto is a complete and correct list, as of the date of this Agreement, of each contract and arrangement to which any Credit Party is a party for which breach, nonperformance, cancellation or failure to renew would have a Material Adverse Effect other than purchase orders made in the ordinary course of business and subject to customary terms.
- (d) To the extent requested by the Agent, true and complete copies of each agreement listed on the appropriate part of Schedule 5.14 have been delivered to the Agent, together with all amendments, waivers and other modifications thereto. All such agreements are valid, subsisting, in full force and effect, are currently binding and will continue to be binding upon each Credit Party that is a party thereto and, to the best knowledge of the Credit Parties, binding upon the other parties thereto in accordance with their terms. The Credit Parties are not in default under any such agreements, which default could have a Material Adverse Effect.
- 5.15 **Federal Reserve Regulations**. No Credit Party is engaged principally or as one of its important activities in the business of extending credit for the purpose of purchasing or carrying margin stock (as defined in Regulation U of the Board). The making of the Loans hereunder, the use of the proceeds thereof as contemplated hereby, and the security arrangements contemplated by the Loan Documents, will not violate or be inconsistent with any of the provisions of Regulations T, U, or X of the Board of Governors of the Federal Reserve System.

- 5.16 **Solvency**. As of the Effective Time and after giving effect to the initial Loans hereunder and the other transactions contemplated hereby:
- (a) the aggregate value of all properties of the Credit Parties at their present fair saleable value on a consolidated, going concern basis (*i.e.*, the amount that may be realized within a reasonable time, considered to be six months to one year, either through collection or sale at the regular market value, conceiving the latter as the amount that could be obtained for such properties within such period by a capable and diligent businessman from an interested buyer who is willing to purchase under ordinary selling conditions), exceeds the amount of all the consolidated debts and liabilities (including contingent, subordinated, unmatured and unliquidated liabilities) of the Credit Parties:
- (b) the Credit Parties will not, on a consolidated basis, have an unreasonably small capital with which to conduct their business operations as heretofore conducted; and
  - (c) the Credit Parties will have, on a consolidated basis, sufficient cash flow to enable them to pay their debts as they mature.
- 5.17 **Force Majeure**. Since December 31, 2007, the business, properties and other assets of the Credit Parties have not been materially and adversely affected in any way as the result of any fire or other casualty, strike, lockout or other labor trouble, embargo, sabotage, confiscation, contamination, riot, civil disturbance, activity of armed forces or act of God.
  - 5.18 Accounts Receivable. Unless otherwise indicated to the Agent in writing:
    - (a) Each account receivable is genuine and in all respects what it purports to be, and it is not evidenced by a judgment;
- (b) Except with respect to accounts receivable arising out of project payments under long term contracts, each account receivable arises out of a completed, bona fide sale and delivery of goods or rendition of services by a Credit Party in the ordinary course of its business and in accordance with the terms and conditions of all purchase orders, contracts or other documents relating thereto and forming a part of the contract between such Credit Party and the account debtor, and, in the case of goods, title to the goods has passed from the Credit Party to the account debtor;
- (c) Except with respect to accounts receivable arising out of project payments under long term contracts, each account receivable is for a liquidated amount maturing as stated in the duplicate invoice covering such sale or rendition of services, a copy of which has been furnished or is available to the Agent;
- (d) Each account receivable is absolutely owing to one of the Credit Parties and is not contingent in any respect or for any reason and the Agent's security interest therein, is not, and will not (by voluntary act or omission of the Credit Parties) be in the future, subject to any offset, Lien, deduction, defense, dispute, counterclaim or any other adverse condition except for disputes resulting in returned goods where the amount in controversy is deemed by the Agent to be immaterial and Liens arising in the ordinary course of business under applicable law in favor of subcontractors, materialmen and mechanics in respect of work performed in connection with such account receivable; provided that the Credit Parties shall pay all amounts required to be paid to any such subcontractor, materialman or mechanic in accordance with the terms of the agreement relating to such account receivable;
- (e) No Credit Party has made any agreement with any account debtor for any extension, compromise, settlement or modification of any account receivable or any deduction therefrom,

except discounts or allowances which are granted by the Credit Parties in the ordinary course of their businesses for prompt payment and which are reflected in the calculation of the net amount of each respective invoice related thereto;

- (f) To the best knowledge of the Credit Parties, the account debtor under each account receivable had the capacity to contract at the time any contract or other document giving rise to an account receivable was executed and such account debtor is not insolvent; and
- (g) To the best knowledge of the Credit Parties, there are no proceedings or actions which are threatened or pending against any account debtor which might result in any material adverse change in such account debtor's financial condition or the collectability of any account receivable.

### 5.19 Labor and Employment Matters.

- (a) Except as set forth on Schedule 5.19 as of the Effective Time, and thereafter with respect to which such would have a Material Adverse Effect, (A) no employee of the Credit Parties is represented by a labor union, no labor union has been certified or recognized as a representative of any such employee, and the Credit Parties do not have any obligation under any collective bargaining agreement or other agreement with any labor union or any obligation to recognize or deal with any labor union, and there are no such contracts or other agreements pertaining to or which determine the terms or conditions of employment of any employee of the Credit Parties; (B) no Credit Party has knowledge of any pending or threatened representation campaigns, elections or proceedings; (C) the Credit Parties do not have knowledge of any strikes, slowdowns or work stoppages of any kind, or threats thereof, and no such activities occurred during the 24-month period preceding the date hereof; and (D) no Credit Party has engaged in, admitted committing or been held to have committed any unfair labor practice.
- (b) Except as set forth on <u>Schedule 5.19</u>, the Credit Parties have at all times complied in all material respects, and are in material compliance with, all applicable laws, rules and regulations respecting employment, wages, hours, compensation, benefits, and payment and withholding of taxes in connection with employment.
- (c) Except as set forth on Schedule 5.19, except as could not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect, the Credit Parties have at all times complied with, and are in compliance with, all applicable laws, rules and regulations respecting occupational health and safety, whether now existing or subsequently amended or enacted, including, without limitation, the Occupational Safety & Health Act of 1970, 29 U.S.C. Section 651 et seq. and the state analogies thereto, all as amended or superseded from time to time, and any common law doctrine relating to worker health and safety.
- 5.20 **Bank Accounts**. Schedule 5.20 lists all banks and other financial institutions at which any Credit Party maintains deposits and/or other accounts as of the Restatement Date, and such Schedule correctly identifies the name and address of each depository, the name in which the account is held, a description of the purpose of the account, and the complete account number.
- 5.21 **Matters Relating to the Special Purpose Subsidiaries**. Except for Cost Overrun and Completion Guaranties and Renewable Energy Project Guaranties permitted hereunder, no Credit Party is obligated under any Indebtedness or other obligation of any Special Purpose Subsidiary. The Hawaii Joint Venture does not conduct any business other than the construction and operation of the Hawaii Project.

- 5.22 Matters Relating to Inactive Subsidiaries. No Inactive Subsidiary (i) owns or otherwise holds any property or other assets or (ii) conducts any business.
- 5.23 **OFAC**. No Credit Party, nor any Subsidiary of any Credit Party (i) is a person whose property or interest in property is blocked or subject to blocking pursuant to Section 1 of Executive Order 13224 of September 23, 2001 Blocking Property and Prohibiting Transactions With Persons Who Commit, Threaten to Commit, or Support Terrorism (66 Fed. Reg. 49079 (2001)), (ii) engages in any dealings or transactions prohibited by Section 2 of such executive order, or is otherwise associated with any such person in any manner violative of Section 2, or (iii) is a person on the list of Specially Designated Nationals and Blocked Persons or subject to the limitations or prohibitions under any other U.S. Department of Treasury's Office of Foreign Assets Control regulation or executive order. The regulations and executive orders described in clauses (i) through (iii) of the preceding sentence are referred to herein as "OFAC Regulations".
- 5.24 **Patriot Act**. The Credit Parties are in compliance, in all material respects, with the (i) the Trading with the Enemy Act, as amended, and each of the foreign assets control regulations of the United States Treasury Department (31 CFR, Subtitle B, Chapter V, as amended) and any other enabling legislation or executive order relating thereto (collectively, the "<u>FAC Regulations</u>"), and (ii) the Patriot Act. No part of the proceeds of the Loans will be used, directly or indirectly, for any payments to any governmental official or employee, political party, official of a political party, candidate for political office, or anyone else acting in an official capacity, in order to obtain, retain or direct business or obtain any improper advantage, in violation of the United States Foreign Corrupt Practices Act of 1977, as amended (the "<u>FCPA</u>").

## ARTICLE VI

#### **Conditions**

- 6.1 **Effective Time**. The obligations of the Revolving Credit Lenders to make Revolving Loans and of the Issuing Lender to issue Letters of Credit hereunder shall not become effective until the date on which each of the following conditions is satisfied (or waived in accordance with Section 11.2):
- (a) <u>Counterparts of Agreement</u>. The Agent shall have received from each party hereto either (i) a counterpart of this Agreement signed on behalf of such party or (ii) written evidence satisfactory to the Agent (which may include telecopy or electronic transmission of a signed signature page of this Agreement) that such party has signed a counterpart of this Agreement.
- (b) <u>Notes</u>. The Agent shall have received a duly completed and executed Revolving Credit Note for the account of each Revolving Credit Lender and a duly completed and executed Swing Loan Note in the principal amount of the Swing Loan Commitment for the account of the Swing Loan Lender.
- (c) <u>Organizational Structure</u>. The corporate organizational structure, capitalization and ownership of the Borrower and its Subsidiaries shall be as set forth on <u>Schedules 5.12</u> and <u>5.13</u> annexed hereto. The Agent shall have had the opportunity to review, and shall be satisfied with, the Credit Parties' state and federal tax assumptions, and the ownership, capital, organization and structure of the Credit Parties.
- (d) Existence and Good Standing. The Agent shall have received such documents and certificates as the Agent or Special Counsel may reasonably request relating to the organization, existence and good standing of each Credit Party, the authorization of the transactions contemplated

hereby and any other legal matters relating to the Credit Parties, this Agreement or the other Loan Documents, all in form and substance reasonably satisfactory to the Agent and Special Counsel.

- (e) Security Interests in Personal and Mixed Property. The Agent shall have received evidence satisfactory to it that the Credit Parties shall have taken or caused to be taken (or authorized the Agent to take or cause to be taken) all such actions, executed and delivered or caused to be executed and delivered all such agreements, documents and instruments and made or caused to be made all such filings and recordings (other than filings or recordings to be made by the Agent on or after the Restatement Date) that may be necessary or, in the opinion of the Agent, desirable in order to create in favor of the Agent, for the benefit of the Lenders, valid and (upon such filing and recording) perfected First Priority security interests in the entire personal and mixed property Collateral.
- (f) <u>Evidence of Insurance</u>. The Agent shall have received certificates from the Credit Parties' insurance brokers that all insurance required to be maintained pursuant to Section 7.5 is in full force and effect and that the Agent on behalf of the Lenders has been named as additional insured or loss payee thereunder to the extent required under Section 7.5.
- (g) Necessary Governmental Permits, Licenses and Authorizations and Consents; Etc. The Credit Parties shall have obtained all other permits, licenses, authorizations and consents from all other Governmental Authorities and all consents of other Persons with respect to Material Indebtedness, Liens and material agreements listed on Schedule 5.14 (and so identified thereon) annexed hereto, in each case that are necessary or advisable in connection with the transactions contemplated by the Loan Documents, and each of the foregoing shall be in full force and effect, in each case other than those the failure to obtain or maintain which, either individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect. No action, request for stay, petition for review or rehearing, reconsideration or appeal with respect to any of the foregoing shall be pending, and the time for any applicable Governmental Authority to take action to set aside its consent on its own motion shall have expired.
- (h) <u>Amendment of Subordinated Note</u>. The Subordinated Note shall have been amended to provide that the maturity date of the Subordinated Note shall occur no earlier than 180 days after the Revolving Credit Maturity Date, and such Subordinated Note, as amended, shall be in form and substance satisfactory to the Agent.
- (i) <u>Subordination Agreement</u>. George Sakellaris and each of the Credit Parties shall have executed and delivered to the Agent a Confirmation of and Amendment to Subordination Agreement in form and substance reasonably acceptable to the Agent, confirming the terms of the Subordination Agreement and containing such amendments to the Subordination Agreement as the Agent shall reasonably deem necessary.
- (j) Existing Debt; Liens. The Agent shall have received evidence that all principal, interest, and other amounts owing in respect of all Existing Debt of the Credit Parties (other than Indebtedness permitted to remain outstanding in accordance with Section 8.1 hereof) will be repaid in full as of the Effective Time, and that with respect to all Indebtedness permitted to remain outstanding in accordance with Section 8.1 hereof, any defaults or events of default existing as of the Restatement Date with respect to such Indebtedness will be cured or waived immediately following the funding of the initial Loans. The Agent shall have received evidence that as of the Effective Time, the Property of the Credit Parties is not subject to any Liens (other than Liens in favor of the Agent and Liens permitted to remain outstanding in accordance with Section 8.2 hereof).

- (k) <u>Financial Statements</u>; <u>Projections</u>. The Agent shall have received the certified financial statements and projections referred to in Section 5.4 hereof and the same shall not be inconsistent with the information previously provided to the Agent.
- (l) <u>Solvency Certificate</u>. The Agent shall have received a certificate, dated the Restatement Date and signed by a Designated Financial Officer, substantially in the form of <u>Exhibit I</u> attached hereto.
- (m) <u>Financial Officer Certificate</u>. The Agent shall have received a certificate, dated the Restatement Date and signed by a Designated Financial Officer, confirming compliance with the conditions set forth in paragraphs (a) and (b) of Section 6.2 at the Effective Time.
- (n) No Material Adverse Change. There shall have occurred no material adverse change (in the reasonable opinion of the Agent) in the businesses, operations, properties (including tangible properties), or conditions (financial or otherwise), assets, liabilities or income of the Credit Parties.
- (o) <u>Opinion of Counsel to Credit Parties</u>. The Agent shall have received favorable written opinions (addressed to the Agent and dated the Restatement Date) of (i) Choate, Hall & Stewart, special counsel to the Credit Parties, substantially in the form of <u>Exhibit I</u> annexed hereto and covering such matters relating to the Credit Parties, this Agreement, the other Loan Documents or the transactions contemplated hereby as the Agent shall reasonably request and (ii) local counsel to the Credit Parties in the following jurisdictions: North Carolina, Nevada, Kentucky, Tennessee, Texas and Ontario, Canada.
- (p) <u>Control Agreements</u>. The Credit Parties shall have delivered to the Agent a Control Agreement duly executed by each financial institution at which any Credit Party maintains deposit or other accounts.
- (q) <u>Fees and Expenses</u>. The Agent and the Issuing Lender shall have received all reasonable fees and other amounts due and payable to such Person and Special Counsel at or prior to the Effective Time, including, to the extent invoiced, reimbursement or payment of all out-of-pocket expenses required to be reimbursed or paid by the Borrower hereunder.
- (r) Other Documents. The Agent shall have received all material contracts, instruments, opinions, certificates, assurances and other documents as the Agent or any Lender or Special Counsel shall have reasonably requested and the same shall be reasonably satisfactory to each of them.

Without limiting the generality of Section 10.3, for purposes of determining compliance with the conditions specified in this Section 6.1, each Lender that has signed this Agreement shall be deemed to have consented to, approved or accepted or to be satisfied with, each document or other matter required thereunder to be consented to or approved by or acceptable or satisfactory to a Lender unless the Agent shall have received notice from such Lender prior to Effective Time specifying its objection thereto.

- 6.2 **Each Extension of Credit**. The obligation of each Lender to make a Loan on the occasion of any Borrowing, and of the Issuing Lender to issue, amend, renew or extend any Letter of Credit, is subject to the satisfaction of the following conditions:
- (a) <u>Representations and Warranties</u>. The representations and warranties of each Credit Party set forth in this Agreement and the other Loan Documents shall be true and correct in all material respects on and as of the date of such Borrowing, or (as applicable) the date of issuance, amendment, renewal or extension of such Letter of Credit, both before and after giving effect thereto and

to the use of the proceeds thereof (or, if any such representation or warranty is expressly stated to have been made as of a specific date, such representation or warranty shall be or have been true and correct as of such specific date and provided that, to the extent any change in circumstances expressly permitted by this Agreement causes any representation and warranty set forth herein to no longer be true, such representation and warranty shall be deemed modified to reflect such change in circumstances).

(b) No Defaults. At the time of, and immediately after giving effect to, such Borrowing, or (as applicable) the date of issuance, amendment, renewal or extension of such Letter of Credit, no Default under Section 9.1(a)(ii) or Event of Default shall have occurred and be continuing and no Material Adverse Effect shall have occurred or result therefrom.

#### ARTICLE VII

#### **Affirmative Covenants**

Until the Commitments have expired or been terminated and the principal of and interest on each Loan and all fees payable hereunder shall have been paid in full and all Letters of Credit shall have expired or terminated and all LC Disbursements shall have been reimbursed, each Credit Party covenants and agrees with the Agent and the Lenders that:

- 7.1 Financial Statements and Other Information. The Credit Parties will furnish to the Agent and each Lender:
  - (a) as soon as available and in any event within 120 days after the end of each fiscal year of the Credit Parties:
- (i) consolidated statements of operations, shareholders' equity and cash flows of the Borrower and its Subsidiaries for such fiscal year and the related consolidated balance sheets of the Borrower and its Subsidiaries as at the end of such fiscal year, setting forth in each case in comparative form the corresponding consolidated figures for the preceding fiscal year; provided that the consolidated statements of operations, shareholders' equity and cash flows of the Borrower and its Subsidiaries and the consolidated balance sheets of the Borrower and its Subsidiaries for any such fiscal year shall present separately the results of the Core Ameresco Companies (taken as a whole) for such fiscal year, and
- (ii) an opinion of independent certified public accountants of recognized national standing (without a "going concern" or like qualification or exception and without any qualification or exception as to the scope of such audit) stating that the consolidated financial statements referred to in the preceding clause (i) fairly present in all material respects the consolidated financial condition and results of operations of the Credit Parties and their Subsidiaries as at the end of, and for, such fiscal year in accordance with GAAP.
  - (b) as soon as available and in any event within 45 days after the end of each fiscal quarter:
- (i) consolidated and consolidating statements of operations, shareholders' equity and cash flows of the Borrower and its Subsidiaries for such fiscal quarter and for the period from the beginning of the respective fiscal year to the end of such fiscal quarter, and the related consolidated and consolidating balance sheets of the Borrower and its Subsidiaries as at the end of such period, setting forth in each case in comparative form the corresponding consolidated figures for the corresponding period in the preceding fiscal year, and the

corresponding figures for the forecasts most recently delivered to the Agent for such period; <u>provided</u> that the consolidated statements of operations, shareholders' equity and cash flows of the Borrower and its Subsidiaries and the consolidated balance sheets of the Borrower and its Subsidiaries for any such fiscal period shall present separately the results of the Core Ameresco Companies (taken as a whole) for such fiscal period, and

- (ii) a certificate of a Designated Financial Officer, which certificate shall state that said consolidated financial statements referred to in the preceding clause (i) fairly present in all material respects the consolidated financial condition and results of operations of the Borrower and its Subsidiaries and that said consolidating financial statements referred to in the preceding clause (i) fairly present the respective individual unconsolidated financial conditions and results of operations of the Borrower and each Subsidiary, in each case in accordance with GAAP, consistently applied, as at the end of, and for, such period (subject to normal year-end audit adjustments and the omission of footnotes);
- (c) as soon as available and in any event within (i) 45 days after the end of each fiscal quarter a Compliance Certificate duly executed by a Designated Financial Officer with respect to the quarterly financial statements delivered pursuant to subsection 7.1(b) above, and (ii) within 120 days after the end of each fiscal year, a Compliance Certificate duly executed by a Designated Financial Officer with respect to the annual financial statements delivered pursuant to subsection 7.1 (a) above, together with, in the case of each of clauses (i) and (ii) of this subsection (c), such supporting financial information with respect to the Core Ameresco Companies as shall be reasonably acceptable to the Agent;
- (d) as soon as available and in any event no later than 1:00 p.m. (Boston time) on each day that the Borrower makes any request for any Borrowing hereunder, an Advance Request in the form attached hereto as <a href="Exhibit B">Exhibit B</a>;
- (e) as soon as available and in any event within 60 days after the end of each fiscal year of the Credit Parties, statements of forecasted consolidated and consolidating income and cash flows for the Credit Parties for each fiscal month in such fiscal year and a forecasted consolidated and consolidating balance sheet of the Credit Parties as of the last day of each fiscal month in such fiscal year, together with supporting assumptions which were reasonable when made, all prepared in good faith in reasonable detail and consistent with the Credit Parties' past practices in preparing projections and otherwise reasonably satisfactory in scope to the Agent;
  - (f) promptly upon receipt thereof, copies of all management letters and accountants' letters received by the Credit Parties; and
- (g) promptly following any request therefor, such other information regarding the operations, business affairs and financial condition of the Credit Parties, or compliance with the terms of this Agreement, as the Agent or any Lender may reasonably request.

Borrower hereby acknowledges that (a) the Agent will make available to the Lenders and the Issuing Lender materials and/or information provided by or on behalf of the Borrower hereunder (collectively, "Borrower Materials") by posting Borrower Materials on IntraLinks or another similar electronic system (the "Platform") and (b) certain of the Lenders (each, a "Public Lender") may have personnel who do not wish to receive material non-public information with respect to the Borrower or its Affiliates or the respective securities of any of the foregoing, and who may be engaged in investment and other market-related activities with respect to such Persons' securities. The Borrower hereby agrees that, to the extent that and, so long as, the Borrower is the issuer of any outstanding debt or equity securities that are registered or issued pursuant to a private offering or is actively contemplating issuing any such securities

(w) all Borrower Materials that are to be made available to Public Lenders shall be clearly and conspicuously marked "PUBLIC" which, at a minimum, shall mean that the word "PUBLIC" shall appear prominently on the first page thereof; (x) by marking Borrower Materials "PUBLIC," Borrower shall be deemed to have authorized the Agent, the Issuing Lender and the Lenders to treat such Borrower Materials as not containing any material non-public information with respect to the Borrower or its securities for purposes of United States Federal and state securities laws (provided, however, that to the extent such Borrower Materials constitute confidential information (as described in Section 11.14), they shall be treated as set forth in Section 11.14); (y) all Borrower Materials marked "PUBLIC" are permitted to be made available through a portion of the Platform that is designated "Public Side Information;" and (z) the Agent shall be entitled to treat any Borrower Materials that are not marked "PUBLIC" as being suitable only for posting on a portion of the Platform not designated "Public Side Information. Notwithstanding the foregoing, the Borrower shall be under no obligation to mark any Borrower Materials "PUBLIC."

- 7.2 Notices of Material Events. The Credit Parties will furnish to the Agent prompt written notice of the following:
  - (a) the occurrence of any Default;
- (b) the filing or commencement of any action, suit or proceeding by or before any arbitrator or Governmental Authority against or affecting any Credit Party or Affiliate that could reasonably be expected to result in a Material Adverse Effect;
- (c) the occurrence of any ERISA Event related to the Plan of any Credit Party or knowledge after due inquiry of any ERISA Event related to a Plan of any other ERISA Affiliate that, alone or together with any other ERISA Events that have occurred, could reasonably be expected to result in liability of the Credit Parties in an aggregate amount exceeding \$500,000; and
- (d) any other development (including, without limitation, any default by a Credit Party under or dispute under a task order or other government contract) that results in, or could reasonably be expected to result in, a Material Adverse Effect.

Each notice delivered under this Section 7.2 shall be accompanied by a statement of a Designated Financial Officer setting forth the details of the event or development requiring such notice and any action taken or proposed to be taken with respect thereto.

- 7.3 **Existence; Conduct of Business**. Each Credit Party shall do or cause to be done all things necessary to preserve, renew and keep in full force and effect its legal existence and the rights, licenses, permits, privileges and franchises material to the conduct of its business; provided that the foregoing shall not prohibit any merger, consolidation, liquidation, dissolution or any discontinuance or sale of such business permitted under Section 8.4.
- 7.4 **Payment of Obligations**. Each Credit Party shall pay its obligations, including Tax liabilities, that, if not paid, could result in a Material Adverse Effect before the same shall become delinquent or in default, except where (a) the validity or amount thereof is being contested in good faith by appropriate proceedings, (b) such Credit Party has set aside on its books adequate reserves with respect thereto in accordance with GAAP, which reserves shall be acceptable to Agent, and (c) the failure to make payment pending such contest could not reasonably be expected to result in a Material Adverse Effect.

- 7.5 Maintenance of Properties; Insurance. Each Credit Party shall (a) keep and maintain all property material to the conduct of its business in good working order and condition, ordinary wear and tear excepted, and (b) maintain insurance, with financially sound and reputable insurance companies, as may be required by law and such other insurance in such amounts and against such risks as are customarily maintained by companies engaged in the same or similar businesses operating in the same or similar locations, including, without limitation, business interruption insurance. Without limiting the generality of the foregoing, the Credit Parties will maintain or cause to be maintained replacement value casualty insurance on the Collateral under such policies of insurance, in each case with such insurance companies, in such amounts, with such deductibles, and covering such terms and risks as are at all times satisfactory to the Agent in its commercially reasonable judgment. All general liability and other liability policies with respect to the Credit Parties shall name the Agent for the benefit of the Lenders as an additional insured thereunder as its interests may appear, and all business interruption and casualty insurance policy shall contain a loss payable clause or endorsement, satisfactory in form and substance to the Agent that names the Agent for the benefit of the Lenders as the loss payee thereunder. All policies of insurance shall provide for at least 30 days prior written notice to the Agent of any modifications or cancellation of such policy.
- 7.6 **Books and Records; Inspection Rights.** Each Credit Party shall keep proper books of record and account in which entries are made of all dealings and transactions in relation to its business and activities which fairly record such transactions and activities. Each Credit Party shall permit any representatives designated by the Agent or any Lender to visit and inspect its properties, to examine and make extracts from its books and records, and to discuss its affairs, finances and condition with its officers and independent accountants as frequently as the Agent deems appropriate <u>provided</u> that, so long as no Default has occurred and is continuing, all such visits shall be on reasonable prior notice, at reasonable times during regular business hours of such Credit Party and, unless a Default shall have occurred and be continuing, shall not occur more than once per year, and <u>provided further</u> that after the occurrence and during the continuance of any Default, the Agent and any of the Lenders may visit at any reasonable time. The Borrower shall reimburse the Agent for all examination and inspections costs, internal costs at the customary rate charged by the Agent plus all out-of-pocket expenses incurred in connection with such inspections, <u>provided</u> that, unless a Default shall have occurred and be continuing, such costs and expenses shall not exceed \$7,000 during any period of twelve (12) consecutive months from and after the Restatement Date. The Credit Parties, in consultation with the Agent, will arrange for a meeting to be held at least once every year (and after the occurrence and during the continuance of a Default, more frequently, if requested by the Agent or the Required Lenders) with the Lenders and the Agent hereunder at which the business and operations of the Credit Parties are discussed.
- 7.7 **Fiscal Year**. To enable the ready and consistent determination of compliance with the covenants set forth in Section 8.10 hereof, the Credit Parties shall maintain their current fiscal year and current method of determining the last day of the first three fiscal quarters in each fiscal year.
- 7.8 **Compliance with Laws**. Each Credit Party shall comply with (i) all permits, licenses and authorizations, including, without limitation, environmental permits, licenses and authorizations, issued by a Governmental Authority, (ii) all laws, rules, regulations and orders including, without limitation, Environmental Laws, all OFAC Regulations, the Trading with the Enemy Act, the FAC Regulations, the Patriot Act and the FCPA, of any Governmental Authority and (iii) all contractual obligations, in each case applicable to it or its property, except where the failure to do so, individually or in the aggregate, could not reasonably be expected to result in a Material Adverse Effect.
- 7.9 **Use of Proceeds**. The proceeds of the Loans will be used only for (i) the refinancing of existing indebtedness, (ii) fees and expenses incurred in connection with the transactions contemplated by this Agreement, and (iii) for general corporate and working capital purposes of the Credit Parties. No part

of the proceeds of any Loan will be used, whether directly or indirectly, for any purpose that entails a violation of any of the Regulations of the Board, including Regulations T, U and X.

# 7.10 Certain Obligations Respecting Subsidiaries; Additional Guarantors.

- (a) Except as otherwise permitted hereunder, each Credit Party will, and will cause each of its Subsidiaries to, take such action from time to time as shall be necessary to ensure that the percentage of the issued and outstanding shares of capital stock of any class or character owned by it in any Subsidiary on the date hereof is not at any time decreased, other than by reason of transfers to another Credit Party.
- (b) Without limiting the obligation of the Borrower to obtain the consent of the Agent in connection with any formation or acquisition of Subsidiaries not otherwise permitted hereunder, in the event that any Person becomes a Subsidiary after the Restatement Date, the Borrower shall promptly (i) notify the Agent of such new Subsidiary and (ii) provide to the Agent the information required by Section 5.13 with respect to such Person. If such Person is engaged in business of the type conducted by the Core Ameresco Domestic Companies, the Borrower shall, within 30 days, cause such Person to (x) become a Guarantor hereunder by delivering to the Agent such joinder documents as the Agent shall reasonably require and (y) deliver to the Agent documents of the types referred to in clauses (d) and (e) of Section 6.1 and, if requested by the Agent in its reasonable discretion, opinions of counsel to such Person (which shall cover, among other things, the legality, validity, binding effect and enforceability of the documentation referred to in clause (x)), all in form and substance reasonably satisfactory to the Agent.
- 7.11 **ERISA**. Except where a failure to comply with any of the following, individually or in the aggregate, would not or could not reasonably be expected to result in a Material Adverse Effect, (i) the Credit Parties will maintain, and cause each ERISA Affiliate to maintain, each Plan in compliance with all applicable requirements of ERISA and of the Code and with all applicable rulings and regulations issued under the provisions of ERISA and of the Code and (ii) the Credit Parties will not and, to the extent authorized, will not permit any of the ERISA Affiliates to (a) engage in any transaction with respect to any Plan which would subject any Credit Party to either a civil penalty assessed pursuant to Section 502(i) of ERISA or a tax imposed by Section 4975 of the Code, (b) fail to make full payment when due of all amounts which, under the provisions of any Plan, any Credit Party or any ERISA Affiliate is required to pay as contributions thereto, or permit to exist any accumulated funding deficiency (as such term is defined in Section 302 of ERISA and Section 412 of the Code), whether or not waived, with respect to any Pension Plan or (c) fail to make any payments to any Multiemployer Plan that any Credit Party or any of the ERISA Affiliates may be required to make under any agreement relating to such Multiemployer Plan or any law pertaining thereto.
- 7.12 Environmental Matters; Reporting. The Credit Parties will observe and comply with, and cause each Subsidiary to observe and comply with all Environmental Laws to the extent non-compliance could reasonably be expected to have a Material Adverse Effect. The Credit Parties will give the Agent prompt written notice of any violation as to any Environmental Law by any Credit Party and of the commencement of any judicial or administrative proceeding relating to Environmental Laws (a) in which an adverse result would have a material adverse effect on any operating permits, air emission permits, water discharge permits, hazardous waste permits or other environmental permits held by any Credit Party, or (b) which will, or is likely to, have a Material Adverse Effect on such Credit Party or which will require a material expenditure by such Credit Party to cure any alleged problem or violation.

## 7.13 Matters Relating to Additional Real Property Collateral.

- (a) From and after the Effective Time, in the event that any Credit Party acquires any Material Owned Property that the Agent determines is an Additional Mortgaged Property or in the event that the Agent determines that any Real Property Asset has become an Additional Mortgaged Property, the Borrower shall deliver, to the Agent, as soon as practicable after the Agent has notified the Borrower that a Real Property Asset is an Additional Mortgaged Property, fully executed and notarized Mortgages ("Additional Mortgages"), in proper form for recording in all appropriate places in all applicable jurisdictions, encumbering the interest of the applicable Credit Party in such Additional Mortgaged Property, together with mortgagee title insurance policies or commitments therefor, and copies of all surveys, deeds, title exception documents, flood hazard certificates and other documents as the Agent may reasonably require copies of all deeds with respect to such Additional Mortgaged Property.
- (b) From and after the Effective Time, in the event that any Credit Party enters into any lease with respect to any Material Leasehold Property, the Borrower shall deliver to the Agent copies of the lease, and all amendments thereto, between the Credit Party and the landlord or tenant, together with a Landlord's Waiver and Consent with respect thereto and where required by the terms of any lease, the consent of the mortgagee, ground lessor or other party.
- (c) If requested by the Agent, the Credit Parties shall permit an independent real estate appraiser satisfactory to the Agent, upon reasonable notice, to visit and inspect any Additional Mortgaged Property for the purpose of preparing an appraisal of such Additional Mortgaged Property satisfying the requirements of all applicable laws and regulations (in each case to the extent required under such laws and regulations as determined by the Agent in its sole discretion).

### ARTICLE VIII

### **Negative Covenants**

Until the Commitments have expired or terminated and the principal of and interest on each Loan and all fees payable hereunder have been paid in full and all Letters of Credit shall have expired or terminated and all LC Disbursements shall have been reimbursed, each Credit Party covenants and agrees with the Agent and the Lenders that:

- 8.1 **Indebtedness**. The Credit Parties will not, and will not permit any Foreign Subsidiary to, create, incur, assume or permit to exist any Indebtedness, except:
  - (a) Indebtedness created hereunder;
- (b) Existing Indebtedness on the Restatement Date which is set forth in Schedule 8.1 and has been designated on such schedule as Indebtedness that will remain outstanding following the funding of the initial Loans, and any extension, renewal, refunding or replacement of any such Indebtedness that does not increase the principal amount thereof;
  - (c) Intercompany loans among the Core Domestic Ameresco Companies;
- (d) other Indebtedness incurred after the Restatement Date (determined on a consolidated basis without duplication in accordance with GAAP) consisting of Capital Lease Obligations and/or secured by Liens permitted under Section 8.2(h), in an aggregate principal amount at any time outstanding not in excess of \$1,000,000 less the aggregate outstanding principal amount of Indebtedness incurred pursuant to subsection (n) of this Section 8.1;

- (e) Subordinated Indebtedness;
- (f) Guarantees permitted under section 8.3;
- (g) Indebtedness incurred by any Credit Party under an Energy Conservation Project Financing (including, without limitation, Indebtedness incurred by the Credit Parties under an Energy Conservation Project Financing existing as of the Restatement Date and set forth on <u>Schedule 8.1</u> attached hereto) in an aggregate principal amount outstanding at any time not in excess of \$225,000,000;
- (h) Other unsecured Indebtedness in an aggregate principal amount at any time outstanding not in excess of \$1,000,000 less the aggregate outstanding principal amount of Indebtedness incurred pursuant to subsection (d) of this Section 8.1;
- (i) Indebtedness of the Hawaiian Joint Venture to any Credit Party in an aggregate principal amount not to exceed \$1,000,000 outstanding at any time;
- (j) Indebtedness of the Canadian Subsidiaries to any Credit Party in an aggregate principal amount not to exceed \$5,000,000 outstanding at any time; and
- (k) Indebtedness of the Foreign Subsidiaries (other than any Canadian Subsidiary) to any Credit Party in an aggregate principal amount not to exceed \$1,000,000 outstanding at any time.
- 8.2 Liens. The Credit Parties will not, and will not permit any Foreign Subsidiary to, create, incur, assume or permit to exist any Lien on any Property or asset now owned or hereafter acquired by it, or assign or sell any income or revenues (including accounts receivable) or rights in respect of any thereof, except (the following being called "Permitted Liens"):
  - (a) Liens created hereunder or under the other Loan Documents;
- (b) any Lien on any property or asset of any Credit Party existing on the date hereof and set forth in Schedule 8.1 (excluding, however, following the making of the initial Loans hereunder, the Liens in favor of any Person other than the Agent securing Indebtedness not designated on said schedule as Indebtedness to remain outstanding following the funding of the initial Loans), provided that (i) such Lien shall not apply to any other property or asset of any Credit Party and (ii) such Lien shall secure only those obligations which it secures on the date hereof and extensions, renewals and replacements thereof that do not increase the outstanding principal amount thereof;
- (c) Liens imposed by any Governmental Authority for taxes, assessments or charges not yet delinquent or (in the case of property taxes and assessments not exceeding \$100,000 in the aggregate more than 90 days overdue) which are being contested in good faith and by appropriate proceedings if adequate reserves with respect thereto are maintained on the books of the applicable Credit Party in accordance with GAAP and which reserves shall be acceptable to the Agent;
- (d) landlords', carriers', warehousemen's, mechanics', materialmen's, repairmen's or other like Liens, and vendors' Liens imposed by statute or common law not securing the repayment of Indebtedness, arising in the ordinary course of business which are not overdue for a period of more than 60 days or which are being contested in good faith and by appropriate proceedings and Liens securing judgments (including, without limitation, pre-judgment attachments) but only to the extent for an amount and for a period not resulting in an Event of Default under Section 9.1(j) hereof;

- (e) pledges or deposits under worker's compensation, unemployment insurance and other social security legislation and pledges or deposits to secure the performance of bids, tenders, trade contracts (other than for borrowed money), leases (other than capital leases), utility purchase obligations, statutory obligations, surety and appeal bonds, performance bonds and other obligations of a like nature incurred in the ordinary course of business;
- (f) easements, rights-of-way, restrictions and other similar encumbrances incurred in the ordinary course of business and encumbrances consisting of zoning restrictions, easements, licenses, restrictions on the use of Property or minor imperfections in title thereto which, in the aggregate, are not material in amount, and which do not, in the aggregate, materially detract from the value of the Property of any Credit Party or materially interfere with the ordinary conduct of the business of any Credit Party;
- (g) Liens consisting of bankers' liens and rights of setoff, in each case, arising by operation of law, and Liens on documents presented in letter of credit drawings;
- (h) Liens on fixed or capital assets, including real or personal property, acquired, constructed or improved by any Credit Party, provided that (A) such Liens secure Indebtedness (including Capital Lease Obligations) permitted by Section 8.1 (d), (B) such Liens and the Indebtedness secured thereby are incurred prior to or within 90 days after such acquisition or the completion of such construction or improvement or were in effect at the time the Credit Parties acquired the assets or stock, (C) the Indebtedness secured thereby does not exceed the cost of acquiring, constructing or improving such fixed or capital assets, and (D) such security interests shall not apply to any other property or assets of the Credit Parties;
- (i) Liens on equity interests of any Special Purpose Subsidiary held by any Credit Party (other than the Hawaii Joint Venture); provided that such Liens do not encumber any other property or assets of any of the Credit Parties; and
- (j) Liens on Energy Conservation Financing Collateral in connection with an Energy Conservation Financing and Liens securing Indebtedness permitted under Section 8.1(h); <u>provided</u> that, in each case, such Liens do not encumber any other property or assets of any of the Credit Parties.
- 8.3 **Contingent Liabilities**. The Credit Parties will not, and will not permit any Foreign Subsidiary to, Guarantee the Indebtedness or other obligations of any Person, or Guarantee the payment of dividends or other distributions upon the stock of, or the earnings of, any Person, except:
  - (a) endorsements of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business;
- (b) Guarantees and letters of credit in effect on the date hereof which are disclosed in <u>Schedule 8.1</u>, and any replacements thereof in amounts not exceeding such Guarantees;
  - (c) Guarantees of any Indebtedness permitted under Sections 8.1 (a), (c), (d), (e), (g) and (i);
- (d) Guarantees of any Indebtedness permitted under Section 8.1 (b) (other than Indebtedness incurred by any Special Purpose Subsidiary);
  - (e) obligations in respect of Letters of Credit;

- (f) any Construction Completion and Cost Overrun Guaranty delivered by the Borrower in connection with a Renewable Energy Project; and
- (g) any Renewable Energy Project Guaranty delivered by the Borrower in connection with a Renewable Energy Project, <u>provided</u>, however that:
  - (i) one or more of the Core Domestic Ameresco Companies or Renewable Energy Subsidiaries shall control the operation and maintenance of the Renewable Energy Project during the term of the renewable energy purchase agreement with respect to such Renewable Energy Project;
  - (ii) in connection with any delivery of a Renewable Energy Project Guaranty to a purchaser of landfill gas or energy derived from landfill gas, sunlight, wind or biomass, the credit rating or other credit quality of such purchaser shall be reasonably satisfactory to the Agent;
  - (iii) in connection with any delivery of a Renewable Energy Project Guaranty to an owner of a landfill or other property used for a Renewable Energy Project, such landfill or other property owner shall have a business reputation reasonably satisfactory to the Agent; and
  - (iv) in connection with the delivery of any Renewable Energy Project Guaranty, the Borrower shall deliver to the Agent (A) prior to the delivery of such Renewable Energy Project Guaranty, a certificate executed by the Chief Financial Officer of the Borrower certifying (based upon such consultation with the Borrower's independent certified public accountants as the Borrower shall reasonably deem appropriate) that, in accordance with GAAP, such Renewable Energy Project Guaranty will not result in the accrual of a liability upon the consolidated balance sheet of the Core Ameresco Companies for the fiscal period during which such Renewable Energy Project Guaranty is delivered; (B) a copy of such Renewable Energy Project Guaranty and all other documents related thereto; and (C) such other information or reports as the Agent may reasonably request with respect to such Renewable Energy Project Guaranty.

#### 8.4 Fundamental Changes; Asset Sales.

- (a) No Credit Party will enter into any transaction of merger or consolidation or amalgamation, or liquidate, wind up or dissolve itself (or suffer any liquidation or dissolution). No Credit Party will acquire any business or property from, or capital stock of, or other equity interests in, or be a party to any acquisition of, any Person except for purchases of property to be used in the ordinary course of business, Investments permitted under Section 8.5 and Capital Expenditures. No Credit Party will form or acquire any Subsidiary, other than a Special Purpose Subsidiary, without the express prior written consent of the Agent.
- (b) No Credit Party will convey, sell, lease, transfer or otherwise dispose (including any Disposition) of, in one transaction or a series of transactions, any part of its business or property, whether now owned or hereafter acquired (including, without limitation, receivables and leasehold interests, but excluding (x) the sale, transfer, assignment or other disposition of the equity interests of a Special Purpose Subsidiary (other than the Hawaii Joint Venture), (y) other asset sales resulting in aggregate Net Cash Proceeds not to exceed \$1,000,000 after the Effective Time) and (z) the sale, transfer, assignment or other disposition of a receivable in connection with an Energy Conservation Project Financing, provided that (i) the Credit Parties may sublease real property to the extent such sublease would not interfere with the operation of the business of the Credit Parties, (ii) any Core Domestic

Ameresco Company may convey, sell, lease, transfer or dispose of its assets or property to any other Core Domestic Ameresco Company, and (iii) any Credit Party or Canadian Subsidiary may convey, sell, transfer or otherwise dispose of a portion of the outstanding capital stock of any other Canadian Subsidiary, so long as no Change of Control shall result therefrom.

- (c) Notwithstanding the foregoing provisions of this Section 8.4:
- (i) (i) any Credit Party may be merged or combined with or into any other Credit Party (<u>provided</u> that if such merger involves the Borrower, (x) the Borrower shall be the surviving entity and (y) no Change of Control shall occur); and
- (ii) any Credit Party may sell, lease, transfer or otherwise dispose of any or all of its property (upon voluntary liquidation or otherwise) to any other Credit Party.
- (d) in addition to the formation and acquisition of Special Purpose Subsidiaries permitted pursuant to subsection (a) of this Section 8.4 and subject to Sections 8.1, 8.2, 8.5 and the third sentence of Section 8.4(a), the Credit Parties may acquire all or substantially all of the business and assets of any corporation, partnership, limited liability company, or other entity located in and organized under the laws of the United States or any state thereof ("<u>Permitted Acquisitions</u>"), subject to satisfaction of the following conditions:
  - (i) with respect to such Permitted Acquisitions, the aggregate purchase price (including, without limitation, any earn-out, non-compete, deferred compensation arrangement or other amounts deferred, financed or withheld in respect of the purchase price for, the amount of any Indebtedness assumed in connection with, and all fees and expenses incurred in connection with, such Permitted Acquisition) shall not exceed (x) \$5,000,000 for any single Permitted Acquisition (or series of related Permitted Acquisitions) and (y) \$10,000,000 in the aggregate for all Permitted Acquisitions consummated during any fiscal year;
  - (ii) the business or assets so acquired shall be located in the United States and in the same or a substantially similar line of business as that of the Credit Parties;
  - (iii) both immediately prior to and after giving effect to such Permitted Acquisition on a pro-forma basis incorporating such proforma assumptions as are satisfactory to the Agent in its reasonable discretion, the Credit Parties shall be in compliance with all financial covenants set forth in Section 8.10 hereof and the Borrower shall deliver to the Agent a Compliance Certificate demonstrating such compliance;
  - (iv) the assets so acquired shall be transferred free and clear of any Liens (other than Liens permitted by Section 8.2) and no debt or liabilities shall be incurred, guaranteed, assumed or combined except to the extent otherwise permitted by Section 8.1;
    - (v) the Agent shall have received Lien searches reasonably satisfactory to the Lender with respect to the assets being acquired;
  - (vi) the Agent shall have received perfected Liens (subject only to Liens permitted by Section 8.2) on substantially all of the assets being acquired in such Permitted Acquisition, provided that such Liens shall not be required on any Property if (A) such Liens are prohibited pursuant to any agreement binding on the Person owning such Property and (B) the failure to obtain such Liens is not reasonably likely to have a Material Adverse Effect on the rights of and remedies available to the Lender;

- (vii) to the extent requested by the Agent, the Agent shall have received an opinion of counsel in each applicable jurisdiction reasonably satisfactory to it to the effect that the Liens granted pursuant to this Agreement are perfected security interests in such assets and as to such other matters as the Agent may reasonably require;
- (viii) in connection with such Permitted Acquisition, the Credit Parties shall deliver to the Agent (A) a copy of the purchase agreement pursuant to which such Permitted Acquisition will be consummated; (B) a copy of each existing material agreement relating to the assets to be acquired in such Permitted Acquisition and which is to be in effect after the consummation of such Permitted Acquisition; (C) a Compliance Certificate calculating compliance (as of the last day of the then most recently ended fiscal quarter) with the covenants set forth in Section 8.10 on a *pro forma* basis, assuming such acquisition had occurred prior to the first day of the earliest fiscal quarter included in the applicable test period for calculating such compliance; (D) the Credit Parties shall use best efforts to provide such other information or reports as the Lender may reasonably request with respect to such Permitted Acquisition; (E) to the extent available to the Credit Parties, historical financial statements (for the prior three fiscal years provided that if such statements are not available for the prior three fiscal years, historical financial statements for not less than the prior four fiscal quarters) of the entity whose assets are being acquired; and (F) if the Borrower is acquiring any interest in real property, and if required by the Agent, reports and other information in form, scope and substance reasonably satisfactory to the Agent and prepared by environmental consultants reasonably satisfactory to the Agent, concerning any environmental hazards or liabilities to which any Credit Party is likely to be subject with respect to such acquired real property;
- (ix) immediately prior to such Permitted Acquisition no Default shall have occurred and be continuing and after giving effect to such Permitted Acquisition, no Default shall have occurred and be continuing and no Material Adverse Effect shall result; and
- (x) such acquisition shall be consensual and shall have been approved by the board of directors or comparable governing body of the business so acquired.

#### 8.5 Investments; Hedging Agreements.

- (a) The Credit Parties will not make or permit to remain outstanding any Investment,
- (i) Investments consisting of Guarantees permitted by Section 8.3(e) and Indebtedness permitted by Section 8.1, Intercompany Indebtedness among the Core Domestic Ameresco Companies, Intercompany Indebtedness between the Credit Parties and the Hawaii Joint Venture to the extent permitted pursuant to Section 8.1(i), Intercompany Indebtedness between the Credit Parties and the Foreign Subsidiaries to the extent permitted pursuant to Sections 8.1(j) and (k), and capital contributions by any Core Domestic Ameresco Company to any other Core Domestic Ameresco Company;
  - (ii) Permitted Investments;
  - (iii) Permitted Acquisitions;
  - (iv) Investments existing on the Restatement Date and set forth in Schedule 8.5 hereto;

- (v) Checking and deposit accounts with banks used in the ordinary course of business maintained with depository institutions that have executed Control Agreements; and
- (vi) Investments by the Credit Parties in Renewable Energy Subsidiaries; <u>provided</u>, that at the time of each such Investment and after giving effect thereto, (i) no Event of Default shall have occurred and be continuing and (ii) the Credit Parties shall be in proforma compliance with all financial covenants set forth in Section 8.10.
- (b) The Credit Parties will not enter into any Hedging Agreement, other than as required hereunder and Hedging Agreements entered into in the ordinary course of business with the prior written consent of the Agent to hedge or mitigate risks to which the Credit Parties are exposed in the conduct of their business or the management of their liabilities.
- 8.6 Restricted Junior Payments. The Credit Parties will not declare or make any Restricted Junior Payment at any time; provided, however, that (a) any Subsidiary of any Core Ameresco Company may pay dividends to such Core Ameresco Company; (b) so long as no Default or Event of Default has occurred and is continuing and no Default or Event of Default shall be caused thereby, the Borrower may redeem or purchase (i) the capital stock or Equity Rights of any employee, officer or director of any Credit Party for aggregate cash consideration not to exceed \$1,000,000 in any fiscal year and (ii) warrants or other equity interests held by Boston Capital for aggregate cash consideration not in excess of \$11,320,000 at any time from and after the Restatement Date; (c) so long as no Default or Event of Default shall have occurred and be continuing and no Default or Event of Default shall be caused thereby, the Borrower may declare and pay cash dividends, provided that (i) such payments shall be made only during the period commencing not earlier than 10 days after and ending not later than 90 days after, the date of delivery of the audited annual financial statements for the previous fiscal year required to be delivered by the Credit Parties pursuant to Section 7.1 (a) hereof, together with the Compliance Certificate required to be delivered pursuant to Section 7.1(c) hereof, and (ii) the Credit Parties shall have delivered to the Agent evidence that after giving effect to such payment, the Credit Parties shall be in projected pro-forma compliance with the financial covenants set forth in Section 8.10 hereof for the period of four fiscal quarters occurring immediately after such payment; and (d) so long as no Default under Section 9.1(a)(ii) or Event of Default shall have occurred and be continuing and no Event of Default shall be caused thereby, the Credit Parties may make regularly scheduled payments of interest but no principal in respect of Subordinated Indebtedness on the dates and in the amounts set forth in the applicable Subordinated Debt Documents.
- 8.7 **Transactions with Affiliates**. Except as expressly permitted by this Agreement, the Credit Parties will not directly or indirectly (a) make any Investment in an Affiliate; (b) transfer, sell, lease, assign or otherwise dispose of any property to an Affiliate; (c) merge into or consolidate with an Affiliate, or purchase or acquire property from an Affiliate; or (d) enter into any other transaction directly or indirectly with or for the benefit of an Affiliate (including, without limitation, guarantees and assumptions of obligations of an Affiliate); provided that:
  - (i) any Affiliate who is an individual may serve as a director, officer, employee or consultant of any Credit Party, receive reasonable compensation for his or her services in such capacity and benefit from Permitted Investments to the extent specified in clause (e) of the definition thereof;
  - (ii) the Credit Parties may engage in and continue the transactions with or for the benefit of Affiliates which are described in Schedule 8.7 or are referred to in Section 8.6 (but only to the extent specified in such section); and

- (iii) the Credit Parties may engage in transactions with Affiliates in the ordinary course of business on terms which are no less favorable to the Credit Parties than those likely to be obtained in an arms' length transaction between a Credit Party and a non-affiliated third party.
- 8.8 **Restrictive Agreements**. The Credit Parties will not directly or indirectly, enter into, incur or permit to exist any agreement or other arrangement (other than this Agreement) that prohibits, restricts or imposes any condition upon (a) the ability of any Credit Party to create, incur or permit to exist any Lien upon any of its property or assets, or (b) the ability of any Credit Party that is a Subsidiary of another Credit Party to pay dividends or other distributions with respect to any shares of its capital stock or other equity interests or to make or repay loans or advances to any other Credit Party or to Guarantee Indebtedness of any other Credit Party; provided that (i) the foregoing shall not apply to restrictions and conditions existing on the date hereof identified on Schedule 8.8 (but shall apply to any extension or renewal of, or any amendment or modification expanding the scope of, any such restriction or condition), (iii) the foregoing shall not apply to customary restrictions and conditions contained in agreements relating to the sale of stock or assets of a Subsidiary of a Credit Party pending such sale, provided such restrictions and conditions apply only to the Subsidiary that is to be sold and such sale is permitted hereunder, (iv) clause (a) of the foregoing shall not apply to restrictions or conditions imposed by any agreement relating to secured Indebtedness permitted by this Agreement if such restrictions or conditions apply only to the property or assets securing such Indebtedness, and (v) clause (a) of the foregoing shall not apply to customary provisions in leases and other contracts (excluding license agreements) restricting the assignment thereof.
- 8.9 **Sale-Leaseback Transactions**. No Credit Party will directly or indirectly, enter into any arrangements with any Person whereby such Credit Party shall sell or transfer (or request another Person to purchase) any property, real, personal or mixed, used or useful in its business, whether now owned or hereafter acquired, and thereafter rent or lease such property from any Person.

#### 8.10 Certain Financial Covenants.

- (a) Minimum Profitability. The Credit Parties shall not permit (i) the quarterly net income of the Core Ameresco Companies (determined on a consolidated basis in accordance with GAAP) for any two consecutive fiscal quarters to be less than \$1, and (ii) the aggregate net income of the Core Ameresco Companies (determined on a consolidated basis in accordance with GAAP) for any period of four consecutive fiscal quarters to be less than \$1.
- (b) <u>Tangible Capital Base</u>. The Credit Parties shall not permit the Tangible Capital Base as of (i) the end of each fiscal quarter ending during the period commencing on the Restatement Date and ending on September 30, 2008 to be less than \$15,000,000, (ii) the end of each fiscal quarter ending during the period commencing on October 1, 2008 and ending on December 31, 2008 to be less than \$20,000,000, and (iii) the end of each fiscal quarter thereafter, to be less than the minimum Tangible Capital Base required to be satisfied by the Core Ameresco Companies as of the last day of the fiscal year most recently ended plus 25% of the net income (without reduction for losses) of the Core Ameresco Companies (determined on a consolidated basis without duplication in accordance with GAAP) for the fiscal year most recently ended.
- (c) <u>Minimum EBITDA</u>. The Credit Parties shall not permit EBITDA of the Core Ameresco Companies for any period of four consecutive fiscal quarters to be less than \$20,000,000.

- (d) <u>Total Funded Debt to EBITDA Ratio</u>. The Credit Parties shall not permit the ratio of (a) Total Funded Debt of the Core Ameresco Companies at any time to (b) EBITDA of the Core Ameresco Companies for the period of four consecutive fiscal quarters most recently ended prior to such time, to exceed 2.00 to 1.00.
- (e) <u>Debt Service Coverage Ratio</u>. The Credit Parties shall not permit the ratio of (a) Cash Flow of the Core Ameresco Companies at any time for the period of four fiscal quarters most recently ended prior to such time, to (b) Debt Service of the Core Ameresco Companies for such period of four fiscal quarters, to be less than 1.50 to 1.00.
- 8.11 Lines of Business. The Credit Parties and all Subsidiaries of the Credit Parties will not engage to any substantial extent in any line or lines of business activity other than (i) the types of businesses engaged in by the Credit Parties as of the Effective Time and businesses substantially related thereto, and (ii) such other lines of business as may be consented to by the Required Lenders and the Agent, which consents shall not be unreasonably withheld or delayed. The Non-Core Energy Subsidiaries shall not engage in any line or lines of business activity other than the construction and operation of Non-Core Energy Projects. None of the Funding Subsidiaries shall engage in any line or lines of business activity other than business activities resulting from or permitted pursuant to the Huntington Beach Receivables Financing. The Hawaii Joint Venture shall not engage in any line or lines of business activity other than the construction and operation of the Hawaii Project.
- 8.12 **Other Indebtedness**. The Credit Parties will not purchase, redeem, retire or otherwise acquire for value, or set apart any money for a sinking, defeasance or other analogous fund for the purchase, redemption, retirement or other acquisition of, or make any voluntary payment or prepayment of the principal of or interest on, or any other amount owing in respect of any Subordinated Indebtedness, except, to the extent permitted by Section 8.6.
- 8.13 **Modifications of Certain Documents**. The Credit Parties will not consent to any modification, supplement or waiver of any of the provisions of any documents or agreements evidencing or governing any Subordinated Indebtedness or any other Existing Debt.
- 8.14 **Transactions with Foreign Subsidiaries, Special Purpose Subsidiaries and Inactive Subsidiaries**. Except as expressly permitted under this Agreement, no Credit Party shall take any of the following actions: (a) make any loan, advance or investment in or to a Foreign Subsidiary, Special Purpose Subsidiary or an Inactive Subsidiary; (b) transfer, sell, lease, assign, or otherwise dispose of any property to a Foreign Subsidiary, Special Purpose Subsidiary or an Inactive Subsidiary; (c) merge into or consolidate with a Foreign Subsidiary, Special Purpose Subsidiary; or (d) enter into any other transaction directly or indirectly with or for the benefit of a Foreign Subsidiary, Special Purpose Subsidiary or an Inactive Subsidiary.

#### ARTICLE IX

### **Events of Default**

- 9.1 Events of Default. The occurrence of any of the following events shall be deemed to constitute an "Event of Default" hereunder:
- (a) the Credit Parties shall fail to pay to the Agent, the Issuing Lender, or the Lenders, (i) any principal of any Loan when the same shall become due and payable, whether at the due date thereof or at a date fixed for prepayment thereof, by acceleration of such due or prepayment date, or otherwise or (ii) any interest or fees in respect of any Loan or any Reimbursement Obligation in respect of

- any LC Disbursement or any other Obligation of the Credit Parties to the Agent, the Issuing Lender, or the Lenders within three (3) Business Days after the same shall become due and payable, whether at the due date thereof or at a date fixed for prepayment thereof, by acceleration of such due or prepayment date, or otherwise;
- (b) any representation or warranty made or deemed made by or on behalf of any Credit Party or any Subsidiary in or in connection with this Agreement, any of the other Loan Documents or any amendment or modification hereof or thereof, or in any report, certificate, financial statement or other document furnished pursuant to or in connection with this Agreement, any of the other Loan Documents or any amendment or modification hereof or thereof, shall prove to have been incorrect in any material respect when made or deemed made;
- (c) the Credit Parties (i) shall fail to observe or perform any covenant, condition or agreement contained in Sections 7.1, 7.2, 7.5, 7.6, 7.8, 7.9, 7.10, 7.12, 7.14, or in Article 8 (it being expressly acknowledged and agreed that any Event of Default resulting from the failure of the Credit Parties at any measurement date to satisfy any financial covenant set forth in Section 8.10 shall not be deemed to be "cured" or remedied by the Credit Parties' satisfaction of such financial covenant at any subsequent measurement date) or (ii) shall fail to observe or perform any other covenant, condition or agreement contained in Sections 7.3, 7.4, 7.7, 7.11, or 7.13 and such failure described in this clause (ii) shall continue unremedied for a period of 30 days after the earlier of (x) actual knowledge by an officer of any Credit Party or (y) notice thereof from the Agent (given at the request of any Lender) to the Credit Parties;
- (d) the Credit Parties shall fail to observe or perform any covenant, condition or agreement contained in this Agreement (other than those specified in clauses (a), (b) or (c) of this Section 9.1) or any other Loan Document, and such failure shall continue unremedied for a period of 30 days after notice thereof from the Agent (at the request of any Lender) to the Credit Parties;
- (e) the Credit Parties shall fail to make any payment (whether of principal, interest or otherwise and regardless of amount) in respect of any Material Indebtedness or any Material Rental Obligation, when and as the same shall become due and payable, after giving effect to any grace period with respect thereto;
- (f) any event or condition occurs that results in (i) any Material Indebtedness of any Credit Party becoming due prior to its scheduled maturity or that enables or permits (with or without the giving of notice, the lapse of time or both) the holder or holders of any Material Indebtedness or any trustee or agent on its or their behalf to cause such Material Indebtedness to become due, or to require the prepayment, repurchase, redemption or defeasance thereof, prior to its scheduled maturity, or (ii) the lease with respect to any Material Rental Obligation of any Credit Party being terminated prior to its scheduled expiration date or that enables or permits (with or without the giving of notice, the lapse of time or both) the counterparty to such lease to cause such lease to be terminated prior to its scheduled expiration date;
- (g) an involuntary proceeding shall be commenced or an involuntary petition shall be filed seeking (i) liquidation, reorganization or other relief in respect of any Credit Party or any Material Canadian Subsidiary or its debts, or of a substantial part of its assets, under any Federal, state or foreign bankruptcy, insolvency, receivership or similar law now or hereafter in effect or (ii) the appointment of a receiver, trustee, custodian, sequestrator, conservator or similar official for any Credit Party or any Material Canadian Subsidiary or for a substantial part of its assets, and, in any such case, such proceeding or petition shall continue undismissed for 60 days or an order or decree approving or ordering any of the foregoing shall be entered;

- (h) any Credit Party or any Material Canadian Subsidiary shall (i) voluntarily commence any proceeding or file any petition seeking liquidation, reorganization or other relief under any Federal, state or foreign bankruptcy, insolvency, receivership or similar law now or hereafter in effect, (ii) consent to the institution of, or fail to contest in a timely and appropriate manner, any proceeding or petition described in clause (g) of this Article, (iii) apply for or consent to the appointment of a receiver, trustee, custodian, sequestrator, conservator or similar official for any Credit Party or any Material Canadian Subsidiary or for a substantial part of its assets, (iv) file an answer admitting the material allegations of a petition filed against it in any such proceeding, (v) make a general assignment for the benefit of creditors or (vi) take any action for the purpose of effecting any of the foregoing;
- (i) any Credit Party or any Material Canadian Subsidiary shall become unable, admit in writing or fail generally to pay its debts as they become due;
- (j) a final judgment or judgments for the payment of money (x) in excess of \$1,000,000 in the aggregate (exclusive of judgment amounts fully covered by insurance where the insurer has admitted liability in respect of such judgment) or (y) in excess of \$2,500,000 in the aggregate (regardless of insurance coverage), shall be rendered by one or more courts, administrative tribunals or other bodies having jurisdiction against any Credit Party and the same shall not be discharged (or provision shall not be made for such discharge), bonded, or a stay of execution thereof shall not be procured, within 60 days from the date of entry thereof and the relevant Credit Party shall not, within said period of 60 days, or such longer period during which execution of the same shall have been stayed, appeal therefrom and cause the execution thereof to be stayed during such appeal;
- (k) an ERISA Event shall have occurred that, in the reasonable opinion of the Required Lenders, when taken together with all other ERISA Events that have occurred, could reasonably be expected to result in a Material Adverse Effect;
  - (1) there shall occur any Change of Control;
- (m) any of the following shall occur: (i) the Liens created hereunder or under the other Loan Documents shall at any time (other than by reason of the Agent relinquishing such Lien) cease in any material respect to constitute valid and perfected Liens on the Collateral intended to be covered thereby; (ii) except for expiration in accordance with its respective terms, any Loan Document shall for whatever reason be terminated, or shall cease to be in full force and effect; or (iii) the enforceability of any Loan Document shall be contested by any Credit Party;
- (n) there shall occur any material loss theft, damage or destruction of any Collateral not fully covered (subject to such reasonable deductibles as the Agent shall have approved) by insurance;
  - (o) any Guarantor shall assert that its obligations under any Loan Document shall be invalid or unenforceable;
- (p) the Credit Parties shall become liable for Renewable Energy Project Guaranty Liabilities in an aggregate amount of \$5,000,000 or greater, outstanding at any time.
- 9.2 **Rights and Remedies Upon any Event of Default.** Upon the occurrence of any Event of Default hereunder, then, and in every such event (other than an event described in clause (g) or (h) of Section 9.1), and at any time thereafter during the continuance of such event, the Agent may, and at the request of the Required Lenders shall, by notice to the Borrower, take any or all of the following actions, at the same or different times: (i) terminate the Commitments, and thereupon the Commitments shall terminate immediately, (ii) notify the Borrower that the outstanding principal of the Loans shall bear

interest at the Post-Default Rate, and thereupon the outstanding principal of the Loans shall bear interest at the Post-Default Rate, (iii) declare the Loans then outstanding to be due and payable in whole (or in part, in which case any principal not so declared to be due and payable may thereafter be declared to be due and payable), and thereupon the principal of the Loans so declared to be due and payable, together with accrued interest thereon and all fees and other Obligations, shall become due and payable immediately, without presentment, demand, protest or other notice of any kind, all of which are hereby waived by the Credit Parties, and (iv) the Agent, the Issuing Lender, and the Lenders may exercise all of the rights as secured party and mortgagee hereunder or under the other Loan Documents; and in case of any event with respect to the Credit Parties or any Subsidiary described in clause (g) or (h) of Section 9.1, the Commitments shall automatically terminate, the principal of the Loans then outstanding shall automatically bear interest at the Post-Default Rate, the principal of the Loans then outstanding, together with accrued interest thereon and all fees and other Obligations shall automatically become due and payable, and the Borrower shall provide cash collateral in accordance with Section 2.4(h) without presentment, demand, protest or other notice of any kind, all of which are hereby waived by the Credit Parties, and the Agent, the Issuing Lender, and the Lenders shall be permitted to exercise such rights as secured party and mortgagee hereunder or under the other Loan Documents to the extent permitted by applicable law.

9.3 Receivership. Without limiting the generality of the foregoing or limiting in any way the rights of the Agent or the Lenders hereunder or under the other Loan Documents or otherwise under applicable law, at any time after (i) the entire principal balance of any Loan shall have become due and payable (whether at maturity, by acceleration or otherwise) and (ii) the Agent shall have provided to the Borrower not less than ten (10) days' prior written notice of its intention to apply for a receiver, the Agent shall be entitled to apply for and have a receiver appointed under state or federal law by a court of competent jurisdiction in any action taken by the Agent to enforce the Lenders' and the Agent's rights and remedies hereunder and under the other Loan Documents in order to manage, protect, preserve, sell and otherwise dispose of all or any portion of the Collateral and continue the operation of the business of the Credit Parties, and to collect all revenues and profits thereof and apply the same to the payment of all expenses and other charges of such receivership, including the compensation of the receiver, and to the payment of the Loans and other fees and expenses due hereunder and under the Loan Documents as aforesaid until a sale or other disposition of such Collateral shall be finally made and consummated. TO THE EXTENT PERMITTED BY APPLICABLE LAW, EACH CREDIT PARTY HEREBY IRREVOCABLY CONSENTS TO AND WAIVES ANY RIGHT TO OBJECT TO OR OTHERWISE CONTEST THE APPOINTMENT OF A RECEIVER AS PROVIDED ABOVE. EACH CREDIT PARTY (I) GRANTS SUCH WAIVER AND CONSENT KNOWINGLY AFTER HAVING DISCUSSED THE IMPLICATIONS THEREOF WITH COUNSEL, (II) ACKNOWLEDGES THAT (A) THE UNCONTESTED RIGHT TO HAVE A RECEIVER APPOINTED FOR THE FOREGOING PURPOSES IS CONSIDERED ESSENTIAL BY AGENT IN CONNECTION WITH THE ENFORCEMENT OF THE LENDERS' AND THE AGENT'S RIGHTS AND REMEDIES HEREUNDER AND UNDER THE OTHER LOAN DOCUMENTS, AND (B) THE AVAILABILITY OF SUCH APPOINTMENT AS A REMEDY UNDER THE FOREGOING CIRCUMSTANCES WAS A MATERIAL FACTOR IN INDUCING THE LENDERS TO MAKE THE LOANS TO THE BORROWER; AND (III) AGREES TO ENTER INTO ANY AND ALL STIPULATIONS IN ANY LEGAL ACTIONS, OR AGREEMENTS OR OTHER INSTRUMENTS IN CONNECTION WITH THE FOREGOING AND TO COOPERATE FULLY WITH THE AGENT AND THE LENDERS IN CONNECTION WITH THE ASSUMPTION AND EXERCISE OF CONTROL BY THE RECEIVER OVER ALL OR ANY PORTION OF THE COLLATERAL. THE LENDERS AND AGENT ACKNOWLEDGE AND AGREE THAT NOTHING IN THIS SECTION 9.3 SHALL BE DEEMED TO CONSTITUTE A WAIVER OF THE RIGHT OF CREDIT PARTIES TO FILE FOR PROTECTION UNDER TITLE 11 OF THE UNITED STATES CODE AT ANY TIME.

### ARTICLE X

#### The Agent

### 10.1 Appointment and Authorization.

- (a) Each of the Lenders and the Issuing Lender hereby irrevocably appoints the Agent as its agent and authorizes the Agent to take such actions on its behalf and to exercise such powers as are delegated to the Agent by the terms of this Agreement and the other Loan Documents, together with such actions and powers as are reasonably incidental thereto. The provisions of this Article X are solely for the benefit of the Agent, the Lenders and the Issuing Lender, and, except with respect to Section 10.6, neither the Borrower nor any Credit Party shall have rights as a third party beneficiary of any such provisions.
- (b) The Agent shall also act as the "collateral agent" under the Loan Documents and each of the Lenders and the Issuing Lender hereby irrevocably appoints and authorizes the Agent to act as the agent of such Lender and the Issuing Lender for purposes of acquiring, holding and enforcing any and all Liens on Collateral granted by any of the Loan Parties to secure any of the Obligations, together with such powers and discretion as are reasonably incidental thereto. In this connection, the Agent, as "collateral agent" and any co-agents, sub-agents and attorneys-in-fact appointed by the Agent pursuant to Section 10.5 or otherwise for purposes of holding or enforcing any Lien on the Collateral (or any portion thereof) granted hereunder or under any other Loan Document, or for exercising any rights and remedies thereunder at the direction of the Agent), shall be entitled to the benefits of all provisions of this Article X and Article XI, as though such co-agents, sub-agents and attorneys-in-fact were the "collateral agent" under the Loan Documents as if set forth in full herein with respect thereto.
- 10.2 **Agent's Rights as Lender**. The Person serving as Agent hereunder shall have the same rights and powers in its capacity as a Lender as any other Lender and may exercise the same as though it were not Agent and the term "Lender" or "Lenders" shall, unless otherwise expressly indicated or unless the context otherwise requires, include the Person serving as Agent hereunder in its individual capacity. Such Person and its Affiliates may accept deposits from, lend money to, act as the financial advisor or in any other advisory capacity for and generally engage in any kind of business with the Borrower or any Subsidiary or other Affiliate thereof as if such Person were not the Agent hereunder and without any duty to account therefor to the Lenders.
- 10.3 **Duties As Expressly Stated**. Neither the Agent nor the Issuing Lender shall have any duties or obligations except those expressly set forth in this Agreement and the other Loan Documents. Without limiting the generality of the foregoing, (a) neither the Agent nor the Issuing Lender shall be subject to any fiduciary or other implied duties, regardless of whether a Default has occurred and is continuing, (b) neither the Agent nor the Issuing Lender shall have any duty to take any discretionary action or exercise any discretionary powers, except discretionary rights and powers expressly contemplated by this Agreement and the other Loan Documents that the Agent or Issuing Lender is required to exercise in writing by the Required Lenders (or such other number or percentage of the Lenders as is required hereunder with respect to such action) and (c) except as expressly set forth herein and in the other Loan Documents, neither the Agent nor the Issuing Lender shall have any duty to disclose, or shall be liable for the failure to disclose, any information relating to any Credit Party or any of their respective Subsidiaries that is communicated to or obtained by the financial institution serving as the Agent or the Issuing Lender or any of its Affiliates in any capacity. Neither the Agent nor the Issuing Lender shall be liable for any action taken or not taken by it with the consent or at the request of the Required Lenders (or such other number or percentage of the Lenders as is required hereunder with respect to such action) or all of the Lenders if expressly required, or in the absence of its own gross

negligence or willful misconduct. Neither the Agent nor the Issuing Lender shall be deemed to have knowledge of any Default other than a Default of the types specified in Section 9.1 (a) unless and until written notice thereof is given to the Agent or the Issuing Lender by the Borrower or a Lender, and the Agent shall not be responsible for or have any duty to ascertain or inquire into (i) any statement, warranty or representation made in, or in connection with, this Agreement or the other Loan Documents, (ii) the contents of any certificate, report or other document delivered hereunder or under any of the other Loan Documents or in connection herewith of therewith, (iii) the performance or observance of any of the covenants, agreements or other terms or conditions set forth herein or in any other Loan Document, (iv) the validity, enforceability, effectiveness or genuineness of this Agreement, the other Loan Documents or any other agreement, instrument or document, or (v) the satisfaction of any condition set forth in Article 6 or elsewhere herein, other than to confirm receipt of items expressly required to be delivered to the Agent or the Issuing Lender. Neither the Agent nor the Issuing Lender shall, except to the extent the Agent expressly instructed by the Required Lenders with respect to collateral security hereunder and under the other Loan Documents, be required to initiate or conduct any litigation or collection proceedings hereunder or under any other Loan Document; provided, however, that the Agent shall not be required to take any action which exposes the Agent to personal liability or which is contrary to the Loan Documents or applicable law.

10.4 **Reliance By Agent**. The Agent and the Issuing Lender shall be entitled to rely upon, and shall not incur any liability for relying upon, any notice, request, certificate, consent, statement, instrument, document or other writing believed by it to be genuine and to have been signed or sent by the proper Person. The Agent and the Issuing Lender also may rely upon any statement made to it orally or by telephone and believed by it to be made by the proper Person, and shall not incur any liability for relying thereon. The Agent and the Issuing Lender may consult with legal counsel (who may be counsel for the Borrower), independent accountants and other experts selected by it, and shall not be liable for any action taken or not taken by it in accordance with the advice of any such counsel, accountants or experts. The Agent and the Issuing Lender shall be fully justified in failing or refusing to take any action under this Agreement or any other Loan Document unless it shall first receive such advice or concurrence of the Required Lenders (or, if so specified by this Agreement, all Lenders) as it deems appropriate or it shall first be indemnified to its satisfaction by the Lenders against any and all liability and expense which may be incurred by it by reason of taking or continuing to take any such action (it being understood that this provision shall not release the Agent from performing any action with respect to the Borrower expressly required to be performed by it pursuant to the terms hereof) under this Agreement. The Agent and the Issuing Lender shall in all cases be fully protected in acting, or in refraining from acting, under this Agreement and the other Loan Documents in accordance with a request of the Required Lenders (or, if so specified by this Agreement, all Lenders), and such request and any action taken or failure to act pursuant thereto shall be binding upon all the Lenders and all future holders of the Loans.

10.5 **Action Through Sub-Agents**. The Agent and the Issuing Lender may perform any and all of its duties, and exercise its rights and powers, by or through any one or more sub-agents appointed by the Agent or the Issuing Lender. The Agent and the Issuing Lender and any such sub-agent may perform any and all its duties and exercise its rights and powers through its Related Parties. The exculpatory provisions of the preceding paragraphs shall apply to any such sub-agent and to the Related Parties of the Agent and the Issuing Lender and any such sub-agent, and shall apply to its activities in connection with the syndication of the credit facilities provided for herein as well as activities of the Agent or the Issuing Lender.

10.6 **Resignation of Agent and Appointment of Successor Agent**. Subject to the appointment and acceptance of a successor Agent as provided in this paragraph, the Agent may resign at any time by notifying the Lenders, the Issuing Lender and the Credit Parties. Upon any such resignation, the Required Lenders shall have the right, in consultation with the Credit Parties, to appoint a successor

Agent. If no successor shall have been so appointed by the Required Lenders and shall have accepted such appointment within 30 days after the retiring Agent gives notice of its resignation, then the retiring Agent may, on behalf of the Lenders and the Issuing Lender, appoint a successor Agent, which shall be a bank with an office in Boston, Massachusetts or New York, New York, or an Affiliate of any such bank. Upon the acceptance of a successor's appointment as Agent hereunder, such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring (or retired) Agent, and the retiring Agent shall be discharged from all of its duties and obligations hereunder or under the other Loan Documents. The fees payable by the Borrower to a successor Agent shall be the same as those payable to its predecessor unless otherwise agreed between the Borrower and such successor. After the retiring Agent's resignation hereunder and under the other Loan Documents, the provisions of this Article and Section 11.3 shall continue in effect for the benefit of such retiring Agent, its sub- agents and their respective Related Parties in respect of any actions taken or omitted to be taken by any of them while the retiring Agent was acting as Agent.

Any resignation by Bank of America as Agent pursuant to this Section shall also constitute its resignation as Issuing Lender and Swing Loan Lender. Upon the acceptance of a successor's appointment as Agent hereunder, (a) such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring Issuing Lender and Swing Loan Lender, (b) the retiring Issuing Lender and Swing Loan Lender shall be discharged from all of their respective duties and obligations hereunder or under the other Loan Documents, and (c) the successor Issuing Lender shall issue letters of credit in substitution for the Letters of Credit, if any, outstanding at the time of such succession or make other arrangements satisfactory to the retiring Issuing Lender to effectively assume the obligations of the retiring Issuing Lender with respect to such Letters of Credit.

10.7 **Lenders' Independent Decisions**. Each Lender acknowledges that it has, independently and without reliance upon the Agent, the Issuing Lender or any other Lender and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Agreement. Each Lender also acknowledges that it will, independently and without reliance upon the Agent, the Issuing Lender or any other Lender and based on such documents and information as it shall from time to time deem appropriate, continue to make its own decisions in taking or not taking action under or based upon this Agreement and the other Loan Documents, any related agreement or any document furnished hereunder or thereunder. Except as explicitly provided herein, neither the Agent nor the Issuing Lender has any duty or responsibility, either initially or on a continuing basis, to provide any Lender with any credit or other information with respect to such operations, business, property, condition or creditworthiness, whether such information comes into its possession on or before the first Event of Default or at any time thereafter. Neither the Agent nor the Issuing Lender shall be deemed a trustee or other fiduciary on behalf of any party.

10.8 **Indemnification**. Each Lender agrees to indemnify and hold harmless the Agent and the Issuing Lender (to the extent not reimbursed under Section 11.3, but without limiting the obligations of the Borrower under Section 11.3), ratably in accordance with the aggregate principal amount of the respective Commitments of and/or Loans and Total LC Exposure held by the Lenders (or, if all of the Commitments shall have been terminated or expired, ratably in accordance with the aggregate outstanding amount of the Loans and Total LC Exposure held by the Lenders), for any and all liabilities (including pursuant to any Environmental Law), obligations, losses, damages, penalties, actions, judgments, deficiencies, suits, costs, expenses (including reasonable attorney's fees) or disbursements of any kind and nature whatsoever that may be imposed on, incurred by or asserted against the Agent or the Issuing Lender (including by any Lender) arising out of or by reason of any investigation in or in any way relating to or arising out of any Loan Document or any other documents contemplated by or referred to therein for any action taken or omitted to be taken by the Agent or the Issuing Lender under or in respect of any of the Loan Documents or other such documents or the transactions contemplated thereby

(including the costs and expenses that the Borrower is obligated to pay under Section 11.3, but excluding, unless a Default has occurred and is continuing, normal administrative costs and expenses incident to the performance of its agency duties hereunder) or the enforcement of any of the terms hereof or thereof or of any such other documents; provided, however, that no Lender shall be liable for any of the foregoing to the extent they are determined by a court of competent jurisdiction in a final and nonappealable judgment to have resulted from the gross negligence or willful misconduct of the party to be indemnified. The agreements set forth in this Section 10.8 shall survive the payment of all Loans and other obligations hereunder and shall be in addition to and not in lieu of any other indemnification agreements contained in any other Loan Document.

- 10.9 **No Other Duties, Etc.** Anything herein to the contrary notwithstanding, no Lender holding a title listed on the cover page hereof shall have any powers, duties or responsibilities under this Agreement or any of the other Loan Documents, except in its capacity, as applicable, as Agent, a Lender or the Issuing Lender hereunder.
- 10.10 **Agent May File Proofs of Claim**. In case of the pendency of any proceeding under any Debtor Relief Law or any other judicial proceeding relative to any Credit Party, the Agent (irrespective of whether the principal of any Loan or Reimbursement Obligation shall then be due and payable as herein expressed or by declaration or otherwise and irrespective of whether the Agent shall have made any demand on the Borrower) shall be entitled and empowered, by intervention in such proceeding or otherwise.
- (a) to file and prove a claim for the whole amount of the principal and interest owing and unpaid in respect of the Loans, Reimbursement Obligations and all other Obligations that are owing and unpaid and to file such other documents as may be necessary or advisable in order to have the claims of Lenders, the Issuing Lender and the Agent (including any claim for the reasonable compensation, expenses, disbursements and advances of the Lenders, the Issuing Lender and the Agent and their respective agents and counsel and all other amounts due the Lenders, the Issuing Lender and the Agent under Sections 2.10 and 11.3) allowed in such judicial proceeding; and
- (b) to collect and receive any monies or other property payable or deliverable on any such claims and to distribute the same; and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Lender and the L/C Issuer to make such payments to the Agent and, in the event that the Agent shall consent to the making of such payments directly to the Lenders and the Issuing Lender, to pay to the Agent any amount due for the reasonable compensation, expenses, disbursements and advances of the Agent and its agents and counsel, and any other amounts due the Agent under Sections 2.10 and 11.3. Nothing contained herein shall be deemed to authorize the Agent to authorize or consent to or accept or adopt on behalf of any Lender or the Issuing Lender any plan of reorganization, arrangement, adjustment or composition affecting the Obligations or the rights of any Lender or the Issuing Lender or to authorize the Agent to vote in respect of the claim of any Lender or the Issuing Lender in any such proceeding.
- 10.11 **Guaranty Matters**. Each Lender and the Issuing Lender hereby irrevocably authorizes the Agent, at its option and in its discretion, to release any Guarantor from its obligations under the Guaranty if such Person ceases to be a Subsidiary as a result of a transaction permitted hereunder. Upon request by the Agent at any time, each Lender and the Issuing Lender will confirm in writing the Agent's authority to release any Guarantor from its obligations under the Guaranty pursuant to this Section 10.11.

### 10.12 Collateral Matters.

- (a) Each Lender and the Issuing Lender hereby irrevocably authorizes and directs the Agent to enter into the Collateral Documents for the benefit of such Lender and the Issuing Lender. Each Lender and the Issuing Lender hereby agrees, and each holder of any Note by the acceptance thereof will be deemed to agree, that, except as otherwise set forth in Section 11.2, any action taken by the Required Lenders, in accordance with the provisions of this Agreement or the Collateral Documents, and the exercise by the Required Lenders of the powers set forth herein or therein, together with such other powers as are reasonably incidental thereto, shall be authorized and binding upon all of Lenders and the Issuing Lender. The Agent is hereby authorized (but not obligated) on behalf of all of Lenders and the Issuing Lender, without the necessity of any notice to or further consent from any Lender or the Issuing Lender from time to time prior to, an Event of Default, to take any action with respect to any Collateral or Collateral Documents which may be necessary to perfect and maintain perfected the Liens upon the Collateral granted pursuant to the Collateral Documents.
  - (b) Each Lender and the Issuing Lender hereby irrevocably authorize the Agent, at its option and in its discretion:
  - (i) to release any Lien on any property granted to or held by the Agent under any Loan Document (A) upon termination of the Commitments and payment in full of all Obligations (other than contingent indemnification obligations) and the expiration or termination of all Letters of Credit (other than Letters of Credit as to which other arrangements satisfactory to Agent and the Issuing Lender shall have been made), (B) that is sold or to be sold as part of or in connection with any sale permitted hereunder or under any other Loan Document, (C) that is sold, transferred, assigned, financed or otherwise disposed of in connection with an Energy Conservation Project or Renewable Energy Project, (D) subject to Section 11.2, if approved, authorized or ratified in writing by the Required Lenders, (E) in connection with any foreclosure sale or other disposition of Collateral after the occurrence of an Event of Default or (F) as otherwise provided under Section 11.13; and
  - (ii) to subordinate any Lien on any property granted to or held by the Agent under any Loan Document to the holder of any Lien on such property that is permitted by this Agreement or any other Loan Document.

Upon request by the Agent at any time, each Lender and the Issuing Lender will confirm in writing the Agent's authority to release or subordinate its interest in particular types or items of Collateral pursuant to this Section 10.12.

(c) Subject to (b) above, the Agent is hereby irrevocably authorized by each Lender and the Issuing Lender, to execute such documents as may be necessary to evidence the release or subordination of the Liens granted to the Agent for the benefit of the Agent, the Lenders and the Issuing Lender herein or pursuant hereto upon the applicable Collateral; provided that (i) the Agent shall not be required to execute any such document on terms which, in the Agent's opinion, would expose the Agent to or create any liability or entail any consequence other than the release or subordination of such Liens without recourse or warranty and (ii) such release or subordination shall not in any manner discharge, affect or impair the Obligations or any Liens upon (or obligations of the Borrower or any other Credit Party in respect of) all interests retained by the Borrower or any other Credit Party, including the proceeds of the sale, all of which shall continue to constitute part of the Collateral. In the event of any sale or transfer of Collateral, or any foreclosure with respect to any of the Collateral, the Agent shall be authorized to deduct all expenses reasonably incurred by the Agent from the proceeds of any such sale, transfer or foreclosure.

- (d) The Agent shall have no obligation whatsoever to any Lender, the Issuing Lender or any other Person to assure that the Collateral exists or is owned by the Borrower or any other Credit Party or is cared for, protected or insured or that the Liens granted to the Agent herein or in any of the Collateral Documents or pursuant hereto or thereto have been properly or sufficiently or lawfully created, perfected, protected or enforced or are entitled to any particular priority, or to exercise or to continue exercising at all or in any manner or under any duty of care, disclosure or fidelity any of the rights, authorities and powers granted or available to Agent in this Section 10.12 or in any of the Collateral Documents, it being understood and agreed that in respect of the Collateral, or any act, omission or event related thereto, the Agent may act in any manner it may deem appropriate, in its sole discretion, given the Agent's own interest in the Collateral as one of the Lenders and that the Agent shall have no duty or liability whatsoever to the Lenders or the Issuing Lender.
- (e) Each Lender and the Issuing Lender hereby appoints each other Lender as agent for the purpose of perfecting the Lenders' and the Issuing Lender's security interest in assets which, in accordance with Article 9 of the UCC can be perfected only by possession. Should any Lender or the Issuing Lender (other than the Agent) obtain possession of any such Collateral, such Lender or the Issuing Lender shall notify the Agent thereof, and, promptly upon the Agent's request therefor shall deliver such Collateral to the Agent or in accordance with the Agent's instructions.

#### ARTICLE XI

#### Miscellaneous

#### 11.1 Notices.

- (a) <u>Notices, Generally</u>. Except in the case of notices and other communications expressly permitted to be given by telephone (and except as provided in subsection (b) below), all notices and other communications provided for herein shall be in writing and shall be delivered by hand or overnight courier service, mailed by certified or registered mail or sent by telephonic facsimile (fax), as follows and all notices and other communications expressly permitted hereunder to be given by telephone shall be made to the applicable telephone number, as follows:
  - (i) if to any Credit Party, to Ameresco, Inc., 111 Speen Street, Suite 410, Framingham, MA 01701, Attention: Chief Financial Officer (Fax no. (508) 661-2201) with a copy to Choate, Hall & Stewart, Two International Place, Boston, Massachusetts 02110, Attention: John F. Ventola (Fax no. ((617) 248-4000);
  - (ii) if to the Agent, to Bank of America, N.A., 100 Federal Street, Mail Stop MA5-100-07-07, Boston, Massachusetts 02110, Attention: John F. Lynch (Fax no.: (617) 434-4896), with a copy to Edwards Angell Palmer & Dodge, LLP, 111 Huntington Avenue at Prudential Center, Boston, MA 02119, Attention: George Ticknor, Esq. (Fax no. (617) 227-4420); and
  - (iii) if to any Lender (including Bank of America in its capacity as the Issuing Lender), to it at its address (or fax number) set forth in its Administrative Questionnaire.

Any party hereto may change its address or fax number for notices and other communications hereunder by notice to the other parties hereto. All notices and other communications given to any party hereto in accordance with the provisions of this Agreement shall be deemed to have been given on the date of receipt. Notices delivered through electronic communications to the extent provided in subsection (b) below, shall be effective as provided in such subsection (b).

- (b) <u>Electronic Communications</u>. Notices and other communications to Lenders and the Issuing Lender hereunder may be delivered or furnished by electronic communication (including e-mail and Internet or intranet websites) pursuant to procedures approved by the Agent, provided that the foregoing shall not apply to notices to any Lender or the Issuing Lender pursuant to Article II if such Lender or the Issuing Lender, as applicable has notified the Agent that it is incapable of receiving notices under such Article by electronic communication. The Agent or the Borrower may, in its discretion, agree to accept notices and other communications to it hereunder by electronic communications pursuant to procedures approved by it, provided that approval of such procedures may be limited to particular notices or communications. Unless the Agent otherwise prescribes, (i) notices and other communications sent to an e-mail address shall be deemed received upon the sender's receipt of an acknowledgement from the intended recipient (such as by the "return receipt requested" function, as available, return e-mail or other written acknowledgement), provided that if such notice or other communication is not sent during the normal business hours of the recipient, such notice or communication shall be deemed to have been sent at the opening of business on the next business day for the recipient, and (ii) notices or communications posted to an Internet or intranet website shall be deemed received upon the deemed receipt by the intended recipient at its e-mail address as described in the foregoing clause (i) of notification that such notice or communication is available and identifying the website address therefor.
- (c) The Platform. THE PLATFORM IS PROVIDED "AS IS" AND "AS AVAILABLE." THE AGENT PARTIES (AS DEFINED BELOW) DO NOT WARRANT THE ACCURACY OR COMPLETENESS OF BORROWER MATERIALS OR THE ADEQUACY OF THE PLATFORM, AND EXPRESSLY DISCLAIM LIABILITY FOR ERRORS IN OR OMISSIONS FROM BORROWER MATERIALS. NO WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF THIRD PARTY RIGHTS OR FREEDOM FROM VIRUSES OR OTHER CODE DEFECTS, IS MADE BY ANY AGENT PARTY IN CONNECTION WITH BORROWER MATERIALS OR THE PLATFORM. In no event shall the Agent or any of its Related Parties (collectively, the "Agent Parties") have any liability to the Borrower, any Lender, the Issuing Lender or any other Person for losses, claims, damages, liabilities or expenses of any kind (whether in tort, contract or otherwise) arising out of the Borrower's or the Agent's transmission of Borrower Materials through the Internet, except to the extent that such losses, claims, damages, liabilities or expenses are determined by a court of competent jurisdiction to have resulted from the gross negligence or willful misconduct of such Agent Party; provided, however, that in no event shall any Agent Party have any liability to the Borrower, any Lender, the Issuing Lender or any other Person for indirect, special, incidental, consequential or punitive damages (as opposed to direct or actual damages).
- (d) <u>Change of Address, Etc.</u> Each of the Borrower, the Agent, the Issuing Lender and Swing Loan Lender may change its address, telecopier or telephone number for notices and other communications hereunder by notice to the other parties hereto. Each other Lender may change its address, telecopier or telephone number for notices and other communications hereunder by notice to the Borrower, the Agent, the Issuing Lender and Swing Loan Lender. In addition, each Lender agrees to notify the Agent from time to time to ensure that the Agent has on record (i) an effective address, contact name, telephone number, telecopier number and electronic mail address to which notices and other communications may be sent and (ii) accurate wire instructions for such Lender. Furthermore, each Public Lender agrees to cause at least one individual at or on behalf of such Public Lender to at all times have selected the "Private Side Information" or similar designation on the content declaration screen of the Platform in order to enable such Public Lender or its delegate, in accordance with such Public Lender's compliance procedures and applicable Law, including United States Federal and state securities Laws, to make reference to Borrower Materials that are not made available through the "Public Side Information" portion of the Platform and that may contain material non-public information with respect to the Borrower or its securities for purposes of United States Federal or state securities laws.

(e) Reliance by Agent, Issuing Lender and Lenders. The Agent, the Issuing Lender and the Lenders shall be entitled to rely and act upon any notices (including telephonic Advance Requests) purportedly given by or on behalf of the Borrower even if (i) such notices were not made in a manner specified herein, were incomplete or were not preceded or followed by any other form of notice specified herein, or (ii) the terms thereof, as understood by the recipient, varied from any confirmation thereof. The Borrower shall indemnify the Agent, the Issuing Lender, each Lender and the Related Parties of each of them from all losses, costs, expenses and liabilities resulting from the reliance by such Person on each notice purportedly given by or on behalf of the Borrower. All telephonic notices to and other telephonic communications with the Agent may be recorded by the Agent, and each of the parties hereto hereby consents to such recording.

### 11.2 Waivers; Amendments.

- (a) No failure or delay by the Agent, the Issuing Lender, or the Lenders in exercising any right or power hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any such right or power, or any abandonment or discontinuance of steps to enforce such a right or power, preclude any other or further exercise thereof or the exercise of any other right or power. The rights and remedies of the Agent, the Issuing Lender, and the Lenders hereunder and under the other Loan Documents are cumulative and are not exclusive of any rights or remedies that they would otherwise have. No waiver of any provision of this Agreement or consent to any departure by any Credit Party or Subsidiary therefrom shall in any event be effective unless the same shall be permitted by paragraph (b) of this Section 11.2, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. Without limiting the generality of the foregoing, the making of a Loan or issuance of a Letter of Credit shall not be construed as a waiver of any Default, regardless of whether the Agent, any Lender or the Issuing Lender may have had notice or knowledge of such Default at the time.
- (b) Neither this Agreement nor any other Loan Document nor any provision hereof or thereof may be waived, amended or modified except pursuant to an agreement or agreements in writing entered into by the Borrower and the Required Lenders or by the Borrower and the Agent with the written consent of the Required Lenders and the Agent; provided that no such agreement shall:
  - (i) increase the Commitment of any Lender without the written consent of such Lender and the Agent;
  - (ii) reduce the principal amount of any Loan or Reimbursement Obligation or reduce the rate of interest thereon (other than the decision not to charge, or to cease to charge, Post-Default Interest), or reduce any fees payable hereunder, without the written consent of each Lender affected thereby;
  - (iii) postpone the scheduled date of payment of the principal amount of any Loan or Reimbursement Obligation other than mandatory prepayments of the Loans required under Section 2.9(b), or any interest thereon, or any fees payable hereunder, or reduce the amount of, waive or excuse any such payment, change the maturity date of any Loan, or postpone the scheduled date of expiration of any Commitment, or extend the ultimate expiration date of any Letter of Credit beyond the Revolving Credit Maturity Date, without the written consent of each Lender affected thereby;
  - (iv) except as expressly set forth in clause (x) below, change Section 2.9(c) in a manner that would alter the application of prepayments thereunder, or change Section 2.8(b) or

- (c) in a manner that would alter the pro rata sharing of payments required thereby, without in each case the written consent of each Lender;
- (v) alter the rights or obligations of the Borrower to prepay Loans (other than mandatory prepayments of Loans under Section 2.9(b)) without the written consent of each Lender affected thereby;
- (vi) change any of the provisions of this Section 11.2 or the definition of "Required Lenders" or any other provision hereof specifying the number or percentage of Lenders required to waive, amend or modify any rights hereunder or under any other Loan Document or make any determination or grant any consent hereunder or thereunder, without the written consent of each Lender;
- (vii) release any of the Guarantors from its obligations in respect of its Guarantee under Article 3 or release any material portion of the Collateral (or terminate any Lien with respect thereto), except as expressly permitted in this Agreement, without the written consent of each Lender:
  - (viii) waive any of the conditions precedent specified in Section 6.1 without the written consent of each Lender and the Agent; or
  - (ix) subordinate the Loans to any other Indebtedness, without the written consent of each Lender;

provided <u>further</u> that no such agreement shall amend, modify or otherwise affect the rights or duties of the Agent, the Swing Loan Lender or the Issuing Lender hereunder without the prior written consent of the Agent, the Swing Loan Lender or the Issuing Lender, as the case may be.

(c) Anything in this Agreement to the contrary notwithstanding, no waiver or modification of any provision of this Agreement that has the effect (either immediately or at some later time) of enabling the Borrower to satisfy a condition precedent to the making of any of Loan shall be effective against all Lender unless the Required Lenders shall have concurred with such waiver or modification.

### 11.3 Expenses; Indemnity: Damage Waiver.

(a) The Credit Parties jointly and severally agree to pay, or reimburse the Agent or the Lenders, as applicable, for paying, (i) all reasonable out-of-pocket expenses incurred by the Agent and its Affiliates, including the reasonable fees, charges and disbursements of Special Counsel, in connection with the syndication of the credit facilities provided for herein, the preparation of this Agreement and the other Loan Documents or any amendments, modifications or waivers of the provisions hereof or thereof (whether or not the transactions contemplated hereby or thereby shall be consummated), (ii) all reasonable out-of-pocket expenses incurred by the Issuing Lender in connection with the issuance, amendment, renewal or extension of any Letter of Credit or any demand for payment thereunder, (iii) all out-of-pocket expenses incurred by the Agent, the Issuing Lender, or any Lender, including the fees, charges and disbursements of any counsel for the Agent, the Issuing Lender, or any Lender, in connection with the enforcement or protection of their rights in connection with this Agreement and the other Loan Documents, including their rights under this Section 11.3, or in connection with the Loans made or Letters of Credit issued hereunder, including in connection with any workout, restructuring or negotiations in respect thereof, and (iv) all Other Taxes levied by any Governmental Authority in respect of this Agreement or any of the other Loan Documents or any other document referred to herein or therein

and all costs, expenses, taxes, assessments and other charges incurred in connection with any filing, registration, recording or perfection of any security interest contemplated by any Loan Document or any other document referred to therein.

- (b) The Credit Parties jointly and severally agree to indemnify the Agent, the Issuing Lender, each Lender and each Related Party of any of the foregoing Persons (each such Person being called an "Indemnitee") against, and hold each Indemnitee harmless from, any and all losses, claims, damages, liabilities and related expenses, including the fees, charges and disbursements of any counsel for any Indemnitee and settlement costs, incurred by or asserted against any Indemnitee arising out of, in connection with, or as a result of (i) the execution or delivery of this Agreement, the other Loan Documents or any agreement or instrument contemplated hereby, the performance by the parties hereto and thereto of their respective obligations hereunder or thereunder or the consummation of the transactions contemplated hereby or any other transactions contemplated hereby, (ii) any Loan or Letter of Credit or the use of the proceeds therefrom (including any refusal by the Issuing Lender to honor a demand for payment under a Letter of Credit if the documents presented in connection with such demand do not strictly comply with the terms of such Letter of Credit), (iii) any actual or alleged presence or release of Hazardous Materials on or from any property owned, leased or operated by any Credit Party or any Subsidiary, or (iv) any actual or prospective claim, litigation, investigation or proceeding relating to any of the foregoing, whether based on contract, tort or any other theory and regardless of whether any Indemnitee is a party thereto; provided that such indemnity shall not, as to any Indemnitee, be available to the extent that such losses, claims, damages, liabilities or related expenses are determined by a court of competent jurisdiction by final and nonappealable judgment to have resulted from the gross negligence or willful misconduct of such Indemnitee.
- (c) To the extent that the Credit Parties fail to pay any amount required to be paid by them to the Agent under paragraph (a) or (b) of this Section 11.3, each Lender severally agrees to pay to the Agent such Lender's Applicable Percentage (determined as of the time that the applicable unreimbursed expense or indemnity payment is sought) of such unpaid amount; <u>provided</u> that the unreimbursed expense or indemnified loss, claim, damage, liability or related expense, as the case may be, was incurred by or asserted against the Agent in its capacity as such. To the extent that the Credit Parties fail to pay any amount required to be paid by them to the Issuing Lender under paragraph (a) or (b) of this Section 11.3, each Revolving Credit Lender severally agrees to pay to the Issuing Lender such Lender's Applicable Percentage (determined as of the time that the applicable unreimbursed expense or indemnity payment is sought) of such unpaid amount; <u>provided</u> that the unreimbursed expense or indemnified loss, claim, damage, liability or related expense, as the case may be, was incurred by or asserted against the Issuing Lender in its capacity as such.
- (d) To the extent permitted by applicable law, none of the Credit Parties shall assert, and each Credit Party hereby waives, any claim against any Indemnitee, on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to direct or actual damages) arising out of, in connection with, or as a result of, this Agreement, the other Loan Documents or any agreement or instrument contemplated hereby or thereby, the transactions contemplated hereby, any Loan or Letter of Credit or the use of the proceeds thereof.
  - (e) All amounts due under this Section 11.3 shall be payable within ten (10) Business Days after written demand therefor.
- (f) The agreements in this Section 11.3 shall survive the resignation of the Agent, the Issuing Lender and the Swing Loan Lender, the termination of the Commitments and the repayment, satisfaction or discharge of all other Obligations.

### 11.4 Successors and Assigns.

- (a) <u>Successors and Assigns, Generally.</u> The provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns permitted hereby, except that no Credit Party may assign or otherwise transfer any of its rights or obligations hereunder without the prior written consent of each Lender, the Issuing Lender and the Agent no Lender may assign or otherwise transfer any of its rights or obligations hereunder except (i) to an assignee in accordance with the provisions of subsection (b) of this Section, (ii) by way of participation in accordance with the provisions of subsection (d) of this Section, or (iii) by way of pledge or assignment of a security interest subject to the restrictions of subsection (f) of this Section (and any other attempted assignment or transfer by any party hereto shall be null and void). Nothing in this Agreement, expressed or implied, shall be construed to confer upon any Person (other than the parties hereto, their respective successors and assigns permitted hereby and, to the extent expressly contemplated hereby, Participants to the extent provided in subsection (d) of this Section and, to the extent expressly contemplated hereby, the Related Parties of the Agent, the Issuing Lender, and the Lenders) any legal or equitable right, remedy or claim under or by reason of this Agreement.
- (b) <u>Assignments by Lenders</u>. Any Lender may at any time assign to one or more assignees all or a portion of its rights and obligations under this Agreement (including all or a portion of its Commitment and the Loans (including for purposes of this subsection (b), participations in L/C Obligations and in Swing Line Loans) at the time owing to it); provided that any such assignment shall be subject to the following conditions:

## (i) Minimum Amounts:

- (A) in the case of an assignment of the entire remaining amount of the assigning Lender's Commitment and the Loans at the time owing to it or in the case of an assignment to a Lender or an Affiliate of a Lender no minimum amount need be assigned; and
- (B) in any case not described in subsection (b)(i)(A) of this Section, the aggregate amount of the Commitment (which for this purpose includes Loans outstanding thereunder) or, if the Commitment is not then in effect, the principal outstanding balance of the Loans of the assigning Lender subject to each such assignment, determined as of the date the Assignment and Assumption with respect to such assignment is delivered to Agent or, if "Trade Date" is specified in the Assignment and Assumption, as of the Trade Date, shall not be less than \$5,000,000, unless each of Agent and, so long as no Event of Default has occurred and is continuing, the Borrower otherwise consents (each such consent not to be unreasonably withheld or delayed); provided, however, that concurrent assignments to members of an Assignee Group and concurrent assignments from members of an Assignee Group to a single Eligible Assignee (or to an Eligible Assignee and members of its Assignee Group) will be treated as a single assignment for purposes of determining whether such minimum amount has been met;
- (ii) <u>Proportionate Amounts</u>. Each partial assignment shall be made as an assignment of a proportionate part of all the assigning Lender's rights and obligations under this Agreement with respect to the Loans or the Commitment assigned, except that this clause (ii) shall not apply to the Swing Loan Lender's rights and obligations in respect of Swing Loans;

- (iii) Required Consents. No consent shall be required for any assignment except to the extent required by subsection (b)(i)(B) of this Section and, in addition:
  - (A) the consent of Borrower (such consent not to be unreasonably withheld or delayed) shall be required for any assignment to a Competitor and for any other assignment; provided, that the consent of the Borrower shall not be required in connection with any assignment to a non-Competitor if (1) an Event of Default has occurred and is continuing at the time of such assignment or (2) such assignment is to a Lender or an Affiliate of a Lender;
  - (B) the consent of Agent (such consent not to be unreasonably withheld or delayed) shall be required for assignments in respect of any Revolving Credit Commitment if such assignment is to a Person that is not a Lender or an Affiliate of such Lender; and
  - (C) the consent of the Issuing Lender (such consent not to be unreasonably withheld or delayed) shall be required for any assignment that increases the obligation of the assignee to participate in exposure under one or more Letters of Credit (whether or not then outstanding).
- (iv) <u>Assignment and Assumption</u>. The parties to each assignment shall execute and deliver to the Agent an Assignment and Assumption, together with a processing and recordation fee in the amount of \$3,500.00; provided, however, that the Agent may, in its sole discretion, elect to waive such processing and recordation fee in the case of any assignment. The assignee, if it is not a Lender, shall deliver to Agent an Administrative Questionnaire.
  - (v) No Assignment to Borrower. No such assignment shall be made to Borrower or any of Borrower's Affiliates or Subsidiaries.
  - (vi) No Assignment to Natural Persons. No such assignment shall be made to a natural person.

Subject to acceptance and recording thereof by the Agent pursuant to subsection (c) of this Section, from and after the effective date specified in each Assignment and Assumption, the assignee thereunder shall be a party to this Agreement and, to the extent of the interest assigned by such Assignment and Assumption, have the rights and obligations of a Lender under this Agreement, and the assigning Lender thereunder shall, to the extent of the interest assigned by such Assignment and Assumption, be released from its obligations under this Agreement (and, in the case of an Assignment and Assumption covering all of the assigning Lender's rights and obligations under this Agreement, such Lender shall cease to be a party hereto) but shall continue to be entitled to the benefits of Sections 2.11, 2.12 and 11.3 with respect to facts and circumstances occurring prior to the effective date of such assignment. Upon request, the Borrower (at its expense) shall execute and deliver a Note to the assignee Lender. Any assignment or transfer by a Lender of rights or obligations under this Agreement that does not comply with this subsection shall be treated for purposes of this Agreement as a sale by such Lender of a participation in such rights and obligations in accordance with subsection (d) of this Section.

(c) <u>Register</u>. The Agent, acting solely for this purpose as an agent of the Borrower, shall maintain at the Agent's office a copy of each Assignment and Assumption delivered to it and a register for the recordation of the names and addresses of the Lenders, and the Commitments of, and principal amounts of the Loans and Reimbursement Obligations owing to, each Lender pursuant to the terms hereof from time to time (the "Register"). The entries in the Register shall be conclusive, and the

Borrower, the Agent and the Lenders may treat each Person whose name is recorded in the Register pursuant to the terms hereof as a Lender hereunder for all purposes of this Agreement, notwithstanding notice to the contrary. The Register shall be available for inspection by the Borrower and any Lender, at any reasonable time and from time to time upon reasonable prior notice.

- (d) Participations. Any Lender may at any time, without the consent of, or notice to, the Borrower or the Agent, sell participations to any Person (other than a natural person or Borrower or any of the Borrower's Affiliates or Subsidiaries) (each, a "Participant") in all or a portion of such Lender's rights and/or obligations under this Agreement (including all or a portion of its Commitment and/or the Loans (including such Lender's participations in Reimbursement Obligations and/or Swing Loans) owing to it); provided that (i) such Lender's obligations under this Agreement shall remain unchanged, (ii) such Lender shall remain solely responsible to the other parties hereto for the performance of such obligations and (iii) the Borrower, the Agent, the Issuing Lender and the Lenders shall continue to deal solely and directly with such Lender in connection with such Lender's rights and obligations under this Agreement. Any agreement or instrument pursuant to which a Lender sells such a participation shall provide that such Lender shall retain the sole right to enforce this Agreement and to approve any amendment, modification or waiver of any provision of this Agreement; provided that such agreement or instrument may provide that such Lender will not, without the consent of the Participant, agree to any amendment, waiver or other modification described in the first proviso to Section 11.2 that affects such Participant. Subject to subsection (e) of this Section, the Borrower agrees that each Participant shall be entitled to the benefits of Sections 2.11 and 2.12 to the same extent as if it were a Lender and had acquired its interest by assignment pursuant to subsection (b) of this Section. To the extent permitted by law, each Participant also shall be entitled to the benefits of Section 11.8 as though it were a Lender, provided such Participant agrees to be subject to Section 2.8 as though it were a Lender.
- (e) <u>Limitations upon Participant Rights</u>. A Participant shall not be entitled to receive any greater payment under Section 2.11 or 2.12 than the applicable Lender would have been entitled to receive with respect to the participation sold to such Participant, unless the sale of the participation to such Participant is made with the Borrower's prior written consent. A Participant that would be a Foreign Lender if it were a Lender shall not be entitled to the benefits of Section 2.12 unless Borrower is notified of the participation sold to such Participant and such Participant agrees, for the benefit of Borrower, to comply with Section 2.12(e) as though it were a Lender.
- (f) <u>Certain Pledges</u>. Any Lender may at any time pledge or assign a security interest in all or any portion of its rights under this Agreement (including under its Note, if any) to secure obligations of such Lender, including any pledge or assignment to secure obligations to a Federal Reserve Bank; provided that no such pledge or assignment shall release such Lender from any of its obligations hereunder or substitute any such pledgee or assignee for such Lender as a party hereto.
- (g) Resignation as Issuing Lender or Swing Loan Lender. Notwithstanding anything to the contrary contained herein, if at any time Bank of America assigns all of its Commitment and Loans pursuant to subsection (b) above, Bank of America may, (i) upon 30 days' notice to the Borrower and the Lenders, resign as Issuing Lender and/or (ii) upon 30 days' notice to the Borrower, resign as Swing Loan Lender. In the event of any such resignation as Issuing Lender or Swing Loan Lender, the Borrower shall be entitled to appoint from among Lenders a successor Issuing Lender or Swing Loan Lender hereunder; provided, however, that no failure by the Borrower to appoint any such successor shall affect the resignation of Bank of America as Issuing Lender or Swing Loan Lender, as the case may be. If Bank of America resigns as Issuing Lender, it shall retain all the rights, powers, privileges and duties of the Issuing Lender hereunder with respect to all Letters of Credit outstanding as of the effective date of its resignation as Issuing Lender and all Reimbursement Obligations with respect thereto (including the right to require the Lenders to make Base Rate Loans or fund risk participations in Unreimbursed Amounts

pursuant to Section 2.4(c)). If Bank of America resigns as Swing Loan Lender, it shall retain all the rights of Swing Loan Lender provided for hereunder with respect to Swing Loans made by it and outstanding as of the effective date of such resignation, including the right to require the Lenders to make Base Rate Loans or fund risk participations in Swing Loans pursuant to Section 2.6(d). Upon the appointment of a successor Issuing Lender and/or Swing Loan Lender, (a) such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring Issuing Lender or Swing Loan Lender, as the case may be, and (b) the successor Issuing Lender shall issue letters of credit in substitution for the Letters of Credit, if any, outstanding at the time of such succession or make other arrangements satisfactory to Bank of America to effectively assume the obligations of Bank of America with respect to such Letters of Credit

- 11.5 **Survival**. All covenants, agreements, representations and warranties made by the Credit Parties and their Subsidiaries herein and in the other Loan Documents, and in the certificates or other instruments delivered in connection with or pursuant to this Agreement and the other Loan Documents, shall be considered to have been relied upon by the other parties hereto and shall survive the execution and delivery of this Agreement and the other Loan Documents and the making of any Loans and issuance of any Letters of Credit, regardless of any investigation made by any such other party or on its behalf and notwithstanding that the Agent, the Issuing Lender or any Lender may have had notice or knowledge of any Default or incorrect representation or warranty at the time any credit is extended hereunder, and shall continue in full force and effect so long as the principal of or any accrued interest on any Loan or any fee or any other Obligation payable under this Agreement or the other Loan Documents is outstanding and unpaid or any Letter of Credit is outstanding and so long as the Commitments have not expired or terminated. The provisions of Sections 2.11, 2.12, and 10.3 and subsection 2.3(g) shall survive and remain in full force and effect regardless of the consummation of the transactions contemplated hereby, the repayment of the Loans, the expiration or termination of the Letters of Credit and the Commitments or the termination of this Agreement or any other Loan Document or any provision hereof or thereof.
- 11.6 Counterparts; Integration; References to Agreement; Effectiveness. This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. This Agreement and any separate letter agreements with respect to fees payable to the Agent or its counsel constitute the entire contract among the parties relating to the subject matter hereof and supersede any and all previous agreements and understandings, oral or written, relating to the subject matter hereof. Whenever there is a reference in any Loan Document or UCC Financing Statement to the "Credit Agreement" to which the Agent, the Lenders and the Credit Parties are parties, such reference shall be deemed to be made to this Agreement among the parties hereto. Except as provided in Section 6.1, this Agreement shall become effective when it shall have been executed by the Agent and when the Agent shall have received counterparts hereof which, when taken together, bear the signatures of each of the other parties hereto, and thereafter shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. Delivery of an executed counterpart of a signature page of this Agreement by telecopy shall be effective as delivery of a manually executed counterpart of this Agreement.
- 11.7 **Severability**. Any provision of this Agreement held to be invalid, illegal or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity, illegality or unenforceability without affecting the validity, legality and enforceability of the remaining provisions hereof; and the invalidity of a particular provision in a particular jurisdiction shall not invalidate such provision in any other jurisdiction.
- 11.8 **Right of Setoff**. Each Credit Party hereby grants to the Agent, and each Lender that from time to time maintains any deposit accounts, holds any funds or otherwise becomes indebted to the Credit

Parties a security interest in all deposits (general or special, time or demand, provisional or final) and funds at any time held and other indebtedness at any time owing by the Agent, or any Lender to or for the credit or the account of any Credit Party as security for the Obligations, and the Credit Parties hereby agree that the Agent, and each Lender are hereby authorized at any time and from time to time, to the fullest extent permitted by law, to set off and apply any and all deposits (general or special, time or demand, provisional or final) or other funds at any time held and other indebtedness at any time owing by the Agent, or such Lender to or for the credit or the account of any Credit Party against any and all of the Obligations, irrespective of whether or not the Agent or the Lenders shall have made any demand under this Agreement and although any of the Obligations may be unmatured. The rights of the Agent and each Lender under this Section 11.8 are in addition to any other rights and remedies (including other rights of setoff) which the Agent or any such Lender may have.

11.9 **Subordination by Credit Parties**. The Credit Parties hereby agree that all present and future Indebtedness of any Credit Party to another Credit Party ("Intercompany Indebtedness.") shall be subordinate and junior in right of payment and priority to the Obligations, and each Credit Party agrees not to make, demand, accept or receive any payment in respect of any present or future Intercompany Indebtedness, including, without limitation, any payment received through the exercise of any right of setoff, counterclaim or cross claim, or any collateral therefor, unless and until such time as the Obligations shall have been indefeasibly paid in full; provided that, so long as no Default shall have occurred and be continuing and no Default shall be caused thereby, the Credit Parties may make and receive such payments as shall be customary in the ordinary course of the Credit Parties' business. Without in any way limiting the foregoing, in the event of any insolvency or bankruptcy proceedings, or any receivership, liquidation, reorganization, dissolution or other similar proceedings relative to any Credit Party or to its businesses, properties or assets, the Lenders shall be entitled to receive payment in full of all of the Obligations before any Credit Party shall be entitled to receive any payment in respect of any present or future Intercompany Indebtedness.

### 11.10 Governing Law; Jurisdiction; Consent to Service of Process.

- (a) This Agreement shall be construed in accordance with and governed by the law of The Commonwealth of Massachusetts.
- (b) Each party hereto hereby irrevocably and unconditionally submits, for itself and its property, to the nonexclusive jurisdiction of the courts of The Commonwealth of Massachusetts and of the United States District Court for the District of Massachusetts, and any appellate court from any thereof, in any action or proceeding arising out of or relating to this Agreement or the other Loan Documents, or for recognition or enforcement of any judgment, and each of the parties hereto hereby irrevocably and unconditionally agrees that all claims in respect of any such action or proceeding may be heard and determined in such Massachusetts court (or, to the extent permitted by law, in such Federal court). Each of the parties hereto agrees that a final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law. Nothing in this Agreement shall affect any right that the Agent, the Issuing Lender, or any Lender may otherwise have to bring any action or proceeding relating to this Agreement against any Credit Party or any Subsidiary or its properties in the courts of any jurisdiction.
- (c) Each party hereto hereby irrevocably and unconditionally waives, to the fullest extent it may legally and effectively do so, any objection which it may now or hereafter have to the laying of venue of any suit, action or proceeding arising out of or relating to this Agreement or the other Loan Documents in any court referred to in paragraph (b) of this Section 11.10. Each of the parties hereto hereby irrevocably waives, to the fullest extent permitted by law, the defense of an inconvenient forum to the maintenance of such action or proceeding in any such court. (d) Each party to this Agreement

irrevocably consents to service of process in the manner provided for notices in Section 11.1. Nothing in this Agreement will affect the right of any party to this Agreement to serve process in any other manner permitted by law.

- 11.11 **WAIVER OF JURY TRIAL**. EACH PARTY HERETO HEREBY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY). EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 11.11.
- 11.12 **Headings**. Article and Section headings and the Table of Contents used herein are for convenience of reference only, are not part of this Agreement and shall not affect the construction of, or be taken into consideration in interpreting, this Agreement.
- 11.13 **Release of Collateral and Guarantees**. The Agent and the Lenders agree that if all of the capital stock of or other equity interests in any Subsidiary that is owned by the Credit Parties is sold to any Person as permitted by the terms of this Agreement and the other Loan Documents, or if any Subsidiary is merged or consolidated with or into any other Person as permitted by the terms of this Agreement and such Subsidiary is not the continuing or surviving corporation, the Agent shall, upon request of the Borrower (and upon the receipt by the Agent of such evidence as the Agent or any Lender may reasonably request to establish that such sale, designation, merger or consolidation is permitted by the terms of this Agreement), terminate the Guarantee of such Subsidiary under Article 3 hereof and authorize the Agent to release the Liens created by the Loan Documents on any capital stock of or other equity interests in such Subsidiary. The Agent and the Lenders further agree that if any task order or contract of any Credit Party shall become Energy Conservation Financing Collateral as permitted by the terms of this Agreement, the Agent shall, upon request by the Borrower (and upon the receipt by the Agent of such evidence as the Agent or any Lender may reasonably request to establish that grant of such security interest in such task orders or contracts in favor of the Energy Conservation Project Financing Agent is permitted by the terms of this Agreement), release the Lien created by the Loan Documents on such Energy Conservation Financing Collateral.
- 11.14 Confidentiality. The Agent, the Issuing Lender and each Lender agrees to keep confidential information obtained by it pursuant hereto and the other Loan Documents confidential in accordance with its customary practices and agrees that it will only use such information in connection with the transactions contemplated by this Agreement and not disclose any of such information other than (a) to the Agent or any Lender, (b) its employees, representatives, directors, attorneys, auditors, agents, professional advisors, trustees or Affiliates who are advised of the confidential nature of such information or to any direct or indirect contractual counterparty in swap agreements or such contractual counterparty's \_\_\_\_\_\_\_ that notice of such requirement or order shall be promptly furnished to the Borrower unless such notice is legally prohibited) or requested or required by bank, securities, insurance or investment company regulators or auditors or any administrative body or commission to whose jurisdiction the Agent or such Lender may be subject, (d) to any rating agency to the extent required in connection with any rating to be assigned to such Lender, (e) to assignees or participants or prospective assignees or participants who agree to be bound by the provisions of this Section 11.13, (f) to the extent required in connection with any

litigation between any Credit Party and the Agent or any Lender with respect to the Loans or this Agreement and the other Loan Documents or (g) with the Borrower's prior written consent.

- 11.15 **Payments Set Aside**. To the extent that any payment by or on behalf of the Borrower is made to the Agent, the Issuing Lender or any Lender, or the Agent, the Issuing Lender or any Lender exercises its right of setoff, and such payment or the proceeds of such setoff or any part thereof is subsequently invalidated, declared to be fraudulent or preferential, set aside or required (including pursuant to any settlement entered into by Agent, the Issuing Lender or such Lender in its discretion) to be repaid to a trustee, receiver or any other party, in connection with any proceeding under any Debtor Relief Law or otherwise, then (a) to the extent of such recovery, the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such setoff had not occurred, and (b) each Lender and the Issuing Lender severally agrees to pay to the Agent upon demand its applicable share (without duplication) of any amount so recovered from or repaid by the Agent, plus interest thereon from the date of such demand to the date such payment is made at a rate per annum equal to the Federal Funds Effective Rate from time to time in effect. The obligations of the Lenders and the Issuing Lender under clause (b) of the preceding sentence shall survive the payment in full of the Obligations and the termination of this Agreement.
- 11.16 No Advisory or Fiduciary Responsibility. In connection with all aspects of each transaction contemplated hereby (including in connection with any amendment, waiver or other modification hereof or of any other Loan Document), the Borrower and each other Credit Party acknowledges and agrees and acknowledges its Affiliates' understanding that that: (i) (A) the services regarding this Agreement provided by the Agent are arm's-length commercial transactions between the Borrower, each other Credit Party and their respective Affiliates, on the one hand, and the Agent, on the other hand, (B) each of the Borrower and the other Credit Parties have consulted their own legal, accounting, regulatory and tax advisors to the extent they have deemed appropriate, and (C) the Borrower and each other Credit Party is capable of evaluating and understanding, and understands and accepts, the terms, risks and conditions of the transactions contemplated hereby and by the other Loan Documents; (ii) (A) the Agent is and has been acting solely as a principal and, except as expressly agreed in writing by the relevant parties, has not been, is not, and will not be acting as an advisor, agent or fiduciary, for the Borrower, any other Credit Party, or any of their respective Affiliates, or any other Person and (B) the Agent does not have any obligation to the Borrower, any other Credit Party or any of their Affiliates with respect to the transaction contemplated hereby except those obligations expressly set forth herein and in the other Loan Documents; and (iii) the Agent and its Affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Borrower, the other Credit Parties and their respective Affiliates, and the Agent has no obligation to disclose any of such interests to the Borrower, any other Credit Party or any of their respective Affiliates. To the fullest extent permitted by law, each of the Borrower and the other Credit Parties hereby waive and release, any claims that it may have against the Agent with respect to any breach or alleged breach of agency or fiduciary duty in connection with any aspect of any transaction contemplated hereby.
- 11.17 Electronic Execution of Assignments and Certain Other Documents. The words "execution," "signed," "signature," and words of like import in any Assignment and Assumption or in any amendment or other modification hereof (including waivers and consents) shall be deemed to include electronic signatures or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act.

11.18 **USA Patriot Act Notice**. Each Lender that is subject to the Patriot Act (as hereinafter defined) and Agent (for itself and not on behalf of any Lender) hereby notifies the Borrower that pursuant to the requirements of the USA PATRIOT Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)) (the "Patriot Act"), it is required to obtain, verify and record information that identifies the Borrower, which information includes the name and address of the Borrower and other information that will allow such Lender or the Agent, as applicable, to identify the Borrower in accordance with the Patriot Act. The Borrower shall, promptly following a request by the Agent or any Lender, provide all documentation and other information that the Agent or such Lender requests in order to comply with its ongoing obligations under applicable "know your customer" and anti-money laundering rules and regulations, including the Patriot Act.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Credit Agreement to be duly executed by their respective authorized officers as of the day and year first above written.

#### **BORROWER**

AMERESCO, INC.

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Vice President & Chief Financial Officer

#### **GUARANTORS**

AMERESCO ENERTECH, INC.

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Treasurer

E.THREE CUSTOM ENERGY SOLUTIONS, LLC,

By: Sierra Energy Company, its sole member

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Treasurer

AMERESCOSOLUTIONS, INC.

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Treasurer

AMERESCO PLANERGY HOUSING, INC.

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Treasurer

#### SOLUTIONS HOLDINGS, LLC

By: Ameresco, Inc., its sole member

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Vice President & Chief Financial Officer

AMERESCO FEDERAL SOLUTIONS, INC.

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Treasurer

SIERRA ENERGY COMPANY

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Treasurer

AMERESCO SELECT, INC.

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Treasurer

AMERESCO HAWAII LLC

By: Ameresco, Inc., its sole member

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Vice President & Chief Financial Officer

 ${\bf AMERESCO~SOLAR-SOLUTIONS,\,INC.}$ 

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Treasurer

#### AMERESCO SOLAR-PRODUCTS LLC

By: Ameresco Solar LLC, its sole member

By: Ameresco, Inc., its sole member

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Vice President & Chief Financial Officer

#### AMERESCO SOLAR, LLC

By: Ameresco, Inc., its sole member

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Vice President & Chief Financial Officer

#### AMERESCO SOLAR – TECHNOLOGIES LLC

By: Ameresco Solar LLC, its sole member

By: Ameresco, Inc., its sole member

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Vice President & Chief Financial Officer

#### AMERESCO WOODLAND MEADOWS ROMULUS LLC

By: Ameresco, Inc., its sole member

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Vice President & Chief Financial Officer

#### AMERESCO NORTHAMPTON LLC

By: Ameresco, Inc., its sole member

By: /s/ Andrew B. Spence

Name: Andrew B. Spence

Title: Vice President & Chief Financial Officer

#### AGENT AND LENDER

BANK OF AMERICA, N.A., as Administrative Agent and a Lender

By: /s/ John F. Lynch

Name: John F. Lynch Title: Senior Vice President

# Material Owned Properties

# **Designated Financial Officers**

George P. Sakellaris, President Andrew Spence, Chief Financial Officer Alan Winkler, Controller

# Existing Letters of Credit

# Websites and Domain Names

ameresco.com
ameresco.net
amerescopv.com
amerescosolar.com
amerescosolutions.com
energyefficiency.com
betterschoolspartnership.org
betterschoolspartnership.net
betterschoolspartnership.com
selectenergysi.com

ameresco.ca

pvesco.com

southwestpv.com

amerescoaxis.com

Networks Solutions is the administrative contact used in connection with the registration of the domain names.

#### Fixtures, etc.

- 1. e.three Custom Energy Solutions, LLC: City Centre Chiller Plant Facility, 128 South Fourth Street, Las Vegas, Nevada 89101.
- 2. Ameresco Woodland Meadows Romulus LLC: Landfill Gas Recovery Plant, 4620 Hannan Road, Wayne, Michigan 48189.
- 3. Ameresco Northampton LLC: Containerized Landfill Gas Generation System, 170 Glendale Road, Florence, Massachusetts 01062.

# Governmental Approvals; No Conflicts

# Financial Condition; No Material Adverse Changes

# Properties; Proprietary Rights; Real Property Assets

(b)(c) Patents: None.

Trademarks:

Mark	Country	Regis. No.	Regis. Date
AMERESCO	United States	3241224	05/15/07
AMERESCO and design	United States	3243480	05/22/07



ENFOTRAK United States 2432771 03/06/01

All other unregistered Trademarks controlled or used by the Credit Parties.

<u>Copyrights</u>: All common law Copyrights controlled by the Credit Parties.

#### (d) Real Property Assets and Leases:

#### **Leased Properties:**

101 Post Road, Anchorage, AK 99516

6633 Brayton Drive, Suite A, Anchorage, AK 99507

610 Wind Song Drive, Anchorage, AK 99516

100 Canyon Park Circle, Suite C, Pelham, AL 35124

2202 West Medtronic Way, Tempe, AZ 85282

8310 S. Valley Highway, 3rd Floor, Englewood, CO 80112

1101 Pennsylvania Avenue, 7th Floor, Washington, DC

2202 N. Westshore Blvd., Ste. 205, Tampa, FL 33607

1900 Spring Road, Suite 400 & 420, Oak Brook, IL

8900 Keystone Crossing, Suite 1075, Indianapolis, IN 46240

6750 Antioch Road, Suite 103, Merriam, KS 66204

9000 Wessex Place, Suite 304, Louisville, KY 40222

125 Johnny Dufren Drive, Unit 102, Mathews, LA 70374

5565 Sterrett Place, Suite 400, Columbia, MD 21044

111 Speen Street, Suite 410, Framingham, MA 01701

48 Union Wharf, Portland, ME 04101

28800 Orchard Lake Road, Farmington Hills, MI 48334

9900 Clayton Road, Ste. E, St. Louis, MO 63117

5200 77 Center Drive, Charlotte, NC 28217

639 Isbell Road, Suite 360, Reno, NV 89509

50 Front Street, Ste. 201, Newburgh, NY 12550

25 Melville Park Road, Melville, NY 11747

9 Cornell Road, Latham, NY 12110

506 East Washington Street, Suite B, Syracuse NY 13020

802 Clare Avenue, Portsmouth, OH 45662

200 E. Campus View Blvd., Suite 218, Columbus, OH 43235

One E. Uwchlan Ave., Ste. 302, Exton, PA 19341

1820 Midpark Dr., Suite B, C & F, Knoxville, TN 37921

1726A General George Patton Drive, Brentwood, TN 37027

7929 Brookriver Drive, Suite 250, Dallas, TX

9801 Westheimer, Houston, TX 77042

212 E. Main, Tomball, TX 77375

217 Texas Street, Tomball, TX 77375

700 Business Center, Suite 1623, Richmond, VA 23219

1330 N. Washington Street, Suite 300, Spokane, WA 99201

Woodland Meadows Landfill 4620 Hannon Road, Wayne, MI 48189

Northampton Landfill 170 Glendale Road, Florence, MA 01062; Easement Agreement

City Centre Chiller Plant 128 South Fourth Street, Las Vegas, NV 89101

Owned Properties: None.

#### Litigation and Environmental Matters

#### (a) Action, Suits or Proceedings:

1. Kyocera Solar, Inc. v. David Arrowood and Jane Doe Arrowood, husband and wife, Jeff Brady and Jane Doe Brady, husband and wife, Steve Gildden and Jane Doe Gildden, husband and wife, Rich Griswold and Jane Doe Griswold, husband and wife, David Larche and Jane Doe Larche, husband and wife, Joel Oatman and Jane Doe Oatman, husband and wife, Chris Pinelli and Jane Doe Pinelli, husband and wife, Robert Rallo and Jane Doe Rallo, husband and wife, Robert Rickman and Jane Doe Rickman, husband and wife, Jim Hulme, an individual, Ameresco Solar Products, LLC f/k/a PV Energy Solutions LLC and Ameresco, Inc.

April 2008. Each individual defendant (other than spouses) is employed by the Borrower and was previously employed by the plaintiff. The plaintiff alleges, among other things, that one or more of the individual defendants copied and/or removed files and documents containing the plaintiff's confidential and proprietary information. A forensic computer consultant, at Borrower's expense, has removed such electronic files from all of the Borrower's computers and computer systems and returned such files to the plaintiff. The Borrower has instructed the individual defendants to refrain from using such files and/or putting such files on the Borrower's computers and computer systems. The claim alleges a violation of the Uniform Trade Secrets Act, Intentional Interference with Business Expectancy, Unfair Competition, Conversion, Unjust Enrichment, Aiding and Abetting Misappropriation as to the all of the above defendants. Other claims relating to the individuals are also alleged; however they do not apply to the corporate defendants. The parties entered into a stipulated preliminary injunction May 1, 2008 whereby the defendants agreed to (i) return to the plaintiff all of the plaintiff's confidential and proprietary documentation and (ii) refrain from using or disclosing any of the plaintiff's confidential and/or proprietary documentation or information.

(b) Environmental Liability: None.

# Compliance with Laws and Agreements

# Pension Plans

# Capitalization

Ameresco, Inc.
Capital Stock Summary

Туре	Buyer	Price	Issued Number of Shares	Treasury Shares	Treasury Shares	Equivalent Number of Shares	Ownership Interest
Preferred Shares	G. P. Sakellaris	\$ 1.00	3,000,000	Situres	Silares	9,000,000	60.93%
Preferred Shares	A. Sakellaris (Consultant)	\$ 1.00	150,000			450,000	3.05%
Preferred Shares	A. Winkler	\$ 1.00	10,000			30,000	0.20%
Preferred Shares	D. Corrsin	\$ 1.00	50,000			150,000	1.02%
Total – Preferred Shares			3,210,000		<u> </u>		
Common Stock	G. P. Sakellaris	\$0.01667	675,000			675.000	4.57%
Common Stock	S. Byrne (BCIA)	\$0.01007	666,667			666,667	4,51%
Common Stock	W. Kremer (BCIA)	\$0.90000	666,667			666,667	4.51%
Common Stock	W. Kreiner (BCIA)	\$0.90000	30,000	(30,000)	(52,500)	000,007	4.5170
Common Stock	A. Sakellaris (Consultant)	\$1.75000	30,000	100,000	175,000	100,000	0.68%
Common Stock	A. Sakellaris (Consultant)  A. Sakellaris (Consultant)	\$1.75000		100,000	175,000	100,000	0.68%
Common Stock	D. Anderson	\$0.01670	600,000	(90,000)	(613,800)	510,000	3.45%
Common Stock	D. Corrsin	\$0.01670	600,000	(50,000)	(015,000)	600,000	4.06%
Common Stock	K. Devlin Ruggiero	\$0.01670	150,000	(25,125)	(171,353)	124.875	0.85%
Common Stock	All Others	\$0.01670	3,551,100	(1,852,650)	(2,136,832)	1,698,450	11.50%
Total – Common Shares			6,939,434	(1,797,775)	\$ 2,624,484)		100.00%
Equity Rights:							
Warrants for common stock	1,000,000	\$ 0.01					
Warrants for common stock	800,000	\$ 0.60					
Incentive Stock Options	5,442,750	\$ 3.99					
Restricted shares to be ves	ted in October 2009						
	1,000,000	\$ 6.82					

See Schedule 5.13 for capitalization of subsidiaries.

# <u>Subsidiaries</u>

The content			JURISDICTION	PERSONS HOLDING		
Section   Process   Proc			ORGANIZATION	INTERESTS HELD OR PERCENTAGE HELD		SUBSIDIARY
Section   Company   Comp	, , , , ,	corporation		Borrower owns 100% of the issued and outstanding shares; 100 shares		Guarantor
Autono-Northina		•	NV	Sierra Energy Company owns 100% of the equity interest	_	Guarantor
Section File Region   10   10   10   10   10   10   10   1	Sierra Energy Company			5 , ,	\$1.00 par value	
Common	AmerescoSolutions, Inc.	corporation	NC	Borrower owns 100% of the issued and outstanding shares; 166 shares		Guarantor
Section   Common		corporation	DE	Borrower owns 100% of the issued and outstanding shares; 1,000 shares		Guarantor
Common   C			DE	Borrower owns 100% of the equity interest	_	Guarantor
Marcon Suffer   Marcon Suffe			TN	<i>2,</i>		Guarantor
Martine Subset   Mart		corporation	MA		100 shares of common stock at	Guarantor
American Signatified   Comment   C		corporation	TX		250,000 shares of common stock at	Guarantor
Accession Note   Company	Ameresco Solar — Products	•	DE		\$23.00 par varue	Guarantor
Second		limited liability	DE	Borrower owns 100% of the equity interest	_	Guarantor
Mareston Santarium Land   Mareston Land   Mareston Land   Mareston Land   Mareston Land   Mare		limited liability	DE	Borrower owns 100% of the equity interest	_	Guarantor
Section		limited liability	DE	Borrower owns 100% of the equity interest	_	Guarantor
Amenon of Indemine Indianing   DE   Amenon Swint Lee sens 100% of the capity interest   Proceed Swint Indianing Books, L.L.C. onts 100% of the capity interest   Proceded Swint Indianing Swint Indianing Books, L.L.C. onts 100% of the capity interest   Proceded Swint Indianing Indianin	Ameresco Solar LLC		DE	Borrower owns 100% of the equity interest	_	Guarantor
Speech Series Holdings, LLC  Speech Series Ho		limited liability	DE	Ameresco Solar LLC owns 100% of the equity interest	_	Guarantor
Speen Street Holdings H.  Line Control Holdi	-		DE	Ameresco Huntington Beach, L.L.C. owns 100% of the equity interest	_	Funding Subsidiary
Excess   Series   Holding III.   Illiand claimity   Discourse   Borrower error   100% of the equity interest   Company   Com	Speen Street Holdings II,		DE	Borrower owns 100% of the equity interest	_	Funding Subsidiary
LC Company Control (Company Company Control (Company Company			DE	Borrower owns 100% of the equity interest	_	Funding Subsidiary
American Finding II.LC  Immined Inhibity  American Finding III.CC  American Finding III.CC  American Finding III.CC  American Finding III.CC  Composition  American Canada Inic.  Composition  Co	LLC	company	DE	Borrower owns 100% of the equity interest	_	
Company   Comp	LLC	company		. ,	_	,
Amereso Faming III, LC  Amereso Faming IV, LC  Amereso Canada Inc.  Occupants		company			_	-
Sements of Ending IV, LLC  Imited liability  Ameresco Claude Inc.		company			_	
Amereso Chauda Ine. Amereso Chiquia Energy LC Company Amereso Dalmedo LC Initial Initiality LC Company Amereso Dalmedo LC Initial Initiality DE Benower owns 100% of the equity interest LC Company Amereso Dalmedo LC Initial Initiality DE Benower owns 100% of the equity interest LC Company Amereso Dalmedo LC Initial Initiality DE Benower owns 100% of the equity interest LC Company LC Company LC Company Amereso Dalmedo LC Initial Initiality DE Amereso EFG Holdings LLC owns 100% of the equity interest LC Company LC Company Amereso Dalmedo LC Initial Initiality DE Amereso EFG Holdings LLC owns 100% of the equity interest LC Company Amereso Dalmedo LC Initial Initiality DE Amereso EFG Holdings LLC owns 100% of the equity interest LC Company Amereso Dalmedo LC Initial Initiality DE Amereso EFG Holdings LLC owns 100% of the equity interest LC Company Amereso Dalmedo LC Company Amereso Dalmedo LC Initial Initiality DE Amereso EFG Holdings LLC owns 100% of the equity interest LC Company Amereso Dalmedo LC Company Amereso Eff Holdings LLC owns 100% of the equity interest LC Company Amereso Dalmedo LC Company Amereso Eff Holdings LLC owns 100% of the equity interest LC Company Amereso Eff Holdings II LC Cowns 100% of the equity interest LC Company Amereso Eff Holdings II LC Cowns 100% of the equity interest LC Company Company Amereso Eff Holdings II LC Cowns 100% of the equity interest LC Company Co		company			_	
Ameresco Quebe Inc.  Proposition (pubble of the proposition of the party of the party interest shares (pubble Inc.)  Ameresco Chiquita Energy (pubble Inc.)  Ameresco Diagnate Energy (pubble Inc.)  Ameresco	3 .,			.,		,
Second   S	Ameresco Canada Inc.	corporation	Canada	Borrower owns 100% of the issued and outstanding shares; 100 shares		Canadian Subsidiary
Let	Ameresco Quebec Inc.	corporation	Quebec			Canadian Subsidiary
Ameres o Parmeto LLC         Imitine I lainitity         Be rower owns 100% of the equity interest         — 6.         Renewable Energy to the company           Ameres o LFG Holdings         Imitine I lainitity         26         Berrower owns 100% of the equity interest         — 6.         Renewable Energy to the company           Ameres o Janes ville LLC         Imitine I lainitity         26         Ameres o LFG Holdings LLC bolds 100% equity interest         — 6.         Renewable Energy to the company         — 6.         Renewable Ener		limited liability	DE	Borrower owns 100% of the equity interest	_	
Ameres o Fix Holdings   Linited liability   DE   Borrower owns 100% of the equity interest   Subsidiary   Sub			DE	Borrower owns 100% of the equity interest	_	Renewable Energy
Amereso Interville LLC company	Ameresco LFG Holdings		DE	Borrower owns 100% of the equity interest	_	•
Meresco Fine Blaff LLC   Imidef liability   DE company			DE	Ameresco LFG Holdings LLC holds 100% equity interest	_	
Company   Comp		company	DE		_	Subsidiary
Abril Amerese Gosben   Amerese Colege Energy   Imited liability   DE   Amerese LFG Holdings LLC owns 100% equity interest   Subsidiary   Subsidiar		company			1 000 shares common stock at	Subsidiary
Marcesco Recewable Energy   Minited Hability   DE   Borrower owns 100% of the equity interest   Company   Subsidiary   S	d/b/a Ameresco Goshen	•		shares		Subsidiary
Meresco LFG Holdings II   mineted liability   DE   Borrower owns 100% of the equity interest   Subsidiary	LLC	company			_	Subsidiary
Meresco Santa Cruz Energy   Imited liability   DE   Ameresco Lef Holdings II LLC owns 100% equity interest   Renewable Energy Subsidiary   Renewable Energy Company   Renewable Energ		•	DE	Borrower owns 100% of the equity interest	_	
Ameresco Santa Cruz Energy LC company Ameresco Half Moon Bay Limited liability Company LC company L	_	•	DE	Borrower owns 100% of the equity interest	_	
Ameresco Half Moon Bay LIC company company limited liability DE mereson belaware Energy limited liability DE mereson limi		limited liability	DE	Ameresco LFG Holdings II LLC owns 100% equity interest	_	
Ameresco Delaware Energy LLC company   Imited liability   DE   Borrower owns 100% of the equity interest   Company   Subsidiary   Subsidiary   Company   C	Ameresco Half Moon Bay	limited liability	DE	Borrower owns 100% of the equity interest	_	Renewable Energy
Ameresco McCarty Energy LLC company LCC company Ameresco Skunk Creek LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Skunk Creek LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Stafford LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Stafford LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Jefferson City LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Pontiac LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Outherland LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Company Ameresco Golden Triangle limited liability DE Borrower owns 100% of the equity interest Company Ameresco Golden Triangle limited liability DE Borrower owns 100% of the equity interest Company Ameresco San Antonio LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco San Antonio LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Company Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Company Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the e	Ameresco Delaware Energy	limited liability	DE	Borrower owns 100% of the equity interest	_	Renewable Energy
Ameresco Keller Canyon LLC company Ameresco Skunk Creek LLC limited liability Company Ameresco Stafford LLC limited liability Company Ameresco Office office of the Limited liability Company Ameresco Office office of the Limited liability Company Ameresco Office office of the Limited liability Company Ameresco Office of the Limite	Ameresco McCarty Energy	limited liability	DE	Borrower owns 100% of the equity interest	_	Renewable Energy
Ameresco Skunk Creek LLC company company  Ameresco Stafford LLC limited liability			DE	Borrower owns 100% of the equity interest	_	
Ameresco Stafford LLC limited liability company  Ameresco Jefferson City LLC limited liability company  Ameresco Pontiac LLC limited liability company  Ameresco Cumberland LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Cumberland LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Golden Triangle limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Golden Triangle limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco San Antonio LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco San Antonio LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Evansville LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Freenridge LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary			DE	Borrower owns 100% of the equity interest	_	
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Ameresco Pontiac LLC limited liability DE Borrower owns 100% of the equity interest — Renewable Energy Company  Ameresco Cumberland LLC limited liability DE Borrower owns 100% of the equity interest — Renewable Energy Subsidiary  Ameresco Golden Triangle limited liability DE Borrower owns 100% of the equity interest — Subsidiary  Ameresco Golden Triangle limited liability DE Borrower owns 100% of the equity interest — Subsidiary  Ameresco San Antonio LLC limited liability DE Borrower owns 100% of the equity interest — Renewable Energy Company  Ameresco Evansville LLC limited liability DE Borrower owns 100% of the equity interest — Renewable Energy Subsidiary  Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest — Subsidiary  Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest — Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest — Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest — Renewable Energy Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest — Renewable Energy Subsidiary	Ameresco Jefferson City LLC		DE	Borrower owns 100% of the equity interest	_	-
Company Ameresco Cumberland LLC Imited liability Company Ameresco Golden Triangle LLC Company Ameresco San Antonic LLC Imited liability DE Borrower owns 100% of the equity interest Company Ameresco San Antonic LLC Imited liability DE Borrower owns 100% of the equity interest Company  Ameresco San Antonic LLC Imited liability DE Borrower owns 100% of the equity interest Company  Ameresco Evansville LLC Imited liability DE Borrower owns 100% of the equity interest Company  Ameresco Greenridge LLC Imited liability DE Borrower owns 100% of the equity interest Company  Ameresco Greenridge LLC Imited liability DE Borrower owns 100% of the equity interest Company  Ameresco Greenridge LLC Imited liability DE Borrower owns 100% of the equity interest Company  Ameresco Santa Clara LLC Imited liability DE Borrower owns 100% of the equity interest Company  Ameresco Santa Clara LLC Imited liability DE Borrower owns 100% of the equity interest Company  Ameresco Santa Clara LLC Imited liability DE Renewable Energy Subsidiary  Ameresco Santa Clara LLC Imited liability DE Renewable Energy Subsidiary  Ameresco Santa Clara LLC Imited liability DE Renewable Energy Subsidiary	•	company		• •	_	Subsidiary
Company  Ameresco Golden Triangle   Imited liability   DE   Borrower owns 100% of the equity interest   Company   Subsidiary    Ameresco San Antonio LLC   Imited liability   DE   Borrower owns 100% of the equity interest   Company   Com		company			_	Subsidiary
LLC company  Ameresco San Antonio LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Evansville LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Evansville LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary		company			_	Subsidiary
Company  Ameresco Evansville LLC limited liability DE Borrower owns 100% of the equity interest — Renewable Energy company  Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest — Subsidiary  Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest — Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest — Renewable Energy	LLC	company		• •		Subsidiary
company Ameresco Greenridge LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest Subsidiary  Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest — Renewable Energy		company		• •	_	Subsidiary
company Ameresco Santa Clara LLC limited liability DE Borrower owns 100% of the equity interest — Subsidiary Renewable Energy		company			_	Subsidiary
•	_	company			_	Subsidiary
	Ameresco Santa Clara LLC	•	DE	Borrower owns 100% of the equity interest	_	

Ameresco Woodland Meadews Canada Wind Power Inc.	limited liability c6 <del>0paran</del> 8n	DE Canada	Borrower owns 100% of the equity interest Ameresco Canada Inc.owns 100% of the issued and outstanding shares; 100 shares	unlimited shares authorized, no par	Renewable Energy Renewable Energy Subsidiary
Ameresco Colchester 1 Inc.	corporation	Canada	Ameresco Canada Wind Power Inc. owns 100% of the issued and outstanding shares; 100 shares	unlimited shares authorized, no par value	Renewable Energy Subsidiary
Ameresco Mt. Olive LLC	limited liability company	DE	Borrower owns 100% of the equity interest	_	Inactive Subsidiary
Mount Olive Community Development Fund LLC	limited liability company	DE	Borrower owns 99.9% and Ameresco Mt. Olive LLC owns 0.01% of the equity interest	_	Inactive Subsidiary
Energy Investment, Inc.	corporation	MA	AmerescoSolutions, Inc. owns 100% of the issued and outstanding shares; 250 shares	250,000 shares common stock at \$1.00 par value	Inactive Subsidiary
EI Fund One, Inc.	corporation	MA	Energy Investment, Inc. owns 100% of the issued and outstanding shares; 100 shares	300,000 shares common stock at \$1.00 par value	Inactive Subsidiary
Ameresco Wind New York LLC	limited liability company	DE	Borrower owns 100% of the equity interest	<u>-</u>	Inactive Subsidiary
Ameresco MT Wind, LLC	limited liability company	DE	Borrower owns 100% of the equity interest	_	Inactive Subsidiary
Ameresco Huntington Beach, L.L.C.	limited liability company	DE	Borrower owns 100% of the equity interest	_	Non-Core Energy Subsidiary
Ameresco CT LLC	limited liability company	DE	Borrower owns 100% of the equity interest	_	Non-Core Energy Subsidiary
HEC/Tobyhanna Energy Project, Inc.	limited liability company	MA	Ameresco Select, Inc. owns 100% of the issued and outstanding shares; 100 shares	100 shares of common stock at \$1.00 par value	Non-Core Energy Subsidiary
HEC/CJTS Energy Center LLC	limited liability company	DE	Ameresco Select, Inc. owns 100% of the equity interest	_	Non-Core Energy Subsidiary
ERI/HEC EFA-Med, LLC	limited liability company	DE	Ameresco Select, Inc. and NORESCO, LLC each own 50% of the equity interest	50% equity interest	Special Purpose Subsidiary
Ameresco/Pacific Energy JV	general partnership	НІ	Ameresco Hawaii LLC owns 99% of the partnership interest and Pacific Energy Strategies LLC owns 1% of the partnership interest	99% partnership interest	Special Purpose Subsidiary
Ameresco S.A.	corporation	Greece	Borrower owns 99% of the issued and outstanding shares; 59,400 shares and AmerescoSolutions, Inc. owns 1% of the issued and outstanding shares; 600 shares	60,000 registered shares	Foreign Subsidiary

#### Material Indebtedness, Liens and Agreements

#### (a) Material Indebtedness:

- 1. The Subordinated Note.
- 2. Indebtedness in respect of the Contingent Amount (as defined in the Exelon Acquisition Agreement) required to be paid by the Borrower pursuant to the Exelon Acquisition Agreement.
- 3. (see table below)

CREDIT PARTY	LENDER	FACE AMOUNT	PROJECT NAME/TASK ORDER NUMBER
Ameresco Federal Solutions, Inc.	Bank of America	\$14,855,072	(Coast Guard) HSCG83-08-R-3YD003
Ameresco Federal Solutions, Inc.	Bank of America	\$ 5,861,340	(Hill AFB Phase 3) DEAM3602NT41457-0003
Ameresco Select, Inc.	United Financial	\$ 3,419,504	(NREL) DEAD36-07GO27359
Ameresco Select, Inc.	United Financial	\$ 6,372,437	(Ft. Huachucha) DACA87-97-D-0001-0004
	Bostonia Federal	\$ 1,884,254	(Hill AFB Mod.) DEAC2602NT41457-0001 Mod. 8
Ameresco Federal Solutions, Inc.	Leasing		

# (b) Liens:

1. See above table for Liens. The Credit Parties have sold the contract payments due from the government under their respective Task Orders to the applicable lenders, all in accordance with the Assignment of Claims Act of 1940, as amended, 31 U.S.C. § 3727, 41 U.S.C. § 15. Each lender has a Lien covering only the contract payments due from the government under the applicable Task Order.

#### (c) Material Contracts:

1. None.

# **Labor and Employment Matters**

(a)	None.
-----	-------

(b) None.

(c) None.

# Bank Accounts

# $Ameresco\ Inc.\ \&\ Subsidiaries --- \ Bank\ Accounts\ Listing$

Company	Bank Name	Address	Туре	Account Number
Ameresco, Inc.	Bank of America	PO Box 25118, Tampa, FL 33622-5118	Checking	XXXXXXX
Ameresco, Inc.	Bank of America	PO Box 25118, Tampa, FL 33622-5118	Deposit	XXXXXXX
Ameresco, Inc.	Bank of America	PO Box 25118, Tampa, FL 33622-5118	Deposit	XXXXXXX
Ameresco, Inc.	Bank of America	PO Box 25118, Tampa, FL 33622-5118	Deposit	XXXXXXX
Ameresco, Inc.	Bank of America Securities	200 N. College Street, 3rd Floor, NC1-004-03-45,	Investment	XXXXXXXX
Ameresco, mc.	Bank of America Securities	Charlotte,	mvestment	ΛΛΛΛΛΛΛ
Ameresco, Inc.	Citizen's Bank	PO Box 6550, Providence, RI, 02940	Checking (1)	XXXXXXX
· ·			0 . ,	
Ameresco, Inc.	Bank of America	PO Box 25118, Tampa, FL 33622-5118	Deposit	XXXXXXX
Ameresco Enertech, Inc.	Citizen's Bank	PO Box 6550, Providence, RI, 02940	Deposit (2)	XXXXXXX
AmerescoSolutions, Inc.	Citizen's Bank	PO Box 6550, Providence, RI, 02940	Checking (3)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake	Deposit (4)	XXXXXXX
,	,	City, UT 84111	1 ()	
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	303 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	304 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	305 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	306 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	299 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	300 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	301 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	302 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	311 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	312 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	313 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
AmerescoSolutions, Inc.	Wells Fargo Northeast, N.A.	314 South Main Street, 12th Floor, Sale Lake City, UT 84111	Deposit (4)	XXXXXXX
Ameresco Federal Solutions, Inc.	Suntrust Bank	Atlanta, GA	Checking (5)	XXXXXXX
Ameresco Federal Solutions, Inc.	Bank of America	PO Box 25118, Tampa, FL 33622-5118	Checking	XXXXXXX
Ameresco Select, Inc. Ameresco Select, Inc. Ameresco Select, Inc.	Citizen's Bank Black Rock Sovereign Bank	PO Box 6550, Providence, RI, 02940 100 Bellevue Parkway, Wilmington, DE 19809 5 Whittier Street, Framingham, MA 01701	Deposit (4) Deposit (4)	XXXXXXX XXXXXXX XXXXXXX
Ameresco Solar, Inc. Ameresco Solar, Inc. Ameresco Solar, Inc. Ameresco Solar, Inc.	Regions Bank Regions Bank Woodforest National Bank Citizen's Bank	810 W. Main Street, Tomball, TX 77375 810 W. Main Street, Tomball, TX 77375 602 Lawrence Street, Tomball, TX 77375 PO Box 6550, Providence, RI, 02940	Money Market (7) Checking (8) Checking (9) Checking (10)	XXXXXXX XXXXXXX XXXXXXX XXXXXXX

(1) Account maintained for processing manual checks in the ordinary course.

Bank of America

- (2) Account maintained to collect receivables in connection with a Master Contract with the State of Tennessee Board of Regents.
- (3) Account maintained to collect receivables in connection with the FRR Contract DACA87-03-D-0007 with the US Army.
- (4) Accounts maintained in connection with Energy Conservation Project Financings (bond financing structures).
- (5) Account maintained to collect receivables in connection with the ESPC Contract DE-AC26-02NT41457 Task Order 0001 with the US DOE and MAC Contract F44600-03-D-0003 with Langley AFB.
- (6) Account maintained to collect receivables in connection with the ESPC Contract DE-AM36-99EE73682 Delivery Order N47408-02-F-4965 with the Marine Corp Base Quantico and ESPC DACA87-97-D-0001 Task Orders 1-3 with the US Army
- (7) Inactive money market account acquired as part of Ameresco Solar, Inc. acquisition.
- (8) Account acquired as part of the Ameresco Solar, Inc. acquisition and maintained to collect receivables.
- (9) Account acquired as part of the Ameresco Solar, Inc. acquisition and maintained to collect receivables.
- (10) Operating cash account.

# **Existing Indebtedness**

# **Existing Debt and Liens:**

1. See Schedule 5.14(a) and (b).

# **Existing Investments**

- $1. \ \, Investments \ made \ in the \ entities \ listed \ on \ Schedule \ 5.13.$
- 2. Investments in the accounts listed on Schedule 5.20.
- 3. Investments under arrangements listed on Schedule 5.14(a)(3).

#### **Transactions with Affiliates**

The Core Ameresco Companies provide design and construction services for Affiliates in connection with Renewable Energy Projects. In addition, the Core Ameresco Companies provide Affiliates with engineering, operations & maintenance, billing, insurance and other administrative services. Furthermore, the Core Ameresco Companies provide Construction Completion and Cost Overrun Guaranties, Renewable Energy Project Guaranties, and assume certain obligations in respect of such guaranties.

From time to time, the Core Ameresco Companies provide the Canadian Subsidiaries with consulting services in construction, sales, and engineering.

The Core Ameresco Companies will continue to provide operational and administrative support to Non-Core Energy Subsidiaries, and to the other Credit Parties, with respect to the Non-Core Energy Projects.

# Restrictive Agreements

# FORM OF REVOLVING CREDIT NOTE

\$ Jun	ne, 2008
FOR VALUE RECEIVED, the undersigned, AMERESCO, INC., a Delaware corporation (the "Borrower"), promises to pa order of (the "Lender"), at the place and times provided in the Credit Agreement referred to below th sum of DOLLARS AND CENTS (\$)	
or, if less, the principal amount of, and interest accrued on, all Revolving Loans made by the Lender from time to time pursuar certain Amended and Restated Credit and Security Agreement dated as of June, 2008 (together with all amendments and of modifications, if any, from time to time hereafter made thereto, the "Credit Agreement") among the Borrower, the Guarantors to time party thereto, the Lenders from time to time party thereto, and Bank of America, N.A., as Administrative Agent (the "A This Revolving Credit Note is being executed and delivered by the Borrower pursuant to subsection 2.1(f) of the Credit Agreement.	other from time Agent").
The unpaid principal amount of this Revolving Credit Note from time to time outstanding is subject to mandatory prepaymetime to time as provided in the Credit Agreement and shall bear interest as provided in the Credit Agreement. All payments of and interest on this Revolving Credit Note shall be payable in lawful currency of the United States of America in immediately funds to the Agent for the benefit of the Lender.	principal
This Revolving Credit Note is entitled to the benefits of, and evidences obligations incurred under, the Credit Agreement, to reference is made for a description of the security for this Revolving Credit Note and for a statement of the terms and condition the Borrower are permitted and required to make prepayments and repayments of principal of the obligations evidenced hereby which such obligations may be declared to be immediately due and payable.	ns on which
THIS REVOLVING CREDIT NOTE SHALL BE GOVERNED, CONSTRUED AND ENFORCED IN ACCORDANCE VLAWS OF THE COMMONWEALTH OF MASSACHUSETTS, WITHOUT REFERENCE TO THE CONFLICTS OR CHOLAW PRINCIPLES THEREOF.	
The Borrower hereby waives all requirements as to diligence, presentment, demand of payment, protest and (except as requirement) notice of any kind with respect to this Revolving Credit Note.	ired by the

IN WITNESS WHEREOF, the undersigned Borrower has written.	s executed this Revolving Credit Note as of the day and year first above
	AMERESCO, INC.
	By:
	Name:
	Title:

#### FORM OF SWING LOAN NOTE

\$3,000,000.00 June , 2008

FOR VALUE RECEIVED, the undersigned AMERESCO, INC., a Delaware corporation (the "Borrower"), promises to pay to the order of BANK OF AMERICA, N.A. (the "Swing Loan Lender") at the place and times provided in the Credit Agreement referred to below the principal sum of

#### THREE MILLION AND 00/100 DOLLARS (\$3,000,000.00)

or, if less, the principal amount of all Swing Loans made by the Swing Loan Lender to the Borrower from time to time pursuant to Section 2.6 of that certain Amended and Restated Credit and Security Agreement dated as of June \_\_\_\_, 2008 (together with all amendments and other modifications, if any, from time to tome hereafter made thereto, the "Credit Agreement") among the Borrower, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent (the "Agent"). The Borrower further promises to pay to the order of the Swing Loan Lender interest on the unpaid principal amount hereof from time to time outstanding at the rates and at the times set forth in the Credit Agreement. This Swing Loan Note is being executed and delivered by the Borrower pursuant to the Credit Agreement. Capitalized terms used herein and not defined herein shall have the meaning ascribed to them in the Credit Agreement.

All payments of principal and interest on this Swing Line Note shall be payable in lawful currency of the United States of America in immediately available funds for the account of the Swing Loan Lender as specified in the Credit Agreement.

This Swing Loan Note is entitled to the benefits of, and evidences obligations incurred under, the Credit Agreement, to which reference is made for a description of the security for this Swing Loan Note and for a statement of the terms and conditions on which the Borrower is permitted and required to make prepayments and repayments of principal of the obligations evidenced hereby and on which such obligations may be declared to be immediately due and payable.

THIS SWING LOAN NOTE SHALL BE GOVERNED, CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE COMMONWEALTH OF MASSACHUSETTS, WITHOUT REFERENCE TO THE CONFLICTS OR CHOICE OF LAW PRINCIPLES THEREOF.

The Borrower hereby waives all requirements as to diligence, presentment, demand of payment, protest and (except as required by the Credit Agreement) notice of any kind with respect to this Swing Loan Note.

IN WITNESS WHEREOF, undersigned Borrower has excurriten.	ecuted this Swing Loan Note under seal as of the day and year first above
	AMERESCO, INC.
	By: Name: Title:

# FORM OF ADVANCE REQUEST AMERESCO, INC.

Bank of America, N.A., as Administrative Agent 100 Federal Street, Mail Stop MA 5-100-07-07 Boston, Massachusetts 02110 Attention: Ameresco, Inc. Account Officer

Re:	Advance Request under Credit Agreement
Ladies a	nd Gentlemen:
among A	ence is made to the Amended and Restated Credit and Security Agreement dated as of June, 2008 (the " <u>Credit Agreement</u> ") meresco, Inc. (the " <u>Borrower</u> "), the Guarantors party thereto, the Lenders party thereto, Bank of America, N.A., as rative agent. In accordance with Section 2.1(b) of the Credit Agreement the Borrower hereby requests the following ng(s):
A. Revo	lving Credit Borrowings:
(1)	Amount requested: \$;
(2)	Date of Borrowing:;
(3)	Type of Borrowing: [Base Rate][LIBOR];
(4)	If LIBOR Borrowing,
	Interest Period: [one] [two] [three] [six] months; and
(5)	Location and account number to which funds are to be disbursed:
B. Swin	g Loan Borrowings:
(1)	Amount requested: \$;
(2)	Date of Borrowing:;
(3)	Type of Borrowing: Base Rate; and
(4)	Location and account number to which funds are to be disbursed:

Date:	
AMERESCO, INC.	
By: Name: Title:	
2	

Capitalized terms used above in this Advance Request are as defined in the Credit Agreement.

# Exhibit C

# **PERFECTION CERTIFICATE**

# [PLEASE COMPLETE A SEPARATE CERTIFICATE FOR <u>EACH</u> OF THE CREDIT PARTIES]

				corporation (the "Company") hereby certifies to
BANK OF AMERICA, N.A., as Administrative Agent and Arranger ("Bank of America" or the "Agent"), as follows:				
1. <u>Name</u> .				
	(a) The exact legal name of the Company as that name appears in its organizational documents is as follows:			
(b) The following is a list of all other names (including trade names or similar appellations) used by the Company, or any other business or organization to which the Company became the successor by merger, consolidation, acquisition, change in form, nature or jurisdiction of organization or otherwise, now or at any time during the past five years and, in the case of any such business or organization, any chief executive office or other principal place of address used thereby during such period to the extent known to the Company:				
	(c) The following is the Comp	any's federal employer i	dentification nun	nber:
	(d) The following is the Comp	any's state-issued identi	fication number,	if any:
2. <u>Current Locations</u> .				
	(a) The following is the jurisd	ction of organization of	the Company:	
	(b) The chief executive office	of the Company is locate	ed at the following	g address:

- (c) The following are all other locations in which the Company maintains any books or records relating to any accounts, contract rights, chattel paper, general intangibles or mobile goods:
  - (i) In the United States of America:
  - (ii) Outside the United States of America:
  - (d) The following are all other places of business of the Company:
    - (i) In the United States of America:
    - (ii) Outside the United States of America:
  - (e) The following are all other locations where any inventory or equipment of the Company is located:
    - (i) In the United States of America:
    - (ii) Outside the United States of America:

(1) The following are the names and addresses of all persons or entities other than the Company, such as lessees, consignees, warehousemen or purchasers of chattel paper, which have possession or are intended to have possession of any of the Collateral consisting of chattel paper, inventory or equipment:
3. Prior Locations.
(a) Set forth below is each location or place of business previously (but not currently) maintained by the Company or at which books or records were previously (but not currently) maintained with respect to the items described in § 2 (c) above at any time during the past four months:
(b) The Company has has not changed its jurisdiction of organization or chief executive office at any time during the past four months (if "has" is checked, please set forth the prior jurisdiction of organization or location of chief executive office below):
(c) Set forth below is information required by subparagraphs (e) and (f) of §2 with respect to each other location at which, or other person or entity with which, any inventory or equipment of the Company has been previously (but not currently) held at any time during the past four months:
4. <u>Real Estate Fixtures</u> . Attached hereto as <u>Schedule 4</u> is a description of each parcel of real property on which any fixtures of the Company are or are to be located and the name and address of each real estate recording office where a mortgage on the real estate on which such fixtures are or are to be located would be recorded and the name and address of the record owner, if not the Company. A summary list of which of such properties are owned and which are leased by the Company is set forth below:
(a) Owned Property
(b) Leased Property

- 5. <u>Unusual Transactions</u>. Except as set forth on <u>Schedule 5</u>, attached hereto, all of the property and assets of the Company pledged to the Agent as Collateral has been originated by the Company in the ordinary course of its business or consist of goods which have been acquired by the Company in the ordinary course from a person in the business of selling goods of that kind.
- 6. File Search Reports. Attached hereto as Schedule 6 is a true copy of a file search report from the Uniform Commercial Code filing officer (or, if such officer does not issue such reports, from an experienced Uniform Commercial Code search organization acceptable to the Agent) (i) in each jurisdiction identified in §§ 2 or 3 above with respect to each name set forth in §1 above, (ii) from each filing officer in each real estate recording office identified on Schedule 4 with respect to the real estate on which Collateral consisting of fixtures are or are to be located and (iii) with respect to any of the transactions described in Schedule 5, with respect to the legal name of each person or entity from whom the Company purchased or otherwise acquired any of the Collateral, in the jurisdiction of organization (or "location" under Article 9 of the Uniform Commercial Code) of each such person or entity and in the jurisdiction in which each such entity maintains its chief executive office or any of the Collateral was located at any time during the preceding four months.
- 7. <u>Deposit Accounts</u>. Set forth on <u>Schedule 7</u> attached hereto is a complete list of all bank accounts (including securities and commodities accounts) maintained by the Company (*provide name and address of depository bank, type of account and account number*).
- 8. <u>Investment Property</u>. Set forth on <u>Schedule 8</u> attached hereto is a complete list of (i) all stocks, bonds, debentures, notes and other securities and investment property owned by the Company and (ii) all limited liability company, partnership and limited partnership interests owned by the Company (*provide name of issuer, description of security or interest and value*).
- 9. <u>Commercial Tort Claims</u>. Set forth on <u>Schedule 9</u> attached hereto is a complete description of all existing commercial tort claims held by the Company (*provide brief description of each claim*).
- 10. <u>UCC Filings</u>. The Agent is hereby authorized to file a financing statement on Form UCC-1 in form acceptable to the Agent and containing the description of the Collateral set forth on <u>Schedule 10</u> in the Uniform Commercial Code filing office in each jurisdiction identified in §2 hereof and in each real estate recording office referred to in <u>Schedule 4</u> hereto.
- 11. <u>Termination Statements</u>. A duly authorized termination statement on Form UCC-3 in form acceptable to the Agent for filing in each applicable jurisdiction identified in § 2 hereof or on <u>Schedule 5</u> hereto has been duly filed or has been delivered to the Agent.

## FORM OF COMPLIANCE CERTIFICATE

Bank of America, N.A., as Administrative Agent 100 Federal Street, Mail Stop MA 5-100-07-07 Boston, Massachusetts 02110

Boston, Massachusetts 02110 Attn: Ameresco, Inc. Account Officer	
	ent, dated as of June, 2008, as amended from time to time, (the orrower"), the guarantors party thereto, the lenders party thereto and "Administrative Agent")
Ladies & Gentlemen:	
	sed are copies of consolidated and consolidating financial statements of the ed(the "Fiscal Period"), prepared in accordance with GAAP. meanings set forth in the Credit Agreement.
undersigned with a view to determining whether, during the Feach and every covenant and condition of the Credit Agreement this certificate, nor existed during the Fiscal Period, any Defa has been no change in GAAP since the date of the last audited	during the Fiscal Period has been made under the supervision of the Fiscal Period, the Credit Parties have kept, observed, performed and fulfilled ent. To the best of my knowledge and belief there neither exists on the date of ault or Event of Default, except as set forth on any attachment hereto. There d financial statements delivered to you by the Borrower which has or could a certificate, except such changes as are set forth on any attachment hereto.
As further required, attached are covenant calculations sho covenants set forth in Section 8.10 of the Credit Agreement.	owing compliance by the Core Ameresco Companies with the financial
	Very truly yours,
	AMERESCO, INC.
Enclosures	By: Name: Title:

## FINANCIAL COVENANT CALCULATIONS

Fiscal □Quarter/□Year Ended	
Fiscal Librarter/Li Year Ended	

Except as otherwise set forth below, the following covenants have been measured at the end of the fiscal quarter/year of the Credit Parties specified above for the period of four consecutive fiscal quarters of the Credit Parties most recently ended (the "Reported Period").

## 8.10(a) MINIMUM PROFITABILITY.

Quarterly net income for the period of two consecutive fiscal quarters most recently ended is:	\$
Quarterly net income for the period of two consecutive fiscal quarters most recently ended is required to be not than:	less \$ 1.00
Aggregate net income for the period of two consecutive fiscal quarters most recently ended is:	\$
Aggregate net income for the period of two consecutive fiscal quarters most recently ended is required to be not than:	t less \$ 1.00
* As set forth in Section 8.10(a) of the Credit Agreement.	
8.10(b) <u>TANGIBLE CAPITAL BASE</u> .	
The actual Tangible Capital Base as of the end of the fiscal quarter most recently ended is:	\$
The Tangible Capital Base as of the end of the fiscal quarter most recently ended is required to be not less than:	\$
* As set forth in Section 8.10(b) of the Credit Agreement.	
The Tangible Capital Base has been calculated as follows:	
(A) Book net worth of Core Ameresco Companies on a consolidated basis:	\$
plus	
(B) Outstanding principal amount of Subordinated Indebtedness:	\$
minus	
(C) Total book value of all assets of Core Ameresco Companies on a consolidated basis treated as intangible assets under GAAP:	\$
minus	
(D) Accounts receivable, notes receivable, other amounts due and owing from any Affiliate of a Core Ameresco Company:	\$
minus	

(E)	Renev	vable Ene	ergy Project Guaranty Liabilities	\$
8.10(	(c) MINIM	IUM EB	ITDA.	
Actu	al EBITDA	A for the	Reported Period is:	\$
ЕВІТ	ΓDA is req	uired to b	be not less than:	\$ 20,000,000
*	As set fort	th in Sect	ion 8.10(c) of the Credit Agreement.	
EBIT	TDA for the	e Reporte	d Period has been calculated as follows:	
	(a)	consolic	lated net income of the Core Ameresco Companies during the Reported Period:	\$
		plus		
	(b)		Reported Period, the sum of (to the extent deducted in calculating net income of the Core co Companies):	
		(i)	income taxes accrued:	\$
		(ii)	Interest Expense (see below for calculation):	\$
		(iii)	amortization and depreciation:	\$
		(iv)	losses attributable to equity in Affiliates which are not Subsidiaries (except to the extent paid in cash by Core Ameresco Companies):	\$
		(v)	extraordinary or unusual losses 1:	\$
		(vi)	non-recurring items, fees and expenses associated with the transactions contemplated by the Credit Agreement, not to exceed \$600,000 after the Effective Time:	\$
		(viii)	aggregate amount received in cash by the Core Ameresco Companies in respect of regularly scheduled dividends or distributions from the Special Purpose Subsidiaries <sup>2</sup> :	\$
SUB	TOTAL:			\$

Any payment required to be made by any Core Ameresco Company in respect of any Renewable Energy Project Guaranty Liability shall reduce net income of the Core Ameresco Companies and shall not be added back to EBITDA as an extraordinary loss.

Not to include amounts received by the Core Ameresco Companies in connection with any sale, transfer or other disposition of assets or equity interests of any Special Purpose Subsidiary.

	minus	
(c)	for the Reported Period, the sum of (to the extent included in calculating net income):	
	(i) extraordinary gains (determined in accordance with GAAP):	\$
	(ii) proceeds received in respect of Casualty Events, Dispositions, and any sale, assig other disposition by any Credit Party of equity interest of any Special Purpose Su	
SUBTO	OTAL:	\$
	plus/minus	
(d)	adjustments for Permitted Acquisitions during the Reported Period:	\$
TOTAL	L EBITDA:	\$
For purp	poses of this Compliance Certificate, Interest Expense for the Reported Period has been calc	culated as follows:
	interest in respect of Indebtedness accrued during such period, excluding capitalized debt a paid-in-kind interest:	acquisition costs and
plus	s (minus)	
	net amounts payable (or net amounts receivable) under Hedging Agreements accrued durin (whether or not actually paid or received) <sup>3</sup> :	ng such period
plus	S	
(c)	all fees (including letter of credit fees and expenses) incurred under the Credit Agreement of	during such period: \$
TOTAL	L INTEREST EXPENSE:	\$

Excluding reimbursement of legal fees and other similar transactions costs and excluding payments required by reason of the early termination of Hedging Agreements in effect as of the Credit Agreement.

## $8.10(d)\ \underline{TOTAL}\ \underline{FUNDED}\ \underline{DEBT}\ \underline{TO}\ \underline{EBITDA}\ \underline{RATIO}.$

The	actual	Total Funded Debt to EBITDA Ratio for the Reported Period is:	to 1.00
The	Total 1	Funded Debt to EBITDA Ratio for the Reported Period is required to be not greater than:	2.00 to 1.00*
*		t forth in Section 8.10(d) of the Credit Agreement.	
The	Total I	Funded Debt to EBITDA Ratio for the Reported Period has been calculated as follows:	
(A)	Tota	Funded Debt of Core Ameresco Companies as of the end of the Reported Period:	\$
	divid	led by	
(B)	EBIT	TDA of Core Ameresco Companies for the Reported Period:	\$
8.10	(e) <u>DE</u>	BT SERVICE COVERAGE RATIO.	
The	actual	Debt Service Coverage Ratio for the Reported Period is:	to 1.00
The	Debt S	Service Coverage Ratio for the Reported Period is required to be not less than:	1.50 to 1.00
*	As se	t forth in Section 8.10(e) of the Credit Agreement.	
The .	Debt S	Service Coverage Ratio for the Reported Period has been calculated as follows:	
(A)	the re	esult for the Reported Period of:	
	(i)	EBITDA of the Core Ameresco Companies:	\$
		minus	
	(ii)	Capital Expenditures made by the Core Ameresco Companies:	\$
		minus	
	(iii)	aggregate amount paid in cash by the Core Ameresco Companies in respect of income, franchise, real estate and other like taxes:	\$
		minus	
	(iv)	dividends, withdrawals and other distributions paid in cash by the Core Ameresco Companies:	\$
	SUB	TOTAL:	\$
	divid	led by	
(B)	the s	um for the Reported Period of:  4	

(i)	all regularly scheduled payments of Indebtedness:	ß
	plus	
(ii)	all Interest Expense:	Ď
SU	BTOTAL:	5
	5	

#### FORM OF AMENDED AND RESTATED PLEDGE AGREEMENT

THIS AMENDED AND RESTATED PLEDGE AGREEMENT, dated as of June \_\_\_\_\_, 2008 by and among Ameresco, Inc., a Delaware corporation ("Ameresco"), each of the other Pledgor party hereto as of the date hereof, and each other Person that becomes a party to this Agreement by executing and delivering an instrument of adherence to this Agreement to the Administrative Agent (collectively, the "Pledgors" and each individually, a "Pledgor") and Bank of America, N.A., individually and as administrative agent (the "Administrative Agent") for the Lenders under the Credit Agreement described below, having an address at 100 Federal Street, Mail Stop MA 5-100-07-07, Boston, Massachusetts 02110. The Administrative Agent and the Lenders are herein collectively referred to from time to time as the "Secured Parties".

#### WITNESSETH:

WHEREAS, each Pledgor is a borrower or guarantor under the terms of an Amended and Restated Credit Agreement dated as of the date hereof among Ameresco, Inc., a Delaware corporation (the "Borrower"), the Guarantors party thereto (the "Guarantors", and collectively with the Borrower, the "Credit Parties"), the Lenders from time to time party thereto, and the Administrative Agent dated as of the date hereof (as amended from time to time, the "Credit Agreement") pursuant to which the Lenders agreed, subject to the terms and conditions set forth therein, to make certain Loans (as defined in the Credit Agreement) to the Borrower, and to issue Letters of Credit (as defined in the Credit Agreement), for the account of the Borrower; and

WHEREAS, each Pledgor owns the percentage of the outstanding partnership interests, limited liability company interests or shares of capital stock, as applicable, of the companies listed on <u>Schedule I</u> hereto as set forth on such <u>Schedule I</u> hereto and is holder of certain other instruments and securities set forth on <u>Schedule II</u> hereto (such companies and the issuers of such instruments and securities, collectively called the "<u>Listed Companies</u>"); and

WHEREAS, the obligations of the Lenders to make the Loans to the Borrower and issue the Letters of Credit for the account of the Borrower are subject to the conditions, among others, that each Pledgor shall execute and deliver this Agreement and grant the pledge and security interest hereinafter described.

NOW, THEREFORE, in consideration of the willingness of the Secured Parties to enter into the Credit Agreement and of the Lenders to agree, subject to the terms and conditions set forth therein, to make the Loans to the Borrower and issue the Letters of Credit for the account of the Borrower pursuant thereto, and for other good and valuable consideration, receipt of which is hereby acknowledged, it is hereby agreed as follows:

1. <u>Defined Terms</u>. Except as otherwise expressly defined herein, all capitalized terms shall have the meanings ascribed to them in the Credit Agreement.

- 2. <u>Security Interest</u>. Each Pledgor hereby deposits with, and pledges to, the Administrative Agent for itself and for the benefit of the other Secured Parties all investment property which such Pledgor holds in the Listed Companies, including, without limitation: (a) the partnership interests, limited liability company interests and shares of capital stock, as applicable, of the Listed Companies as listed on <u>Schedule I</u> attached hereto (the "<u>Pledged Equity</u>") (together with the appropriate powers duly endorsed in blank), and, to the extent such collateral is not certificated, the appropriate assignment and control documents, and (b) the promissory notes payable to the Pledgors as listed in <u>Schedule II</u> attached hereto (the "<u>Pledged Notes</u>", and together with the Pledged Equity and any additional investment property, securities, securities entitlements, or collateral pledged hereunder, the "<u>Pledged Collateral</u>"), and each Pledgor hereby grants to the Administrative Agent for itself and for the benefit of the other Secured Parties a security interest in all of the Pledged Collateral as security for the due and punctual payment and performance of the Secured Obligations described in Section 3 hereof.
- 3. <u>Secured Obligations</u>. The security interest hereby granted shall secure the due and punctual payment and performance of the following liabilities and obligations of the Pledgors (herein called the "<u>Secured Obligations</u>"):
  - (a) Principal of and premium, if any, and interest on the Loans; and
- (b) Any and all other obligations and indebtedness of any of the Credit Parties to the Secured Parties or any of them, whether direct or indirect, absolute or contingent, due or to become due or now existing or hereafter arising or incurred under the Credit Agreement, any other Loan Document or under any Hedging Agreement permitted by the Credit Agreement, all as amended from time to time including, without limitation, any and all Reimbursement Obligations, any and all other fees, premiums and penalties.
- 4. <u>Special Warranties and Covenants of the Pledgors</u>. Each Pledgor hereby warrants and covenants to the Secured Parties with respect to the Pledged Collateral for which it is the "Pledgor," as set forth on <u>Schedules I and II</u>, that:
- (a) The Pledged Collateral is duly and validly pledged with the Administrative Agent for the benefit of the Secured Parties in accordance with law, the Administrative Agent for the benefit of the Secured Parties has a First Priority security interest in such Pledged Collateral, and each Pledger warrants and will defend the Secured Parties' right, title and security interest in and to the Pledged Collateral against the claims and demands of all Persons whomsoever.
- (b) Each Pledgor has good title to the Pledged Collateral, free and clear of all Liens, except as expressly set forth in or permitted under the Credit Agreement.
  - (c) All of the Pledged Equity has been duly and validly issued and is fully paid and nonassessable.
- (d) The Pledged Equity constitutes the amount and percentage of partnership interests, limited liability company interests or shares, as applicable, of the presently issued and

outstanding partnership interests, limited liability company interests or capital stock of the Listed Companies, as applicable, as set forth on Schedule I.

- (e) If any additional partnership interests, limited liability company interests or shares of capital stock of any class of the Listed Companies or if any promissory notes of the Listed Companies or other securities of the Listed Companies are acquired by any Pledgor after the date hereof, the same shall constitute Pledged Collateral and shall be deposited with and pledged to the Administrative Agent for itself and for the benefit of the other Secured Parties as provided in Section 2 hereof simultaneously with such acquisition. The Pledgors will promptly notify the Administrative Agent of the date and amount of any loans made from time to time by the Pledgors to the Listed Companies as permitted by the Credit Agreement.
- (f) No Pledgor will sell, convey or otherwise dispose of any of the Pledged Collateral, nor will any Pledgor create, incur or permit to exist any Lien with respect to any of the Pledged Collateral or the proceeds thereof, other than Liens with respect to the Pledged Collateral created hereby or Liens which are otherwise permitted under the Loan Documents and except as permitted by the Credit Agreement.
- (g) If any additional partnership interests, limited liability company interests or shares of capital stock of any class of the Listed Companies are issued, any such partnership interests, limited liability company interests or additional shares of capital stock shall be deposited with and pledged to the Administrative Agent for itself and for the benefit of the other Secured Parties simultaneously with such issuance as provided in Section 2 hereof.
- (h) The Pledged Notes evidence the amount of outstanding indebtedness for money borrowed of the respective issuers thereof indicated on <u>Schedule II</u> hereto.
- (i) If any additional promissory notes are acquired by any Pledgor from the issuers of the Pledged Notes or any other Person, the same shall constitute Pledged Notes and Pledged Collateral and shall be deposited with and pledged to the Administrative Agent for itself and the benefit of the other Secured Parties as provided in Section 2 hereof simultaneously with such acquisition. Upon the request of the Administrative Agent, the Pledgors will promptly notify the Administrative Agent of any loans made from time to time to such issuers as permitted by the Credit Agreement.
- 5. <u>Distributions</u>. In case, upon the dissolution, winding up, liquidation or reorganization of the Listed Companies whether in bankruptcy, insolvency or receivership proceedings or upon an assignment for the benefit of creditors or any other marshaling of the assets and liabilities of the Listed Companies or otherwise, any sum shall be paid or any property shall be distributed upon or with respect to any of the Pledged Collateral, such sum shall be paid over to the Administrative Agent for the benefit of the Secured Parties as collateral security for the Secured Obligations. In case any stock dividend shall be declared on any of the Pledged Collateral, or any share of stock or fraction thereof shall be issued pursuant to any stock split involving any of the Pledged Collateral, or, any distribution of capital or profits shall be made on any of the Pledged Collateral, or any property shall be distributed upon or with respect to the Pledged Collateral, the limited partnership interests, limited liability company interests, shares,

cash or other property so distributed shall be delivered to the Administrative Agent to be held for the benefit of the Secured Parties as collateral security for the Secured Obligations.

- 6. Events of Default. The Pledgors shall be in default under this Agreement upon the happening of any Event of Default, as defined in the Credit Agreement (herein called an "Event of Default").
- 7. <u>Rights and Remedies of Secured Parties</u>. Upon the occurrence and during the continuance of any Event of Default, the Secured Parties shall have the following rights and remedies:
  - (a) All rights and remedies provided by law, including, without limitation, those provided by the Uniform Commercial Code;
  - (b) All rights and remedies provided in this Agreement; and
- (c) All rights and remedies provided in the Credit Agreement or in the Loan Documents, or in any other agreement, document or instrument pertaining to the Secured Obligations.
- 8. Right to Transfer into Name of Administrative Agent, etc. Upon the occurrence and during the continuance of an Event of Default, but subject to the provisions of the Uniform Commercial Code or other applicable law, with 10 days prior written notice to the Pledgors, the Administrative Agent may cause all or any of the Pledged Collateral to be transferred into its name or into the name of its nominee or nominees (such transfer, a "<u>Transfer</u>"). So long as no Event of Default shall have occurred and be continuing, each Pledgor shall be entitled to exercise as such Pledgor shall deem fit, but in a manner not inconsistent with the terms hereof or of the Secured Obligations, the voting power with respect to the Pledged Collateral.
- 9. Right of Administrative Agent to Exercise Voting Power, etc. Upon the occurrence and during the continuance of an Event of Default and following a Transfer, the Administrative Agent for the benefit of the Secured Parties shall be entitled to exercise the voting power with respect to the Pledged Collateral, to receive and retain, as collateral security for the Secured Obligations, any and all dividends or other distributions at any time and from time to time declared or made upon any of the Pledged Collateral, and to exercise any and all rights of payment, conversion, exchange, subscription or any other rights, privileges or options pertaining to the Pledged Collateral as if it were the absolute owner thereof, including, without limitation, the right to exchange, at its discretion, any and all of the Pledged Collateral upon the merger, consolidation, reorganization, recapitalization or other readjustment of the Listed Companies or, upon the exercise of any such right, privilege or option pertaining to the Pledged Collateral, and in connection therewith, to deposit and deliver any and all of the Pledged Collateral with any committee, depositary, transfer agent, registrar or other designated agency upon such terms and conditions as the Administrative Agent may determine, all without liability except to account for property actually received, but the Administrative Agent shall have no duty to exercise any of the aforesaid rights, privileges or options and shall not be responsible for any failure to do so or delay in so doing.

10. Right of Administrative Agent to Dispose of Collateral, etc. Upon the occurrence and during the continuance of an Event of Default, the Administrative Agent shall have the right at any time or times thereafter to sell, resell, assign and deliver all or any of the Pledged Collateral in one or more parcels at any exchange or broker's board or at public or private sale. Unless the Pledged Collateral is perishable or threatens to decline speedily in value or is of a type customarily sold on a recognized market, the Administrative Agent will give the Pledgors at least ten (10) days' prior written notice in accordance with Section 20 hereof of the time and place of any public sale thereof or of the time after which any private sale or any other intended disposition of any of the Pledged Collateral is to be made. Any such notice shall be deemed to meet any requirement hereunder or under any applicable law (including the Uniform Commercial Code) that reasonable notification be given of the time and place of such sale or other disposition. Such notice may be given without any demand of performance or other demand, all such demands being hereby expressly waived by each Pledgor. All such sales shall be at commercially reasonable price or prices and either for cash or on credit or for future delivery (without assuming any responsibility for credit risk). At any such sale or sales, to the extent permitted by law, any Secured Party may purchase any or all of the Pledged Collateral to be sold thereat upon such terms as the Administrative Agent may deem best. Upon any such sale or sales the Pledged Collateral so purchased shall be held by the purchaser absolutely free from any claims or rights of whatsoever kind or nature, including any equity of redemption and any similar rights, all such equity of redemption and any similar rights being hereby expressly waived and released by each Pledgor. In the event any consent, approval or authorization of any governmental agency will be necessary to effectuate any such sale or sales, each Pledgor shall execute, and hereby agrees to cause the Listed Companies to execute, all such applications or other instruments as may be required.

Each Pledgor recognizes that the Administrative Agent may be unable to effect a public sale of all or a part of the Pledged Collateral by reason of certain prohibitions contained in the Securities Act of 1933, as amended (the "Securities Act") or otherwise but may be compelled to resort to one or more private sales to a restricted group of purchasers, each of whom will be obligated to agree, among other things, to acquire such Pledged Collateral for its own account, for investment and not with a view to the distribution or resale thereof. Each Pledgor acknowledges that private sales so made may be at prices and upon other terms less favorable to the seller than if such Pledged Collateral were sold at public sales without such restrictions, and that the Administrative Agent has no obligation to delay sale of any such Pledged Collateral for the period of time necessary to permit such Pledged Collateral to be registered for public sale under the Securities Act. Each Pledgor agrees that any such private sales shall not be deemed to have been made in a commercially unreasonable manner solely because they shall have been made under the foregoing circumstances.

11. Collection of Amounts Payable on Account of Pledged Collateral, etc. Upon the occurrence and during the continuance of any Event of Default, the Administrative Agent may, but without obligation to do so, demand, sue for and/or collect any money or property at any time due, payable or receivable, to which it may be entitled hereunder, on account of, or in exchange for, any of the Pledged Collateral and shall have the right, for and in the name, place and stead of each Pledgor, to execute endorsements, assignments or other instruments of conveyance or transfer with respect to all or any of the Pledged Collateral.

- 12. <u>Care of Pledged Collateral in Administrative Agent's Possession</u>. Beyond the exercise of reasonable care to assure the safe custody of the Pledged Collateral while held hereunder, the Administrative Agent shall have no duty or liability to collect any sums due in respect thereof or to protect or preserve rights pertaining thereto, and shall be relieved of all responsibility for the Pledged Collateral upon surrendering the same to the Pledgors.
- 13. <u>Proceeds of Collateral</u>. By way of enlargement and not by way of limitation of the rights of the Administrative Agent under applicable law or the Credit Agreement or Loan Documents, the Administrative Agent shall receive and apply the proceeds of any sale or sales of the Pledged Collateral, together with any other additional collateral security at the time received and held hereunder, to the Secured Obligations (including, without limitation, the Loans) in accordance with the terms of the Credit Agreement. In the event the proceeds of any sale, lease or other disposition of the Pledged Collateral hereunder are insufficient to pay all of the Secured Obligations in full, each Pledgor will be liable for the deficiency, together with interest thereon at the maximum rate provided in the Credit Agreement, and the cost and expenses of collection of such deficiency, including (to the extent permitted by law), without limitation, reasonable attorneys' fees, expenses and disbursements.
- 14. <u>Credit Agreement</u>. Notwithstanding any other provision of this Agreement, the rights of the parties hereunder are subject to the provisions of the Credit Agreement, including the provisions thereof pertaining to the rights and responsibilities of the Administrative Agent. In the event that any provision of this Agreement is in conflict with the terms of the Credit Agreement, the Credit Agreement shall control. Unless the context shall otherwise clearly indicate, the terms "Secured Party" and "Secured Parties" as used herein shall be deemed to include the Administrative Agent acting on behalf of the Secured Parties pursuant to the Credit Agreement. The term "Administrative Agent" as used herein shall include Bank of America, N.A., or any other Person acting as Administrative Agent for the Secured Parties pursuant to the terms of the Credit Agreement.
- 15. Waivers, etc. Each Pledgor hereby waives presentment, demand, notice, protest and, except as is otherwise provided herein, all other demands and notices in connection with this Agreement or the enforcement of the Secured Parties' rights hereunder or in connection with any Secured Obligations or any Pledged Collateral; consents to and waives notice of the granting of renewals, extensions of time for payment or other indulgences to the other Listed Companies or the other Pledgors or to any third party, or substitution, release or surrender of any collateral security for any Secured Obligation, the addition or release of Persons primarily or secondarily liable on any Secured Obligation or on any collateral security for any Secured Obligation, the acceptance of partial payments on any Secured Obligation or on any collateral security for any Secured Obligation and/or the settlement or compromise thereof. No delay or omission on the part of the Secured Parties in exercising any right hereunder shall operate as a waiver of such right or of any other right hereunder. Any waiver of any such right on any one occasion shall not be construed as a bar to or waiver of any such right on any future occasion. Each Pledgor further waives any right it may have under the laws of The Commonwealth of Massachusetts, under the laws of any state in which any of the Pledged Collateral may be located or which may govern the Pledged Collateral, or under the laws of the United States of America, to notice (other than any requirement of notice provided herein or in any other Loan Documents) or to a judicial hearing

prior to the exercise of any right or remedy provided by this Agreement to the Administrative Agent or the Secured Parties and waives its rights, if any, to set aside or invalidate any sale duly consummated in accordance with the foregoing provisions hereof on the grounds (if such be the case) that the sale was consummated without a prior judicial hearing. Each Pledgor's waivers under this Section have been made voluntarily, intelligently and knowingly and after such Pledgor has been apprized and counseled by its attorneys as to the nature thereof and its possible alternative rights.

- 16. <u>Termination</u>; <u>Assignment</u>, <u>etc</u>. When all the Secured Obligations have been paid in full and have been terminated and the Commitments of the Lenders to make any Loan under the Credit Agreement have terminated or expired and no Letters of Credit remain outstanding, this Agreement and the security interest in the Pledged Collateral created hereby shall terminate. No waiver by the Administrative Agent or by any other holder of Secured Obligations of any default shall be effective unless in writing nor operate as a waiver of any other default or of the same default on a future occasion. In the event of a sale or assignment by any Secured Party of all or any of the Secured Obligations held by it, any Secured Party may assign or transfer its rights and interest under this Agreement in whole or in part to the purchaser or purchasers of such Secured Obligations, whereupon such purchaser or purchasers shall become vested with all of the powers and rights of a Secured Party hereunder.
- 17. <u>Reinstatement</u>. Notwithstanding the provisions of Section 16, this Agreement shall continue to be effective or be reinstated, as the case may be, if at any time any amount received by any Secured Party in respect of the Secured Obligations is rescinded or must otherwise be restored or returned by any such Secured Party upon the insolvency, bankruptcy, dissolution, liquidation or reorganization of any of the Listed Companies, any Pledgor or upon the appointment of any intervener or conservator of, or trustee or similar official for, the Listed Companies or any Pledgor, or any substantial part of their respective properties, or otherwise, all as though such payments had not been made.
- 18. <u>Governmental Approvals, etc.</u> Upon the exercise by the Administrative Agent of any power, right, privilege or remedy pursuant to this Agreement which requires any consent, approval, qualification or authorization of any governmental authority or instrumentality, each Pledgor will execute and deliver, or will cause the execution and delivery of, all applications, certificates, instruments and other documents and papers that the Administrative Agent or any Secured Party may be required to obtain for such governmental consent, approval, qualification or authorization.
- 19. Restrictions on Transfer, etc. To the extent that any restrictions imposed by the charter, certificate of limited partnership, limited partnership agreement, operating agreement or by-laws of any of the Listed Companies or any other document or instrument would in any way affect or impair the pledge of the Pledged Collateral hereunder or the exercise by the Administrative Agent of any right granted hereunder, including, without limitation, the right of the Administrative Agent to dispose of the Pledged Collateral upon the occurrence and during the continuance of any Event of Default, each Pledgor hereby waives such restrictions to the extent permitted by applicable securities laws, and represents and warrants that it has caused the Listed Companies to take all necessary action to waive such restrictions, and each Pledgor

hereby agrees that it will take any further action which the Administrative Agent may reasonably request in order that the Administrative Agent may obtain and enjoy the full rights and benefits granted to the Administrative Agent by this Agreement free of any such restrictions

- 20. <u>Notices</u>. All notices, consents, approvals, elections and other communications hereunder shall be in writing (whether or not the other provisions of this Agreement expressly so provide) and shall be deemed to have been duly given if delivered in accordance with the terms of the Credit Agreement.
- 21. <u>Miscellaneous</u>. This Agreement shall inure to the benefit of and be binding upon the Administrative Agent, the Secured Parties and each Pledgor and their respective successors and assigns, and the term "Secured Parties" shall be deemed to include any other holder or holders of any of the Secured Obligations. In case any provision in this Agreement shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby. This Agreement may be executed in any number of counterparts and by the different parties hereto on separate counterparts, each of which shall be an original, but all of which together shall constitute one instrument.
- 22. Governing Law; Jurisdiction; Waiver of Jury Trial. This Agreement, including the validity hereof and the rights and obligations of the parties hereunder, shall be construed in accordance with and governed by the laws of The Commonwealth of Massachusetts. Each Pledgor, to the extent that it may lawfully do so, hereby consents to service of process, and to be sued, in any state or federal court located in The Commonwealth of Massachusetts, as well as to the jurisdiction of all courts to which an appeal may be taken from such courts, for the purpose of any suit, action or other proceeding arising out of any of its obligations hereunder or with respect to the transactions contemplated hereby, and expressly waives any and all objections it may have as to venue in any such courts. Each Pledgor further agrees that a summons and complaint commencing an action or proceeding in any of such courts shall be properly served and shall confer personal jurisdiction if served personally or by certified mail to it in accordance with Section 20 hereof or as otherwise provided under the laws of The Commonwealth of Massachusetts. Nothing in this Agreement shall affect any right the Administrative Agent or any Secured Party may otherwise have to bring an action or proceeding relating to this Agreement against any Pledgor or its properties in the courts of any jurisdiction. EACH PLEDGOR IRREVOCABLY WAIVES ALL RIGHT TO A TRIAL BY JURY IN ANY SUIT, ACTION OR OTHER PROCEEDING INSTITUTED BY OR AGAINST SUCH PLEDGOR IN RESPECT OF ITS OBLIGATIONS HEREUNDER OR THE TRANSACTIONS CONTEMPLATED HEREBY.

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IN WITNESS WHEREOF, the parties have executed this Pledge Agreement as a sealed instrument as of the date first above written.

# **PLEDGORS** AMERESCO, INC. By: Name: Andrew B. Spence Title: Vice President & Chief Financial Officer AMERESCO ENERTECH, INC. By: Name: Andrew B. Spence Title: Treasurer E.THREE CUSTOM ENERGY SOLUTIONS, LLC, By: Sierra Energy Company, its sole member By: Name: Title: AMERESCOSOLUTIONS, INC. Name: Andrew B. Spence Title: Treasurer AMERESCO PLANERGY HOUSING, INC.

Name: Andrew B. Spence

Title: Treasurer

By:	Name: Andrew B. Spence
	Title: Vice President & Chief Financial Officer
	The Trestant & Chief I manetar officer
AM	ERESCO FEDERAL SOLUTIONS, INC.
Ву:	
	Name: Andrew B. Spence
	Title: Treasurer
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	ERESCO SELECT, INC.  Name:
Ву:	Name: Title:
By:	Name: Title: ERESCO HAWAII LLC
By:	Name: Title:
By: AM By:	Name: Title: ERESCO HAWAII LLC
By:	Name: Title: ERESCO HAWAII LLC Ameresco, Inc., its sole member
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By: AM By: By:	Name: Title:  ERESCO HAWAII LLC Ameresco, Inc., its sole member  Name: Title:  ERESCO SOLAR — SOLUTIONS, INC.
By: AM By: By:	Name: Title:  ERESCO HAWAII LLC Ameresco, Inc., its sole member  Name: Title:

## By: Ameresco, Inc., its sole member By: Name: Title: AMERESCO SOLAR, LLC By: Name: Title: ${\tt AMERESCO\ SOLAR-TECHNOLOGIES\ LLC}$ By: Name: Title: AMERESCO WOODLAND MEADOWS LLC By: Name: Title: AMERESCO NORTHAMPTON LLC By: Name: Title:

AMERESCO SOLAR-PRODUCTS LLC

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## ADMINISTRATIVE AGENT

BANK OF AMERICA, N.A., individually and as Administrative Agent for the Secured Parties

By:

Name: John F. Lynch Title: Senior Vice President

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#### PLEDGED STOCK

Certificate No. of Issuer and Address Pledgor Description Shares No.(s) Ameresco, Inc. AmerescoSolutions, Inc. Ameresco, Inc. Ameresco Planergy Housing, Inc. Ameresco Enertech, Inc. Ameresco, Inc. Ameresco, Inc. Ameresco Canada Inc. Ameresco, Inc. Sierra Energy Company Ameresco Select, Inc. Ameresco, Inc. Solutions Holdings, LLC Ameresco Federal Solutions, Inc. Ameresco Solar LLC Ameresco Solar — Solutions, Inc. 13

### PLEDGED MEMBERSHIP INTERESTS

Pledgor Issuer and Address Description Solutions Holdings, LLC

No. of Certificate No.(s)

No.(s)

No.(s)

Ameresco Solar LLC

Ameresco, Inc.

Ameresco, Inc. Ameresco Woodland Meadows LLC

Ameresco, Inc. Ameresco Northampton LLC

Ameresco, Inc. Ameresco Hawaii LLC

Sierra Energy Company E. Three Custom Energy Solutions, LLC

Ameresco Solar LLC Ameresco Solar — Products LLC

Ameresco Solar LLC Ameresco Solar-Technologies LLC

Ameresco Hawaii LLC Ameresco/Pacific Energy JV

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## PLEDGED NOTES

### FORM OF OPINION OF COUNSEL TO THE BORROWER

June \_\_\_\_, 2008

Bank of America, N.A., as Administrative Agent under the Credit Agreement described below, and the Lenders party thereto 100 Federal Street Boston, MA 02110

Ladies and Gentlemen:

This opinion is furnished to you pursuant to Section 6.1(o) of the Amended and Restated Credit and Security Agreement dated as of ], 2008 (the "Credit Agreement"), among Ameresco, Inc., a Delaware corporation (the "Borrower"), Ameresco Enertech, Inc., a Kentucky corporation ("Enertech"), E.Three Custom Energy Solutions, LLC, a Nevada limited liability company ("E.Three"), Ameresco Solutions, Inc., a North Carolina corporation ("Ameresco Solutions"), Ameresco Planergy Housing, Inc., a Delaware corporation ("Planergy"), Solutions Holdings, LLC, a Delaware limited liability company ("Exelon"), Ameresco Federal Solutions, Inc., a Tennessee corporation ("Federal Solutions"), Sierra Energy Company, a Nevada corporation ("Sierra Energy"), Ameresco Select, Inc., a Massachusetts corporation ("Select"), Ameresco Hawaii LLC, a Delaware limited liability company ("Hawaii"), Ameresco Solar-Solutions, Inc., a Texas corporation ("Solar-Solutions"), Ameresco Solar-Products LLC, a Delaware limited liability company ("Solar-Products"), Ameresco Solar, LLC, a Delaware limited liability company ("Solar"), Ameresco Solar-Technologies LLC, a Delaware limited liability company ("Solar-Technologies"), Ameresco Woodland Meadows Romulus LLC, a Delaware limited liability company ("Woodland"), and Ameresco Northampton LLC, a Delaware limited liability company ("Northampton") (Enertech, E.Three, AmerescoSolutions, Planergy, Exelon, Federal Solutions, Sierra Energy, Select, Hawaii, Solar-Solutions, Solar-Products, Solar, Solar-Technologies, Woodland and Northhampton collectively, the "Guarantors" and, collectively with the Borrower, the "Credit Parties"; Planergy, Exelon, Select, Hawaii, Solar-Products, Solar, Solar-Technologies, Woodland and Northampton are sometimes referred to herein individually as a "Delaware or Massachusetts Party" and collectively the "Delaware or Massachusetts Parties"), the Lenders from time to time party thereto (the "Lenders"), and Bank of America, N.A., as administrative agent for the Lenders (the "Administrative Agent"). Except as otherwise defined herein, terms defined in the Credit Agreement are used herein as therein defined.

We have acted as special counsel for the Credit Parties in connection with the Credit Agreement and the other Loan Documents, as defined below, and the documents and agreements delivered pursuant to the Loan Documents at the Effective Time. We note that prior to the negotiation of the transactions contemplated by the Prior Credit Agreement we did not act as

counsel to the Credit Parties with respect to any matters. We also note that we do not act as general counsel to the Borrower or any of its subsidiaries. The Borrower and its subsidiaries (a) have in-house counsel and (b) regularly retain the services of various outside counsel. Accordingly, our knowledge of the business and affairs of the Credit Parties is necessarily limited.

In connection with this opinion, we have reviewed the following documents:

- (1) the Credit Agreement;
- (2) the Revolving Credit Notes issued by the Borrower as of the date hereof;
- (3) the Swing Loan Note;
- (4) the Pledge Agreement;
- (5) the Subordination Agreement;
- (6) the Uniform Commercial Code ("UCC") Financing Statements copies of which are attached hereto as Exhibit A (the "UCC Financing Statements");
- (7) the Perfection Certificates completed and executed by the Borrower and each Guarantor;
- (8) the Certificate of Incorporation, Certificate of Formation, bylaws, operating agreements, and other organizational documents of the Borrower and each of the Guarantors; and
- (9) the Certificate of good standing for the Borrower and each of the Guarantors.

The documents in clauses (1) through (5) are sometimes collectively referred to herein as the "Loan Documents" and each individually as a "Loan Document". The UCC Financing Statements include those financing statements filed in connection with the Prior Credit Agreement. The documents in clause (8) and (9) are collectively referred to herein as the "Organizational Documents". We express no opinion as to any of the agreements, documents or instruments referred to herein other than the Loan Documents, UCC Financing Statements, and Organizational Documents, and our opinion in paragraphs 1 and 2 below concerning the legal existence and good standing of the Borrower and each of the Delaware or Massachusetts Parties is based solely on such certificates and is given as of the date of such certificates.

In addition to the foregoing, we have examined (a) the original or certified, conformed or photostatic copies for the Borrower and each Guarantor of their (i) Organizational Documents, as amended to date, (ii) its bylaws or limited liability company operating agreement, as applicable, as amended to date, and (iii) records of all corporate proceedings relating to the Loans; (b) the certificate of officers' of the Credit Parties attached hereto as Exhibit B (the "Officers' Certificate"); and (c) such other documents, records, certificates and legal matters as we have deemed necessary or relevant for purposes of issuing the opinions hereinafter expressed. We

have also examined the Uniform Commercial Code as enacted and in effect in The Commonwealth of Massachusetts on the date hereof ("MA UCC").

In our examination we have also assumed the genuiness of all signatures (other than those on behalf of the Borrower and the Guarantors), the legal capacity of the natural Persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies, and the authenticity of the originals of such copies. As to any facts material to this letter, we have relied solely upon (and have assumed without investigating the accuracy or completeness of) written certificates, statements and representations of officers and other representatives of the Borrower and the Guarantors (including without limitation the representations and warranties contained in the Loan Documents), and upon certificates of public officials.

With respect to Chapter 271, §49 of the Massachusetts General Laws, we have assumed with your permission that you and each Lender are subject to control, regulation or examination by one or more state or federal regulatory agencies. Section 49 provides that it is unlawful to take or receive in exchange for a loan recovery of interest and expenses which in the aggregate exceed 20% per annum unless the lender shall have made the filing contemplated by §49 prior to making the loan or is a "lender subject to control, regulation or examination by a state or federal regulatory agency."

We have not made any independent review or investigation as to any factual matters in connection with the issuance of the opinions contained herein (including, without limitation, conducting any docket searches or other searches) and any limited inquiry undertaken by us during the preparation of this opinion letter should not in any way be regarded as such investigation. Whenever our opinion with respect to the existence of facts is indicated to be based upon our knowledge or the like, we are referring to the actual knowledge of only those Choate, Hall & Stewart LLP attorneys who were actively involved in our representation of the Borrower and the Guarantors in connection with the transactions contemplated by the Loan Documents.

Our opinions contained herein are subject to the qualifications (a) that validity and enforceability may be subject to (i) bankruptcy, insolvency, reorganization, moratorium, fraudulent transfer, fraudulent conveyance, equitable subordination or other similar laws or doctrines now or hereafter in effect relating to creditors' rights generally, (ii) general principles of equity (regardless of whether considered at a proceeding in equity or at law), including without limitation the principle that equitable remedies, such as the remedy of specific performance, are subject to the discretion of the court before which any proceeding therefor may be brought, (iii) statutory and decisional law concerning recourse by creditors to security in absence of notice and hearing and (iv) duties and standards imposed on parties, including, without limitation, the duties of good faith and fair dealing; (b) that we express no opinion as to the validity or enforceability of (i) any provision contained in any of the Loan Documents providing for rights of indemnity and/or contribution, (ii) any provision contained in any of the Loan Documents purporting to waive (or having the effect of waiving) any rights under the constitution or laws of the United States of America or any state or commonwealth, or any provision purporting to waive any rights in connection with any bankruptcy or insolvency or which is otherwise contrary to public policy, (iii) any choice of law provision in any of the Loan

Documents, or any provision restricting access to legal or equitable remedies, ( $\underline{iv}$ ) any provision which provides that any jurisdiction is the exclusive forum for any dispute, ( $\underline{v}$ ) the rights and remedies purportedly granted to the Administrative Agent and Lenders in Sections 4.4, 4.5 and 9.2 of the Credit Agreement, and any similar section in any other Loan Document, or any consent to receivership or similar proceeding contained in Section 9.3 of the Credit Agreement, and any similar section in any other Loan Document, ( $\underline{vi}$ ) any provision providing that the failure to exercise any right, remedy or option under any Loan Document shall not operate as a waiver thereof, or any provision providing that amendments, waivers or modifications to any Loan Document must be in writing, ( $\underline{vii}$ ) any provision contained in any Loan Documents providing for the release of, or having the effect of releasing, any Person prospectively from any liability from its own wrongful or negligent acts or for breach of any agreement, ( $\underline{viii}$ ) any powers of attorney purported to be granted in any of the Loan Documents, ( $\underline{ix}$ ) any provision providing for the payment of interest on overdue installments of interest, default interest or prepayment premiums or charges and ( $\underline{x}$ ) any provision purporting to establish an evidentiary standard; and ( $\underline{c}$ ) certain portions of the Loan Documents may be unenforceable in whole or in part, although the inclusion of such provisions therein does not render the Loan Documents invalid, and the Loan Documents contain adequate provisions for the practical realization of the principal rights and benefits purported to be afforded thereby (subject to the other qualifications contained in this opinion and the economic consequences of any delay that may arise from the unenforceability of any provision).

In rendering this opinion, we have assumed that no party will exercise any right or remedy except in an equitable and commercially reasonable manner and in good faith, and that each party to any of the Loan Documents has received the agreed upon consideration, and, if a Loan Document does not recite that it is executed as an instrument under the seal, that such consideration is legally sufficient. We have also assumed that each party to the Loan Documents has all requisite power and authority and has taken all necessary corporate or other action (including, without limitation, obtaining all governmental approvals, authorizations and consents and making all necessary filings with all applicable governmental entities required on its part) necessary to authorize, execute, enter into and perform its obligations under each Loan Document to which it is a party and to effect the respective transactions contemplated thereby, and that each such Loan Document constitutes the legal, valid and binding obligation of each such other party and is enforceable against each such other party in accordance with the respective terms thereof. We have also assumed that all laws, rules, regulations and decisions applicable to this opinion are generally available in terms of access and distribution following publication or other release and are in a format which makes legal research reasonably feasible.

The opinions expressed herein do not purport to cover, and we express no opinion with respect to the applicability of, Section 548 of the United States Bankruptcy Code or any comparable provision of state law. In addition, we express no opinion as to whether a subsidiary may guarantee or otherwise become liable for, or pledge its assets to secure, indebtedness incurred by its parent except to the extent such subsidiary may be determined to have benefited from the incurrence of such indebtedness, or as to whether such benefit may be measured other than by the extent to which the proceeds of such indebtedness are directly or indirectly made available to such subsidiary for its corporate purposes.

We have also assumed that for each Guarantor such Guarantor's obligations under its Guarantee and any Loan Documents to which it is a party are in furtherance of its corporate purposes and necessary or convenient to the conduct, promotion or attainment of its business, that each such Guarantor has obtained consideration that is fair and sufficient to support its Guarantee and any Loan Document to which it is a party and that a court of competent jurisdiction would deem such consideration to have been duly received by each such Guarantor.

We express no opinion as to any of the agreements, documents or instruments referred to herein other than the Loan Documents. We also express no opinion as to any matters that would be excluded by Section 19 of the Legal Opinion Accord of the ABA Section of Business Law were it to govern this letter unless such matter is expressly contained in this opinion. We also express no opinion as to any matters that arise solely as a result of any laws, orders, rules, regulations or limitations created or issued by any federal, state or municipal authority or any agency or subdivision thereof, which regulates any portion of the Borrower's or any Guarantors' business. We direct your attention to the fact that our opinions are limited in scope consistent with the Legal Opinion Principles issued by the Committee on Legal Opinions of the American Bar Association's Business Law Section as published in 53 Business Lawyers 831 (May, 1998).

With regard to the opinions expressed in paragraphs (1) and (2) below as to the valid existence and good standing and as to the valid organization or incorporation, of the Borrower and the Delaware or Massachusetts Parties as applicable, we have assumed the accuracy and completeness of, and have relied solely upon, certificates of governmental officials, dated on or after May 26, 2008.

We note that you are relying on the opinions of Kennedy Covington Lobdell & Hickman, L.L.P. (with respect to matters of North Carolina law), Parsons Behle & Latimer (with respect to matters of Nevada law), Frost Brown Todd LLC (with respect to matters of Kentucky and Tennessee law) and Porter & Hedges LLP (with respect to matters of Texas law) (such opinions collectively referred to as the "Local Counsel Opinions") as to the due organization and existence of AmerescoSolutions, Sierra Energy, E.Three, Enertech, Federal Solutions and Solar-Solutions (collectively, referred to as the "Non-Delaware or Massachusetts Companies"), respectively, and the due authorization, execution and delivery of the documents to be executed and delivered by the Non-Delaware or Massachusetts Companies and to such other matters as set forth in the Local Counsel Opinions. We express no opinion regarding the matters contained in the Local Counsel Opinions or to any choice of laws applicable to the obligations of the Non-Delaware or Massachusetts Companies. We have assumed herein the due authorization, execution and delivery of the Credit Agreement and other Loan Documents by the Non-Delaware or Massachusetts Companies which are necessary to creating a valid, legal and binding obligation under applicable state law, that the Non-Delaware or Massachusetts Companies do not violate any applicable state law or regulation by incurring the obligations contained in the Credit Agreement and that the laws of The Commonwealth of Massachusetts (without giving effect to any choice of laws provisions thereunder) apply to the obligations of the Non-Delaware or Massachusetts Companies under the Credit Agreement and other Loan Documents.

Our opinions herein are limited to the effect on the subject transactions of the internal laws of the Commonwealth of Massachusetts (without giving affect to conflicts of laws

principles), the Delaware General Corporation Law, the Delaware Limited Liability Company Act and the Uniform Commercial Code in effect on the date hereof in the State of Delaware ("DE UCC"), in each case, in our experience, normally applicable to credit transactions of the type contemplated by the Loan Documents. We express no opinion as to the applicability or effect of any other laws. We render no opinion on matters except as specifically stated herein.

In rendering our opinions set forth in paragraphs 8 and 9 below, we have assumed that no part of the Collateral identified in the Loan Documents in respect of which provision is made in the Loan Documents for a lien or security interest (other than the Non-Delaware or Massachusetts Companies) consists of property subject to a United States statute or treaty providing for a national or international recordation, registration, or certificate of title, or specifying a place for filing different from that specified in Article 9 of the DE UCC or MA UCC. Without limiting any other provisions contained in this opinion, our opinion in paragraph 10 below is rendered solely to the extent that the MA UCC as in effect on the date hereof, is applicable to such matters and we express no opinion as to such applicability.

We have made no examination of, and express no opinion herein as to (i) the right, title or interest of any Person to any of the property, tangible or intangible, that constitutes any of the Collateral; (ii) the existence of any liens, security interests, charges or encumbrances (other than those created by the Loan Documents) on the Collateral; (iii) the value of any security granted to the Administrative Agent; (iv) the creation or enforceability of any security interest other than in the Collateral; (v) the ranking or priority of any liens or security interests; (vi) the perfection of any security interest in any collateral other than the Collateral; or (vii) matters regarding the classification of property as real or Personal property. We have assumed that the Collateral is in existence.

We also call your attention to the following provisions of the DE UCC and the MA UCC:

- the effectiveness of DE UCC and MA UCC financing statements will lapse at a statutorily defined time (generally five years after the date of filing) unless a continuation statement is filed prior to such lapse in accordance with the DE UCC or the MA UCC, as applicable;
- (ii) Section 9-507(c) of each of the DE UCC and MA UCC provides that, if a debtor so changes its name that a filed financing statement becomes seriously misleading, the filing is not effective to perfect a security interest in collateral acquired by such debtor more than four months after the change unless an amendment to the financing statement which renders the financing statement not seriously misleading is filed within four months after the change;
- (iii) under certain circumstances described in Section 9-315 of each of the DE UCC and MA UCC, the rights of a secured party to enforce a perfected security interest in proceeds of collateral may be limited;
- (iv) continued perfection of security interest may require the filing of new appropriate financing statements or of amendments to financing statements in the event of a

- change of the name, location or legal identity of structure of the borrower or, in certain cases, the location of the collateral;
- (v) Section 552 of the United States Bankruptcy Code (11 U.S.C. § 552) limits the extent to which property acquired by a debtor after the commencement of a case under the Bankruptcy Code may be subject to a lien resulting from any security agreement entered into the debtor before the commencement of the case; and
- (vi) under certain circumstances described in Section 9-320 of each of the DE UCC and MA UCC, purchasers of collateral may take the same free of a perfected security interest.

Based on the foregoing, and subject to the qualifications set forth herein, it is our opinion that:

- 1. The Borrower is a validly existing corporation, in good standing under the laws of the State of Delaware, and has the requisite power and authority to own its properties and, to our knowledge, to transact the business in which it is engaged.
- 2. Planergy is a validly existing corporation, in good standing under the laws of the State of Delaware. Each of Exelon, Hawaii, Solar-Products, Solar, Solar-Technologies, Woodland and Northampton is a limited liability company validly existing and in good standing under the laws of the State of Delaware. Select is a corporation validly existing and in good standing under the laws of the Commonwealth of Massachusetts. Each of the Delaware or Massachusetts Parties has the requisite power and authority to own its respective properties and, to our knowledge, to transact its respective business in which it is engaged.
- 3. The Borrower and each Delaware or Massachusetts Party have the power to execute, deliver and carry out the terms and provisions of each of the Loan Documents to which the Borrower and each Delaware or Massachusetts Party is a party, and the Borrower and each Delaware or Massachusetts Party have taken or caused to be taken all necessary action to authorize the execution, delivery and performance of each of the Loan Documents to which the Borrower or any such Delaware or Massachusetts Party, as applicable, is a party.
- 4. Neither the execution and delivery of the Loan Documents by the Borrower or any of the Delaware or Massachusetts Parties who is a party thereto, nor compliance with any of the provisions thereof, will violate any law or regulation applicable to the Borrower or any Delaware or Massachusetts Party, result in the creation or imposition of any Lien upon any of the property of the Borrower or any Delaware or Massachusetts Party (except in favor of the Administrative Agent) or, to our knowledge, any order or decree of any court or governmental instrumentality specifically naming the Borrower or any Delaware or Massachusetts Party or violate any provision of any of the Organizational Documents of the Borrower or any Delaware or Massachusetts Party.
- 5. The execution, delivery and performance of the Loan Documents by each of the Borrower and each Delaware or Massachusetts Party, respectively, does not require and will not require the consent of, any exemption by, or any registration or filing (other than filing the

Financing Statements pursuant to the MA UCC or DE UCC, as applicable) with any court, government or regulatory authority.

- 6. Each of the Loan Documents has been duly executed and delivered by each of the Credit Parties which is a party thereto. The Loan Documents are the valid and binding obligations of each of the Credit Parties, to the extent each of them is a party thereto, enforceable against each such Credit Party in accordance with their respective terms.
- 7. Relying upon the representations and warranties of the Borrower in Section 5.8 of the Credit Agreement, the Borrower and the Guarantors are not individually or collectively (a) an "investment company" within the meaning of the Investment Company Act of 1940, as amended, or (b) a "bank holding company" within the meaning of the Bank Holding Company Act of 1956, as amended.
- 8. Assuming that (a) each of the Credit Parties has authenticated the provisions in Section 4.1 of the Credit Agreement that provide a description of the Collateral, (b) value has been given to the Credit Parties by the Administrative Agent and each other party seeking to obtain the benefit of the Credit Agreement and Pledge Agreement and (c) the Credit Parties (other than the Non-Delaware or Massachusetts Companies) have rights in such collateral as contemplated by Section 9-203 of the MA UCC, the Credit Agreement creates in favor of the Agent, for its own benefit and the ratable benefit of the other Lenders, a valid and enforceable security interest in that part of the Collateral in which a security interest may be created under Article 9 of the MA UCC.
- 9. Under the MA UCC (including the conflict of laws provisions thereof), the internal laws of the Commonwealth of Massachusetts (with respect to Select) and the State of Delaware (with respect to Planergy, Exelon, Hawaii, Solar-Products, Solar, Solar-Technologies, Woodland and Northampton) govern the perfection, by the filing of financing statements, of the Administrative Agent's security interest in the Collateral of each Credit Party (other than the Non-Delaware or Massachusetts Companies) in which a security interest may be perfected by filing. Upon the proper filing of the UCC Financing Statements in the Office of the Secretary of the Commonwealth of Massachusetts (with respect to Select) and the Office of the Secretary of State of the State of Delaware (with respect to Planergy, Exelon, Hawaii, Solar-Products, Solar, Solar-Technologies, Woodland and Northampton), assuming the accuracy of the assumptions in paragraph 8, the security interests of the Administrative Agent on behalf of the Lenders in the Collateral in which a security interest may be created under Article 9 of the MA UCC or DE UCC, as applicable, will be perfected to the extent that the MA UCC or DE UCC, as applicable, provides that such security interests may be perfected solely by the filing of financing statements.
- 10. Assuming that (a) any certificated securities or instruments (as such terms are defined in the MA UCC) which constitute part of the Collateral (as defined in the Credit Agreement) are delivered to the Administrative Agent in The Commonwealth of Massachusetts and that the Administrative Agent takes possession of such certificated securities or instruments in good faith and without notice, prior to or on the date of such delivery, of an adverse claim thereto, within the meaning of the MA UCC, and further assuming that the Administrative Agent retains continuous possession thereof, (b) value has been given to the Borrower by the

Administrative Agent and each other party seeking to obtain the benefit of the Pledge Agreement, and (c) the Borrower has rights in such Collateral as contemplated by Section 9-203 of the MA UCC, the security interest granted to the Administrative Agent by the Borrower pursuant to the Pledge Agreement creates in favor of the Administrative Agent a perfected security interest in the Borrower's right, title and interest in any such certificated securities or instruments in favor of the Administrative Agent.

11. Relying upon the representations and warranties of the Borrower in Section 5.15 of the Credit Agreement, the making of the Loans, the use of the proceeds thereof as required by the Credit Agreement and the security arrangements contemplated by the Loan Documents will not violate or be inconsistent with any of the provisions of Regulation T, U or X of the Board of Governors of the Federal Reserve System.

We render no opinion on matters except as specifically stated herein. This opinion is given and speaks only as of the date hereof and is limited to our knowledge of the facts and the laws, statutes, rules and regulations, and judicial and administrative interpretations thereof, as currently in effect. These are all subject to change and such change may be made with retroactive effect. We assume no obligation to advise the Administrative Agent or other Lenders of changes of any kind that may hereafter be brought to our attention even if such changes would affect our opinion or to update or supplement this opinion after the date hereof. This opinion is solely for the benefit of the Administrative Agent and other Lenders solely in connection with the closing this day under the Credit Agreement, is not to be used or relied upon by such Persons for any other purpose, and may not be furnished, quoted or otherwise referred to, or relied upon by any other Person for any purpose without our prior written consent, except that this opinion may be relied upon by independent auditors and financial institutions in connection the participation or assignment of the interests of the Administrative Agent and Lenders in the Loan Documents, as permitted by the terms thereof.

Very truly yours

## EXHIBIT A

## UCC Financing Statements

Please see the following pages.

## EXHIBIT B

## Officers' Certificate

Please see the following pages.

#### FORM OF SOLVENCY CERTIFICATE

The undersigned, C	thief Financial Officer of Ameresco, Inc.,	a Delaware corporation (the	"Borrower") is duly authorize	zed to execute
this certificate on this	day of June, 2008, on behalf	of itself and the Guarantors	under the Credit Agreement	defined below.

#### WITNESSETH:

WHEREAS, the Borrower has entered into an Amended and Restated Credit and Security Agreement dated as of the date hereof (as amended and modified from time to time, the "Credit Agreement"; capitalized terms used but not otherwise defined herein shall have the meanings provided in the Credit Agreement) with the Guarantors party thereto (the "Guarantors" and together with the Borrower, the "Credit Parties"), the Lenders from time to time party thereto, and Bank of America, N.A., as administrative agent (the "Agent"), pursuant to which the Lenders have established credit facilities in the aggregate principal amount of \$50,000,000 (the "Credit Facilities") in favor of the Borrower:

WHEREAS, each of the Credit Parties will benefit substantially and directly from the establishment of the Credit Facilities in favor of the Borrower;

WHEREAS, to secure their respective obligations under and relating to the Credit Facilities, the Credit Parties have executed and delivered to the Agent the Loan Documents referenced in the Credit Agreement (the grant of security interests, transfers, incurrence of obligations and other transactions relating to the execution, delivery and performance of the obligations under the Loan Documents, and any other transactions and transfers related thereto, shall be referred to herein collectively as the "Transactions");

WHEREAS, the undersigned has carefully reviewed the Credit Agreement and the various other Loan Documents, and also the contents of this Certificate, and in connection herewith has made such investigations and inquiries as he has deemed reasonably necessary and prudent therefor, and further acknowledges that the Agent and the Lenders are relying on the truth and accuracy of this Certificate in connection with the establishment of the Credit Facilities;

WHEREAS, the following terms, as used in this Certificate, shall have the following meanings:

"fair value" shall mean the amount at which the assets of an entity would change hands between a willing buyer and a willing seller, within a commercially reasonable period of time, each having knowledge of the relevant facts, neither being under any compulsion to act, with equity to both;

"indebtedness" shall mean all obligations and liabilities, whether matured or unmatured, liquidated or unliquidated, disputed or undisputed, secured or unsecured, or subordinated, and also includes all identified contingent liabilities;

"identified contingent liabilities" shall mean the maximum reasonably estimated liabilities that may result from pending litigation, asserted claims and assessments, guaranties, environmental conditions, uninsured risks, and other contingent obligations known to management;

"present fair saleable value" shall mean the amount that may be realized within a reasonable time, considered to be six months to one year, either through collection or sale at the regular market value, conceiving the latter as the amount which could be obtained for such properties within such period by a capable and diligent businessman from an interested buyer who is willing to purchase under ordinary selling conditions).

NOW, THEREFORE, ON THE BASIS OF THE FOREGOING, and the inquiries and considerations set forth below, the undersigned hereby certifies that, both before and after giving effect to the consummation of the Transactions:

- 1. I am, and at all pertinent times mentioned herein, have been, the duly qualified and acting Chief Financial Officer of the Borrower, and have responsibility for the management of the financial affairs of the Credit Parties, and the preparation of the financial statements of the Credit Parties.
- 2. The financial information, projections and assumptions which underlie and form the basis for the representations made in this Certificate were believed by the Credit Parties to be fair and reasonable when made, were accurately computed and were made in good faith and continue to be believed by the Credit Parties to be reasonable as of the date hereof.
- 3. I have carefully reviewed the contents of this Certificate, and I have conferred with counsel for the purpose of discussing the meaning of this Certificate.
- 4. The fair value and present fair saleable value on a going concern basis of all assets and property of the Credit Parties, on a consolidated basis, is greater than the total amount of indebtedness of the Credit Parties, on a consolidated basis.
- 5. The aggregate fair value and present fair saleable value on a going concern basis of the assets of the Credit Parties, on a consolidated basis, exceeds the amount that will be required to pay the probable liabilities of the Credit Parties, on a consolidated basis, in respect of their indebtedness, as such indebtedness becomes absolute and matured.
- 6. The Credit Parties, on a consolidated basis, do not and will not have an unreasonably small capital for them to carry on their businesses as now conducted and as proposed to be conducted after the closing of the Transactions. The undersigned recognizes that "unreasonably small capital" is dependent upon the nature of the particular business or businesses conducted or to be conducted, and the statement made in the preceding sentence is

based upon the current and anticipated future capital requirements for the current and anticipated future conduct of the businesses of the Credit Parties.

- 7. The Credit Parties, on a consolidated basis, will have sufficient cash flow to enable them to pay their debts as they mature.
- 8. The Credit Parties, on a consolidated basis, do not intend or believe that they have or will incur indebtedness that is or will be beyond their ability to pay as such indebtedness matures.
- 9. The Credit Parties, on a consolidated basis, do not intend, in consummating the Transactions, to hinder, delay, or defraud either present or future creditors or any other person to which the Credit Parties, on a consolidated basis, are or will become, on or after the date hereof, indebted.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF,	the undersigned has executed	d this Solvency Certif	ficate on the day and y	ear first mentioned abo	ve, on
behalf of the Credit Parties.					

AM	ERESC	O, INC.
By:		
	Name: Title:	Chief Financial Officer

[Signature Page to Solvency Certificate]

# FORM OF ASSIGNMENT AND ASSUMPTION

This Assignment and Assumption (this "Assignment and Assumption") is dated as of the Effective Date set forth below and is entered into by and between [the][each] Assignor identified in item 1 below ([the][each, an] "Assignor") and [the][each] Assignee identified in item 2 below ([the][each, an] "Assignee"). [It is understood and agreed that the rights and obligations of [the Assignors][the Assignees] hereunder are several and not joint.]. Capitalized terms used but not defined herein shall have the meanings given to them in the Credit Agreement identified below (the "Credit Agreement"), receipt of a copy of which is hereby acknowledged by the Assignee. The Standard Terms and Conditions set forth in Annex 1 attached hereto are hereby agreed to and incorporated herein by reference and made a part of this Assignment and Assumption as if set forth herein in full.

For an agreed consideration, [the][each] Assignor hereby irrevocably sells and assigns to [the Assignee][the respective Assignees], and [the][each] Assignee hereby irrevocably purchases and assumes from [the Assignor][the respective Assignors], subject to and in accordance with the Standard Terms and Conditions and the Credit Agreement, as of the Effective Date inserted by Agent as contemplated below (i) all of [the Assignor's][the respective Assignors'] rights and obligations in [its capacity as a Lender][their respective capacities as Lenders] under the Credit Agreement and any other documents or instruments delivered pursuant thereto to the extent related to the amount and percentage interest identified below of all of such outstanding rights and obligations of [the Assignor][the respective Assignors] under the respective facilities identified below (including, without limitation, the Letters of Credit and Swing Loans included in such facilities) and (ii) to the extent permitted to be assigned under applicable law, all claims, suits, causes of action and any other right of [the Assignor (in its capacity as a Lender)][the respective Assignors (in their respective capacities as Lenders)] against any Person, whether known or unknown, arising under or in connection with the Credit Agreement, any other documents or instruments delivered pursuant thereto or the loan transactions governed thereby or in any way based on or related to any of the foregoing, including, but not limited to, contract claims, tort claims, malpractice claims, statutory claims and all other claims at law or in equity related to the rights and obligations sold and assigned pursuant to clause (i) above (the rights and obligations sold and assigned by [the][any] Assignor to [the][any] Assignee pursuant to clauses (i) and (ii) above being referred to herein collectively as, [the][an] "Assigned Interest"). Each such sale and assignment is without recourse to [the][any] Assignor and, except as expressly provided in this Assignment and Assumption, without representation or warranty by [the][any] Assignor.

1.	Assignor[s]:	
2.	Assignee[s]:	for each Assignee, indicate Affiliate of [identify Lender]]
3.	Borrower:	Ameresco, Inc.
4.	Administrative A	gent: Bank of America, N. A., as the administrative agent under the Credit Agreement

5.	Credit Agreement: Amer Borrower, the Guarantor Agent						
6.	Assigned Interest[s]:						
	Assignor[s]	Assignee[s]	Facility Assigned	Aggregate Amount of Commitment/ Loans for all Lenders	Amount of Commitment/ Loans Assigned	Percentage Assigned of Commitment/ Loans	CUSIP No.
				\$	\$	%	
				\$	\$	%	
				\$	\$	%	
[7.	Trade Date:						
Effe	ctive Date:	, 20	I TO BE IN	SERTED BY ADMI	NISTRATIVE AGI	ENT AND WHICH	SHALL BE
	E EFFECTIVE DATE OF						
The	terms set forth in this Assi	gnment and Assur	nption are he	reby agreed to:			
1110		B	inputon are no				
				ASSIGNOR ASSIGN	NODI		
				[NAME OF ASSIG	NORJ		
				By:			
				Title:			
				<u>ASSIGNEE</u>			
				[NAME OF ASSIG	NEE]		
					-		
				By:			
				Title:			
[Co	nsented to and] Accepted	:					
	k of America, N. A., as Iministrative Agent						
ъ							
By:	Title:						
	Tiuc.						
[Co	nsented to:]						
By:							
	Title:						

## STANDARD TERMS AND CONDITIONS FOR ASSIGNMENT AND ASSUMPTION

## 1. Representations and Warranties.

- 1.1. <u>Assignor</u>. [The][Each] Assignor (a) represents and warrants that (i) it is the legal and beneficial owner of [the][the relevant] Assigned Interest, (ii) [the][such] Assigned Interest is free and clear of any lien, encumbrance or other adverse claim and (iii) it has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby; and (b) assumes no responsibility with respect to (i) any statements, warranties or representations made in or in connection with the Credit Agreement or any other Loan Document, (ii) the execution, legality, validity, enforceability, genuineness, sufficiency or value of the Loan Documents or any collateral thereunder, (iii) the financial condition of Borrower, any of its Subsidiaries or Affiliates or any other Person obligated in respect of any Loan Document or (iv) the performance or observance by Borrower, any of its Subsidiaries or Affiliates or any other Person of any of their respective obligations under any Loan Document.
- 1.2. Assignee. [The][Each] Assignee (a) represents and warrants that (i) it has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby and to become a Lender under the Credit Agreement, (ii) it meets all the requirements to be an assignee under Section 11.4(b)(iii),(v) and (vi) of the Credit Agreement (subject to such consents, if any, as may be required under Section 11.4(b)(iii) of the Credit Agreement), (iii) from and after the Effective Date, it shall be bound by the provisions of the Credit Agreement as a Lender thereunder and, to the extent of [the] [the relevant] Assigned Interest, shall have the obligations of a Lender thereunder, and (iv) it is sophisticated with respect to decisions to acquire assets of the type represented by [the][such] Assigned Interest and either it, or the Person exercising discretion in making its decision to acquire [the][such] Assigned Interest, is experienced in acquiring assets of such type, (v) it has received a copy of the Credit Agreement, and has received or has been accorded the opportunity to receive copies of the most recent financial statements delivered pursuant to Section 7.1 thereof, as applicable, and such other documents and information as it deems appropriate to make its own credit analysis and decision to enter into this Assignment and Assumption and to purchase [the][such] Assigned Interest (vi) it has independently and without reliance upon Agent or any other Lender and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Assignment and Assumption and to purchase [the][such] Assigned Interest and (vii) if it is a Foreign Lender, attached hereto is any documentation required to be delivered by it pursuant to the terms of the Credit Agreement, duly completed and executed by [the][such] Assignee; and (b) agrees that (i) it will, independently and without reliance upon Agent, [the][any] Assignor or any other Lender, and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under the Loan Documents, and (ii) it will perform in accordance with their terms all of the obligations which by the terms of the Loan Documents are required to be performed by it as a Lender.
- 2. <u>Payments</u>. From and after the Effective Date, Agent shall make all payments in respect of [the][each] Assigned Interest (including payments of principal, interest, fees and other amounts) to [the][the relevant] Assignor for amounts which have accrued to but excluding the Effective

Date and to [the][the relevant] Assignee for amounts which have accrued from and after the Effective Date.

3. <u>General Provisions</u>. This Assignment and Assumption shall be binding upon, and inure to the benefit of, the parties hereto and their respective successors and assigns. This Assignment and Assumption may be executed in any number of counterparts, which together shall constitute one instrument. Delivery of an executed counterpart of a signature page of this Assignment and Assumption by telecopy shall be effective as delivery of a manually executed counterpart of this Assignment and Assumption. This Assignment and Assumption shall be governed by, and construed in accordance with, the law of the Commonwealth of Massachusetts.

Confidential Materials omitted and filed separately with the Securities and Exchange Commission. Asterisks denote omissions.

## REVISED FINAL PROPOSAL

DOE Savannah River Site

Biomass Cogeneration Facility and

K and L Area Heating Plants

Submitted by:

Ameresco Federal Solutions

1820 Midpark Road, Suite C

Knoxville, TN 37921

Under DOE Contract No. DE-AM36-02NT41457

May 11, 2009

#### DISCLOSURE OF INFORMATION

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed—in whole or in part—for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of—or in connection with—the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained on all pages.

Biomass Cogeneration Facility and Heating Plants Savannah River Site Contract DE-AM36-02NT41457

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Biomass Cogeneration Facility and Heating Plants

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Biomass Cogeneration Facility and Heating Plants Savannah River Site Contract DE-AM36-02NT41457

#### LIST OF ABBREVIATIONS & ACRONYMS

ACSR Aluminum Conductor, Steel Reinforced
AIA American Institute of Architects
ASG Annual Steam Guarantee

BAMF Biomass & Alternate Methane Fuel

BDF Bio Derived Fuel BFB **Bubbling Fluidized Bed** British Thermal Unit Btu Categorical Exclusion CATEX Carbon Monoxide CO CO<sub>2</sub> Carbon dioxide CYCalendar Year DA Deaerator DC Direct Current DDC Direct Digital Control DES Detailed Energy Survey DOE Department of Energy Environmental Assessment EΑ **ECM Energy Conservation Measure** Environmental Protection Agency **EPA** 

EPI Energy Products of Idaho ESPC Energy Savings Performance Contract

°F Degrees Fahrenheit

FAR Federal Acquisition Regulation FEMP Federal Energy Management Program FONSI Finding of No Significant Impact

FY Fiscal Year
gpm Gallons per Minute
Hp Horsepower
ID Induced Draft

IMRT Integrated Management Review Team

IPMVP International Performance Measurement & Verification Protocol

kgal Kilogallons klbs Kilopounds kV Kilovolts KVA Kilovolt Amperes

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kW Kilowatt kWh Kilowatt hour

LEED Leadership in Energy and Environmental Design

M & O Management and Operations M & V Measurement and Verification

MBtu Million British Thermal Units (1 x 106)

MOA Memorandum of Agreement
MOU Memorandum of Understanding
MVAR Megavolt Ampere Reactive

MW Megawatts

NEPA National Environmental Policy Act NFPA National Fire Protection Association

NIST National Institute of Standards & Technology

NOI Notice of Intent to Award

NOx Nitrogen Oxide

NPDES National Pollutant Discharge Elimination System

O & M Operations and Maintenance

PA Public Address
PM Particulate Matter
PMT Project Management Team
POIC Point of Interconnection
PPEF Performance Period Escrow Fund

PPH Pounds Per Hour
PRV Pressure Reducing Valve
Psig Pounds per square inch gauge
PSUP Power Services Utilization Permit

PT Potential Transformer
PVC Polyvinyl Chloride
QC Quality Control
QCM Quality Control Mana

QCM Quality Control Manager
REC Renewable Energy Credit
RO Reverse Osmosis
ROW Right of Way

SCADA Supervisory Control and Data Acquisition

SCDHEC South Carolina Department of Health & Environmental Control

SCDOT South Carolina Department of Transportation

SCE&G South Carolina Electric & Gas

Biomass Cogeneration Facility and Heating Plants Savannah River Site Contract DE-AM36-02NT41457

SNCR Selective Non Catalytic Reduction

SO2 Sulfur Dioxide SRS Savannah River Site

SRNS Savannah River Nuclear Solutions

SSM Site Safety Manager
VAC Volts Alternating Current
VFD Variable Frequency Drive
VOC Volatile Organic Compound

Yr Year

Biomass Cogeneration Facility and Heating Plants Savannah River Site Contract DE-AM36-02NT41457

## **EXECUTIVE SUMMARY**

This Revised Final Proposal (Final Proposal) submitted by Ameresco Federal Solutions, Inc. (Ameresco) is for the implementation of two biomass Energy Conservation Measures (ECMs) at the Department of Energy's (DOE) Savannah River Site (SRS), located in South Carolina, approximately 18 miles south of Aiken and 20 miles east of Augusta, Georgia. The ECMs are being proposed under the authority and terms of the DOE Biomass and Alternate Methane Fuel (BAMF) Energy Savings Performance Contract number DE-AM36-02-NT41457 as modified by DO RFP # DE-RP09-09SR22572, dated February 26, 2009. This Revised Final Proposal including technical, pricing, and management data shall remain valid through June 15, 2009.

The proposal consists of two Energy Conservation Measures (ECMs). ECM 1 provides for the turnkey installation of a new Biomass Cogeneration Facility with a design capacity of 240,000 pounds per hour (PPH) of steam and 20 megawatts (MW) of electric power. The new facility will replace the existing D Area coal-fired cogeneration plant. ECM 2 includes the turnkey installation of two 10,500 PPH steam heating facilities; one to be located in the K Area and one to be located in the L Area. These systems will replace the aging fuel oil-fired packaged boilers currently serving the K and L Areas of the site.

The existing D Area cogeneration plant produces both steam and electricity that is consumed on site. The steam is delivered through a large distribution pipeline that runs several miles from the plant to the end-user facilities. The plant also produces approximately 15 MW of electricity that is consumed by DOE facilities on site. The 1950s era plant is fueled by coal and in need of significant modifications to bring the plant into compliance with current environmental requirements as well as to be a reliable source of energy. The proposed Biomass Cogeneration Facility, sited near the existing steam interconnection at the intersection of Burma Road and C Road, will significantly reduce the distance from the plant to the end-user, resulting in improved operating efficiency. The new facility will have enough capacity to satisfy all of the site's steam requirements and a significant portion of the electrical demand which will allow for the D Area plant to be shut down.

Currently, the existing heating plant in the K Area provides steam for both the K and L Areas. Steam is delivered from the K Area plant to L Area facilities through a 6", 2.5 mile pipeline. ECM 2 provides for replacing the K Area plant with two 10,500 PPH boilers — one boiler located in K Area and one located in L Area — eliminating the need to use the 2.5 mile distribution line. The existing K Area plant and the steam line will be shut down.

Clean biomass and bio-derived fuels (BDF) will be the primary fuel source for all of the new boilers. The clean biomass consists of various types of forest residues, and the BDF consists primarily of scrapped vehicle tires. Fuel deliveries will be received by Ameresco staff at a fuel handling yard located within the Biomass Cogeneration Facility site at the Burma Road/C Road location. The fuel handling yard includes a fuel receiving, storage, and processing area that will serve the Biomass Cogeneration Facility and the K and L Area Heating Plants. Fuel deliveries to the K and L Area Heating Plants will be made by Ameresco staff on an as-needed basis from the central fuel yard.

The use of renewable energy fuel sources provides many positive economic and environmental benefits to the SRS and the local community, while providing significant energy and cost savings to SRS. The savings result from fuel switching (coal to biomass), reductions in line losses by locating the new cogeneration facility and heating plants closer to end-user facilities, and improved efficiencies from new equipment sized to better match existing load requirements. Key environmental benefits of the project include:

- Over 2,000,000 MBtu/yr of thermal renewable energy production and a minimum generation of 77,000 mWh (264,444 MBtu) of green power.
- Annual Energy Savings of approximately 500,000 MBtu/yr
- No-cost Renewable Energy Credits (RECs)
- Decrease of water intake from the Savannah River by 1,412,000 kgal/yr, supporting water conservation efforts in the regional drought situation.
- Reduction of 400 tons/yr of Particulate Matter (PM) emissions
- Reduction of 3,500 tons/yr of Sulfur Dioxide (SO2) emissions
- Reduction of 100,000 tons/yr of Carbon Dioxide (CO2) emissions
- Support of the South Carolina Biomass Council Goals

Ameresco proposes to provide a turnkey package of design, permitting, and installation. Ameresco will also take responsibility for the operation and maintenance of the cogeneration facility and heating plants throughout the contract term. *Table ES.1* below provides an overview of project economics (as shown on Schedule DO-4) for Performance Period Year 1.

Table ES.1: Project Economic Summary

Project	Project Implementation Cost*	Total Energy Savings (Year 1, 2012)	O&M Savings (Year 1, 2012)	Water Savings (Year 1, 2012)	Total Savings (Year 1, 2012)
DES Cost	[**]	N/A	N/A	N/A	N/A
ECM 1: Biomass Cogeneration Facility					
(D Area Replacement Plant)	[**]	\$21,053,328	\$12,482,882	\$ (355,013)	\$33,181,197
ECM 2: Biomass Heating Facilities for					
K & L Areas	[**]	\$ 558,208	\$ 638,970	\$ (25,917)	\$ 1,171,260
Total	\$149,172,566	\$21,611,535	\$13,121,852	\$ (380,931)	\$34,352,457

<sup>\*</sup> The project Implementation Cost excludes the financial procurement costs.

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Following contract award, the detailed design will be completed and construction of the new facilities will take place. It is expected that thirty months from the date of contract award will be required to complete the final design and construction of the main Biomass Cogeneration Facility. However, Ameresco expects that the K and L Area Heating Plants can be constructed within 18 months of contract award. For this reason, Ameresco proposes an early acceptance of ECM 2.

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#### 1.0 ECM 1 DESCRIPTION

#### 1.1 ECM Summary Schedule DO-4

Pricing Schedule DO-4 is included in Section 6.0, Proposal Pricing Information.

#### 1.2 ECM #1:Biomass Cogeneration Facility

#### 1.2.1 Detailed Description of ECM

#### 1.2.1.1 ECM Summary

This ECM comprises the design and construction of a Biomass Cogeneration Facility (cogeneration facility) to be located to the northwest of the main distribution steam interconnection at the intersection of Burma Road and C Road. The steam produced from the facility will be exported to the 200 Areas via the existing distribution system; the green power generated will be exported to the SRS electrical distribution system via a new interconnection at the existing F Area substation. The scope of work includes the installation of the cogeneration facility and all equipment, the site work, and the necessary utility interconnections required for plant operation. There are three additional items included in the scope (design drawings for these items to be provided following contract award):

- The procurement and installation of a new skid-mounted river water pump and new pumping systems controls at the river water pump house, Building 681-3G.
- 2) Rework of the electrical feeder from the TNX area to the South Carolina Electric and Gas (SCE&G) utility line at the D Area.
- 3) Relocation of the existing L Area capacitor bank.

The cogeneration facility will be sized to provide a continuous supply of steam to site end-users (based on current and future load projections as presented in the SRS Site Projection Profile provided by the Government) while optimizing the quantity of green power generated. The system is designed using applicable national codes and standards for power plants and specific site standards (refer to *Section 5.2*). Previously, conceptual design drawings were submitted to the site for review prior to issuance of this final proposal; a draft version of the "issued for pricing" drawings is included in Volume III of this proposal. Finalized "issued for construction" drawings will be submitted to the government for concurrence throughout the first year of the construction period, as major equipment items are ordered and the design drawings are finalized.

This ECM will provide an estimated savings of over \$33 million in the first year of operation through the offset of coal purchases, and reduced O&M from the elimination of the existing D Area Power Plant and electrical substation. The renewable energy-fueled cogeneration facility will also provide renewable energy credits (RECs) to SRS at no cost. For purposes of receiving credit for implementing this renewable energy initiative, the RECs attached to ECM 1 and ECM 2 will belong to the Government and will not be claimed nor sold by Ameresco.

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In addition to the design and construction, Ameresco will retain responsibility for fuel delivery, operations, maintenance of the cogeneration facility and site; repair and replacement of the cogeneration facility equipment; air and effluent outfall emissions compliance for the cogeneration facility; and monitoring, measurement, and verification (M&V) throughout the contract term. Refer to Section 5.2.7 for details on Ameresco's Site Operations.

#### 1.2.1.2 ECM Design Process

The proposed cogeneration facility will provide steam and power to the SRS site. Several configurations and energy models were analyzed during the Detailed Energy Survey (DES) phase to determine the final system sizing and system components. The optimal equipment selection and sizing was selected to balance the current and future thermal needs of the site while maximizing green power generation. Final selection resulted in a system composed of two (2) biomass bubbling fluidized bed boilers, each with an output capacity of 120,000 PPH (240,000 PPH plant total) steam and one (1) condensing steam turbine/generator with an output design capacity of 20 MW.

Superheated steam will be produced in the new combustor/boiler systems at 850 pounds per square inch gauge (psig) and 825 degrees Fahrenheit (°F), for delivery to the turbine/generator unit. Steam is extracted at a reduced pressure (385 psig nominal) from the turbine to meet the demand of the site, as well as for parasitic use. As the primary purpose of the cogeneration facility is to provide a continuous supply of steam, the amount of steam extracted from the turbine will vary to meet the site demand. As the extraction rate varies with the site steam demand, the gross power output from the turbine/generator will also vary. Based on future steam load forecasts as presented in the SRS Site Projection Profile provided by the Government (*Table 1.1* below), output from the turbine/generator will range from 8 to 20 MW. The net power exported will vary from 5 to 17 MW as the new cogeneration facility's in-house (parasitic) loads will range between 2-4 MW. A detailed basis of design is included in the following subsections.

#### Site

The location of the new cogeneration facility was selected during the initial feasibility study of the project. The facility will be located approximately 0.5 miles northwest of the intersection of Burma and C Roads on a 30 acre site. The development on the site will include the following major areas: 1) the fuel handling yard, 2) the boiler/combustion system, 3) the power plant, 4) the cooling tower and outfall piping, and 5) the administration building and site parking. The placement of the cogeneration facility on this site was optimized to minimize fuel handling conveyor runs, and to ensure critical systems are located near the operator control room. The layout was also arranged to make use of the natural topography of the land where possible to minimize disturbance to the environment. The location and layout of the facilities were also optimized to the extent possible with regard to interfaces with site utilities (described in *Section 1.2.3*), a new storm water collection system and outfall, and the new site fire protection system.

The storm water system is designed to collect storm water from the impervious portions of the site. These include building run-off, roadway run-off, and equipment run-off. The system will include a series of

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catch basins to collect the storm water. The site will be graded to direct the storm water to each of the catch basins. The catch basins will be interconnected by 6", 8", and 12" piping. A manhole will be included to provide maintenance access at each change of direction. Ultimately the storm water will be directed by gravity to a storm water detention pond which is sized to hold the expected rainfall peaks in the area. The pond will be complete with a liner and slotted spillway to enable a controlled release of water to the outfall. The system will be installed with a monitoring system to measure flow, pH, and conductivity. Major components include catch basins, piping, manholes for maintenance access, lined 165,000 gallon detention pond, monitoring system, and the 24" outfall.

Extensive soil testing was completed on the site to determine the conditions for the soil and recommended design for structural support of equipment, facilities, and new pavements. The soil composition is primarily sand with light clay and therefore requires treatment of the site with an engineered fill prior to foundation work. A copy of the complete soil report is included in *Appendix A* of this proposal.

Logistics of site traffic are designed to allow biomass delivery trucks and other facility traffic to enter the site from Burma Road. The existing gravel portion of Burma Road will be paved up to the entrance of the site. Delivery trucks will enter the facility from the Burma Road entrance using a new deceleration lane, and exit the facility via a new one-way exit along the former route of Old Burma Road (currently an unmaintained dirt pathway between Burma and C Roads). All other facility traffic will enter into the new parking lot or the on-site access road, and may then exit back to Burma Road or use the new one-way exit to C Road.

Delivery trucks will traverse the entrance road to the fuel yard, and after fuel delivery will exit via Old Burma Road, which will be re-cleared and paved up to C Road at the existing 3-way intersection of C Road and the entry to the F Area. Old Burma Road will be designated and marked as a one-way thoroughfare in accordance with South Carolina Department of Transportation (SCDOT) standards, and the traffic signal at the existing 3-way intersection on C Road will be converted to a new 4-way intersection. This arrangement provides for a safe traffic flow and allows delivery vehicles to make left-hand turns across traffic only at a signal-controlled intersection. Also included in the site scope of work is the removal of the curbed median at the existing 3-way intersection, and the installation of new loop-control vehicle sensor wiring beneath the pavement at the new 4-way intersection. Figure 1.1 is an illustration of the overall site layout; the specific areas within the site are further described in the following pages.

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## Figure 1.1: Proposed Cogeneration Facility Site Layout

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#### **Fuel Handling Yard**

The fuel handling yard will serve as the delivery point for all fuel supplies for the cogeneration facility, as well as the two heating plants serving the K and L Areas. Approximately 40-60 trucks will enter the site daily (at staggered delivery times) at the Burma Road facility entrance. The entrance to the yard will include truck scales for weigh-in of all fuel sources for tracking deliveries. Beyond the entrance will be the unloading equipment, fuel storage area, and the fuel handling and processing equipment.

For fuel handling operations at the cogeneration facility, front-end loaders and augers/conveyors will be used at various points in the yard to move fuel between stations, through the yard area, and into the combustion systems. The biomass wood fuel will be unloaded using three (3) automated hydraulic truck-dumping stations. The truck-dumpers discharge into a reclaim pit, where the fuel will be lifted to the first transfer conveyor. The fuel is then screened and processed through a hogger and disc screen onto a second transfer conveyor. The fuel can then be transferred into the outside storage area or directly into the metering bins of the combustors. Stored fuel will be stacked in the outside storage after delivery from the transfer conveyor by use of a circular stacker/reclaimer. In addition to stacking the fuel, the stacker/reclaimer functions as a reclaimer to transfer the fuel from the storage stack to the fuel metering bins prior to entering the combustors.

The total available outside storage for clean biomass is approximately 15 acres, allowing for 30 days of continuous operations without replenishing the on-site fuel storage. The scrap vehicle tires brought to the site will be unloaded and processed in a separate area before being augured into a separate reclaimer. The separate unloading area and reclaimer allow for better process control through mixing with the biomass fuel, and also help to quantify BDF usage in meeting the requirements of the South Carolina Department of Health and Environmental Control (SCDHEC) air permit with regards to limits on BDF combustion.

Fuel supplies for the K and L Area boilers will be loaded at the cogeneration facility fuel handling yard and trucked by Ameresco staff to the K and L Area heating plants as needed, since the heating plants operate only during a limited heating season. One truckload per day is the estimated maximum usage at both the K and L Area heating plants during the coldest periods.

Proposed Fuel Yard Components include:

- Two (2) Truck scales
- Three (3) Hydraulic truck dumps and reclaimers
- Front end loaders
- Dump trucks for site use
- Live bottom trailers for K and L Area
- One (1) Fuel hogger
- One (1) Screener for oversized product
- Two (2) Magnets for metals screening
- One (1) Stacker & Reclaimer
- One (1) Truck Reclaim for Tires

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- One (1) Shredder for tires
- Multiple conveyors for fuel handling
- One (1) Whole Tree Chipper

The final design of the system was developed with primary consideration given to the following: handling and processing of multiple fuel types; safe and plentiful fuel storage area on site; minimized maintenance requirements; reduced downtimes; and provision for flexible operation of the overall systems.

#### Combustion/Boiler System

The combustion/boiler system includes the components from the fuel feeders to the exhaust stack, including the boiler auxiliaries. A bubbling fluidized bed (BFB) combustion technology will be used for this project. BFB technology uses high pressure air to fluidize a 2-3 foot bed of sand (inert material) in suspension. The fuel source is fed into the system through air spouts and mixed into the suspended bed. The system operates using 30-40% theoretical combustion air to reduce bed temperature and minimize nitrogen oxide (NOx) emissions.

BFB technology is preferable for biomass fuels due to its ability to better tolerate various fuel types, as well as larger variations in both fuel mixture density and moisture content. BFBs have the advantage of reduced air emissions due to a more stringently controlled temperature in the combustion process (1400-1600°F). Compared to stoker technology, the bubbling bed offers lower uncontrolled air emission rates, resulting in a lower investment for downstream air pollution control system components. BFBs require less maintenance than the stoker boiler, resulting in less downtime and lower ongoing costs.

[\*\*]. The EPI system is shown in Figure 1.2. The EPI combustor/boiler offers the following benefits in this size range of BFB equipment:

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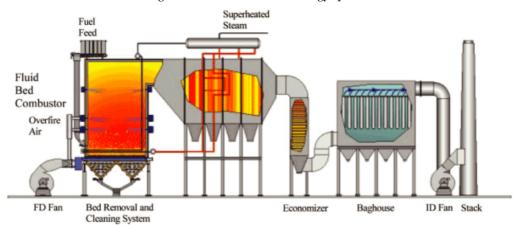


Figure 1.2: EPI Fluidized Bed Energy System

Two identical BFBs will be installed in the new cogeneration facility. Both boilers will be sized for a total design input of 372 MBtu/hr (186 MBtu/hr per boiler) and an output of 240 kpph (120 kpph per boiler). The bubbling bed boiler will produce steam at 850 psig, 825°F. Steam generated will go through a condensing turbine when generating electricity, or through a pressure reducing valve (PRV) station which will reduce the pressure to 385 psig. Steam required by the site and for the cogeneration facility deaerator (DA) tank will be extracted from the turbine at 385 psig. The 385 psig steam will be distributed to the existing system via the interconnection to the existing steam header located just across the street from the new cogeneration facility. Additionally, full capacity fuel oil burners will also be installed in the combustor to serve as a back up fuel source in case the biomass feeders are down. Refer to Section 1.2.1.3 for details of SRS steam demand.

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Figure 1.3: EPI Fluidized Bed Cell

Fuel will enter into the combustion metering bins from the fuel transfer conveyors. Metered fuel is discharged through isolation slide gates and into the fuel spreaders. The spreaders distribute the fuel across the fluidized bed. The fluidized bed cell as shown in *Figure 1.3* includes the equipment to accept, distribute, and mix air, fuel, and limestone in a high temperature thermal oxidization environment. The system is designed in accordance with National Fire Protection Association (NFPA) Section 850. Underbed air and overfire air distribution systems are provided to allow proper air flow for uniform combustion, to provide cooling of tramp material, and to optimize overall bed temperature.

The EPI system is specifically designed to include a bed recycle system to accommodate wood and tire derived fuel containing wires. The tire bed system is a fluidizing bed bottom, wire separation, and screening system designed to handle high concentrations of wire left over from the thermal oxidization of shredded tires and tramp material. The metal is recovered from the rest of the tramp material and bed media then discharged to the hopper for recycling.

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Each of the biomass boilers will include a gas handling system, which includes an induced draft (ID) fan to pull the boiler flue gas through the economizer. The ID fan exhausts into a fabric filter baghouse and then to an integral exhaust stack.

#### Pollution Abatement Control

The fluidized bed system provides an environment to optimize destruction of hazardous air pollutants and volatile organic compounds. Additional pollution abatement control is included in this system to comply with air emission requirements.

Particulate Matter Control: Particulate in the gas stream is captured in a pulse-jet baghouse system. The baghouse captures particulate matter from the flue gas and has removal efficiencies of 99.9+%. The flue gas will then exit through a stack adjacent to the ID fan and baghouse located just outside of the new cogeneration facility.

Nitrogen Oxide Control: The flue gas from the boiler will be treated in the combustion system using selective non-catalytic reduction (SNCR) technology to reduce nitrogen oxides. Using the SNCR will reduce NOx rates to 0.12 lb/MBtu. Urea is injected into the furnace typically above the over-fire air ports, reacting with the oxides to form nitrogen and hydrogen.

Sulfur Dioxide Control: Since tire derived fuel will be used as a fuel source, each biomass boiler will also have a bed additive system. The bed additive system will introduce limestone into the fluidized bed cells in order to reduce sulfur dioxide and other acid emissions. Sulfur dioxide will be controlled to less than 0.2 lb/MBtu in order to comply with air permit conditions.

Each boiler will include an exhaust stack. Each stack will include an aviation lighting system, and a continuous emissions monitoring system to measure the stack emissions and provide data reporting. The system will monitor carbon monoxide (CO), oxygen (O2), NOx, SO2, reagent slip, and opacity. The data is recorded in the facility supervisory control and data acquisition (SCADA) system.

#### Ash Handling System

The fuel will primarily consist of clean biomass sources; therefore, the ash content is expected to be low, less than 1.0-3.0% of the fuel burned. The ash stream consists of a bottom ash stream and a flyash stream. Bottom ash will be automatically removed from the biomass boiler with mechanical conveyors and augered into a hopper outside of the building. Fly ash will be collected at multiple points along the flue gas exhaust train, including boiler hoppers, mechanical dust collector hoppers, and baghouse. The flyash system will be a mechanical pneumatic system consisting of rotary airlock valves, screw conveyors, drag conveyors, and storage container. The ash collection hoppers will include water nozzles to keep ash wet and minimize dusting into the plant area.

The ash generated from combustion will be delivered to the landfill or taken off site to potential end-users. Ameresco will be responsible for ash removal, and the cost is included in the performance period expenses.

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Major Combustion/Boiler System Components:

- Two (2) 120,000 PPH biomass fluidized bed boilers, including fan systems
- Two (2) Baghouses including Penthouse
- Two (2) SNCR systems (Urea Injection)
- Boiler auxiliaries (boiler feed water pumps, DA tank, chemical treatment, and instrumentation)
- Boiler control SCADA system
- Two (2) Ash bins
- Two (2) Ash storage silos
- Two (2) Ash conveying systems (for each biomass boiler)
- Fuel Oil Storage
- Reagent Storage
- Limestone Storage

#### **Power Plant**

The power plant will house the boiler feedwater system, the water treatment system, the chemical treatment system, and the steam condensing turbine. The cooling tower and emergency generators will be located outside to the west of the power plant. The building will be a pre-engineered two-tiered metal building and 16,000 sq ft in size. Within the power plant there will be a control room, break room, storage, chemical and sampling area, and the motor control center. The equipment components are described in the sections below.

#### Boiler Feedwater System

A feedwater system will pressurize and deliver deaerated boiler feedwater from the DA tanks and the desuperheater to the boilers. The boiler feed pumps will pull the heated water from the DA tanks. Since there is no condensate return infrastructure in place, the DA tanks will receive makeup water from the water treatment system and from the condensate tank. The feedwater will be delivered to the boiler at 850 psig and 370°F. There are 2 DA tanks for the boilers; one will be used as a backup.

Components of the primary feedwater system include the following:

- Three (3) Boiler feed pumps and motors
- Two (2) DA tanks with instrumentation and trim
- Piping, valves, and controls

#### Water Treatment System

River water will be used as the source of water for the process water, regeneration water, and for fire system water. The river water will be filtered through carbon filters and softeners. Process water will be treated using Reverse Osmosis (RO) technology and then deionized through a mixed bed system. This system was designed based on samples collected from the Savannah River during the DES and from water analysis reports for the D-Area plant. The peak make-up requirement to the cogeneration facility is

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2,200 gallons per minute (gpm); this would occur at the cogeneration facility's full capacity and if the water treatment regeneration cycles were occurring at the same time. Normal flow rate to the water treatment skid will be 600 gpm. Primary components of the water treatment system include:

- Four (4) Carbon Filters
- Two (2) Water Softeners
- Neutralization Tank
- RO System
- Two (2) Deionized Mixed Beds
- Neutralization Skid
- Deionized Water Storage Tank

## Chemical Feed System

Chemical feed systems are designed for the boilers to provide protection from corrosion, scale formation, circulating water biofouling, and to provide pH control. Specific internal boiler water treatment programs will be designed during the implementation phase. Chemical equipment includes the following:

- Boilers
  - " Internal Boiler Water Treatment: Chemical feed skid(s) with injection pumps. The skid will be pre-piped, pre-wired, including necessary components and accessories for a complete functional system. Feed skid to be used with chemical totes.
- Circulating Water System
  - " Common acid chemical feed skid with injection pumps, pre-piped, pre-wired and including necessary components and accessories for a complete functional system. Feed skid to be used with chemical totes.
  - " Corrosion control chemical feed skid with injection pumps (dispersant and corrosion inhibitor), pre-piped, pre-wired and including necessary components and accessories for a complete functional system. Feed skid to be used with chemical totes.
  - " Biocide chemical feed skid with injection pumps, pre-piped, pre-wired and including necessary components and accessories for a complete functional system. Feed skid to be used with chemical totes.

#### Turbine System

The turbine will be installed in the power plant building. The turbine generator will have a rated output of 20 MW and generate at 13.8 kilovolts (kV). The turbine will be provided by TGM; information on the TGM system is included in *Appendix C*. The TGM turbine is manufactured in Brazil; however, Ameresco selected it for the SRS project because of its higher efficiency, lower cost, and shorter delivery time. Ameresco requested and the contracting officer has added the TGM turbine to the exemption list for Buy American.

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#### **Electrical Generation Equipment:**

- One (1) TGM Steam Condensing Turbine (20 MW), Model TMCE 25000A
- Electrical switchgears
- Two (2) fuel oil-fired emergency generators (1.5 MW each)
- Surface Condenser
- High Voltage, Medium Voltage Transformers

#### Cooling System

- One (1) two-cell Cooling Tower with variable frequency drive (VFD) Fans
- Cooling Tower pumps
- Outfall Sampling Station

#### **Administration Area**

A 2,200 sq ft building will be constructed to provide office space for cogeneration facility management staff and to also provide an area to allow visitors to gather for facility tours.

#### **Fire Protection Plan**

The Site Fire Protection Plan includes different methods depending on the type of area and the recommended practice for fire protection. The site will include a stationary pump as well as the following elements described below.

## Biofuel receiving and storage areas

- NFPA 850, Recommended Practice for Fire Protection for Electric Generating Plants
  - Fire water loop with hydrants and post indicating valves installed in accordance with NFPA 24 Standard for the Installation of Private Fire Service Mains and Their Appurtenances
- International Fire Code
  - " Open access for emergency vehicles

#### Boiler/Turbine/Equipment yard

- NFPA 850, Recommended Practice for Fire Protection for Electric Generating Plants
  - " Fire water loop with hydrants and post indicating valves installed in accordance with NFPA 24 Standard for the Installation of Private Fire Service Mains and Their Appurtenances
- International Fire Code
  - Open access for emergency vehicles

## Turbine Hall

- NFPA 850, Recommended Practice for Fire Protection for Electric Generating Plants
  - " Oil containment/drainage system

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- " A hose connection
- " Fixed protection system, detection, and alarm system to cover, as minimum, the Turbine/Generator bearings and oil containment areas.
- " Turbine shut down control per NFPA 850

#### Administration Area

- International Building Code and International Fire Code
  - Detection, alarm, and sprinkler system installed in accordance with NFPA 13 Standard for the Installation of Sprinkler Systems and NFPA 72 National Fire Alarm Code

#### Lab, Breakroom, and Bathrooms

- International Building Code and International Fire Code
  - Detection, alarm, and sprinkler system installed in accordance with NFPA 13 Standard for the Installation of Sprinkler Systems and NFPA 72 National Fire Alarm Code

#### Control Room and Electrical Rooms

- NFPA 850, Recommended Practice for Fire Protection for Electric Generating Plants
  - " Detection and alarm system installed in accordance with NFPA 72 National Fire Alarm Code
    - ☐ Detection, alarm, and fixed protection under raised floors.
      - Fixed protection Dry Chemical, NFPA 17

#### Biofuel Conveyors and Transfer Towers

- NFPA 850, Recommended Practice for Fire Protection for Electric Generating Plants
  - " Protection, detection, and alarm systems are not required but are a good practice
    - Dry type deluge system install in accordance with NFPA 13 Standard for the Installation of Sprinkler Systems
  - Detection and alarm system installed in accordance with NFPA 72 National Fire Alarm Code
  - " Conveyor controls to be interlocked per NFPA 850

#### Cooling Tower

- NFPA 850, Recommended Practice for Fire Protection for Electric Generating Plants
  - " Hydrant installed in accordance with NFPA 24 Standard for the Installation of Private Fire Service Mains and Their Appurtenances
  - " Cooling Tower design and constructed in accordance with NFPA 214, Standard on Water-Cooling Towers

#### Fuel Oil Storage Tank

- NFPA 30: Flammable and Combustible Liquids Code
  - " Separation in accordance with NFPA 30
  - " 100% containment in accordance with NFPA 30

- " Design and construction in accordance with NFPA 30
- " Hydrant installed in accordance with NFPA 24 Standard for the Installation of Private Fire Service Mains and Their Appurtenances

#### 1.2.1.3 ECM 1 Operation

ECM 1 will be operated continuously to produce steam and power for SRS, with the primary mission of meeting the Annual Steam Guarantee (ASG). The ASG is the total amount of steam output from the biomass boilers as defined in *Section 1.2.7.4*. During normal operation, steam produced from the boilers will flow through the condensing steam turbine. Steam required for the cogeneration facility auxiliaries and the export steam required by the site will be extracted from the turbine. The balance of steam will continue through the turbine to generate additional green power. As required by SRS, the cogeneration facility will be operated to provide steam at 350 psia through the existing Government-owned distribution system to the users in the F and H Areas.

Scheduled outages will not exceed one per year and only one boiler will be taken down at a time for planned maintenance. In the unlikely event that both boilers are inoperable, Ameresco has made provisions and connections for bringing temporary boilers to the site to ensure the supply of steam.

Projected steam demands of the site are based on information provided in the SRS Site Projection Profile provided by Government personnel. The projections upon which the cogeneration facility performance model is based was provided by government personnel in the SRS Site Projection Profile and shows that annual steam loads will differ for the next 20 years as shown in *Table 1.1*. Due to these changes in operation and the anticipated variation in weather from year to year, it is proposed that the new cogeneration facility will be operated to produce a fixed quantity of steam each year, the ASG. As the demand for exported steam decreases, the amount of green power generation will increase, up to the ASG.

Table 1.1: SRS Site Projection Profile — Steam Demand

Year	Winter peak [kpph]	Winter average [kpph]	Summer average [kpph]
2009	[**]	[**]	[**]
2010	[**]	[**]	[**]
2011	[**]	[**]	[**]
2012	[**]	[**]	[**]
2013	[**]	[**]	[**]
2014	[**]	[**]	[**]
2015	[**]	[**]	[**]
2016	[**]	[**]	[**]
2017	[**]	[**]	[**]
2018	[**]	[**]	[**]
2019	[**]	[**]	[**]
2020	[**]	[**]	[**]

Table 1.1: SRS Site Projection Profile — Steam Demand

Year	Winter peak [kpph]	Winter average [kpph]	Summer average [kpph]
2021	[**]	[**]	[**]
2022	[**]	[**]	[**]
2023	[**]	[**]	[**]
2024	[**]	[**]	[**]
2025	[**]	[**]	[**]
2026	[**]	[**]	[**]
2027	[**]	[**]	[**]
2028	[**]	[**]	[**]
2029	[**]	[**]	[**]
2030	[**]	[**]	[**]
2031	[**]	[**]	[**]

Ameresco staff will be responsible for operating and maintaining the cogeneration facility throughout the contract term as detailed in *Section 5.2.7.1*, and the cogeneration facility will be continuously manned by Ameresco staff as described in *Section 5.2.7*. However, this Final Proposal excludes any operation and maintenance obligations on the part of Ameresco except as detailed in *Section 5.2.7.1* 

#### 1.2.2 Location Affected

During the Initial Proposal kickoff meeting, the Government presented three sites as potential locations for the new cogeneration facility. The selected site is shown in *Figure 1.4* below and was agreed upon by SRS, the M&O Contractor, and Ameresco based on an evaluation of many factors, including distance to existing utility connections, available acreage, accessibility, security concerns, and environmental impacts. A site-use permit was obtained and is currently being amended to include the electrical feeder to the F Area, the river water piping tie-in from the C Area, the process water outfall to Upper Three Runs Creek, and improvements to the Old Burma Road/C Road intersection.

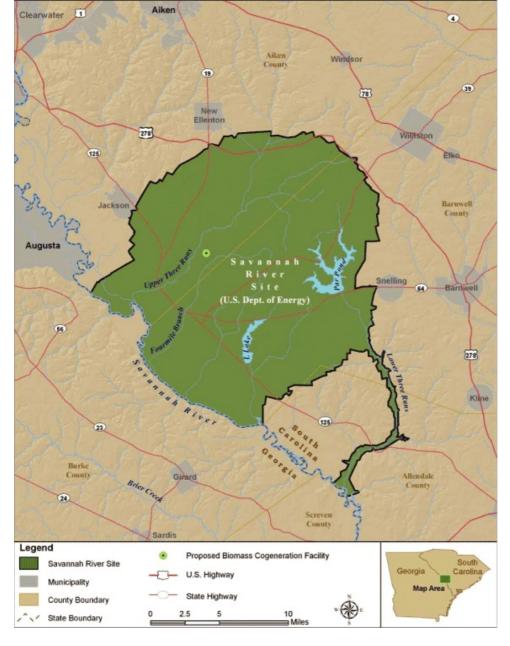


Figure 1.4: Cogeneration Facility Site Location

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# 1.2.3 ECM 1 Interface with Government Equipment

Title to all Ameresco installed equipment will transfer to the Government at the time of Government acceptance of an ECM. Title to the biomass fuel will transfer to and vest in the Government simultaneously with Ameresco's receipt of the biomass at the fuel handling yard. For the sake of clarity, ECM 1 will interface with *existing* Government equipment at the utility interconnections as described in this section. The installation of utility interconnections required for the new cogeneration facility are included in the project implementation cost and the installation will be Ameresco's responsibility; however, the SRS M&O Contractor will retain O&M responsibility including repair and replacement for the utility interconnections and utility distribution systems. *Table 1.2* provides a summary of the utility interface and the scope of O&M responsibility for the utility systems. Ameresco and the SRS M&O Contractor will enter into an agreement that will provide the cogeneration facility with utility services to include river water, sanitary sewer service, backup electrical power, and domestic water service. A Power Services Utilization Permit (PSUP) form will be completed by Ameresco prior to construction of utility interconnections. Utility meters will be installed to measure usage. It is proposed the Government will incur the cost for the cogeneration facility's non fuel utilities. These Post-ECM Implementation Costs have been factored into the annual savings. The annual consumption and costs of the utilities are shown in *Table 1.6*, and the unit cost used for each utility is shown in *Table 4.2*. Refer to *Section 5.2.7.1* for operation and maintenance responsibility.

Infrastructure services (site facility operations and maintenance) are primarily the responsibility of the Site M&O Contractor. M&O Contractor personnel operate and maintain the SRS utility systems and manage site environmental programs. On site DOE personnel are charged with oversight of M&O Contractor operations although M&O Contractor personnel often render project or program decisions for the Government. Therefore, for purposes of this proposal, the use of the term "Government" is applicable to DOE and M&O Contractor. For example, the term "Government caused delays" includes any delays caused by government and/or M&O Contractor personnel. Although the M&O Contractor makes operational decisions for the systems they operate and programs they manage, only DOE personnel, i.e. Contracting Officer and Contracting Officer's Representative (COR) will provide project and program decisions affecting work performed by Ameresco or Ameresco subcontractor personnel resulting from this proposal.

**Table 1.2: Utility Interconnection Summary** 

Utility	Interconnection	O&M Responsibility
Steam	New 12", 240 kpph line from plant to existing 24" across Burma Road	Ameresco: To the point of the new valve located in a new 12" line near the point of interconnection (POIC) with the existing steam line. SRS: Upstream of the new valve.
Domestic Water	30 gpm, new 2" line from plant to header located outside existing water treatment plant	Ameresco: To the new utility valve outside of power plant. SRS: Downstream of the tie-in to the new valve.

**Table 1.2: Utility Interconnection Summary** 

Utility	Interconnection	O&M Responsibility
River Water	New 12",2200 gpm line from valve house near C-Area to new biomass plant	Ameresco: Downstream of the interconnection valve. SRS: From existing pump station up to interconnection valve at cogeneration facility.
Outfall	1200 gpm + storm water runoff, new 24" line to Upper Three Runs Creek	Ameresco: To conduct all testing of the effluent; responsible for maintaining compliance of this discharge.
Sanitary Sewer	New 4" line & new lift	Ameresco: To the new valve located in the new line outside of power plant.
	station, 20 gpm to upside of the existing Lift Station	SRS: Downstream of the new utility valve.
Electrical	New 13.8 kV line to/from F Area substation	SRS: From outside of new cogeneration facility
Fire Water System	Tapped off the new river water header, prior to cooling tower	Ameresco: Responsible for fire water system
Telephone Line/Public Address (PA) System	Verizon New Line	Verizon/Ameresco
Data Line	Verizon New Line	Verizon/Ameresco

#### **Steam Distribution System**

Steam produced from the boiler at 850 psig and 825°F will flow through the turbine, or through a pressure reducing valve (PRV) and desuperheater if the turbine is not operating. From the turbine or PRV, the steam will be exported to the SRS distribution system, with a small percentage going to the cogeneration facility DA tanks. Flash steam from the continuous blowdown flash tank is supplied to a low pressure header to supplement the steam requirements of the DA.

The steam exported to the distribution system will be delivered at 350 psig 450°F. A new 12" carbon steel pipe will be routed above-ground from the cogeneration facility (exiting from the turbine or PRV station) to the existing steam line located across Burma Road. A steam meter will be installed in the line to measure steam exported from the cogeneration facility, as well as a steam meter on the flow exiting the boilers to measure the total amount of steam produced. The new cogeneration facility export connection is approximately 3 miles closer to the F and H Areas than the existing D Area plant, providing increased distribution system efficiency from decreased line losses. The approximate point of interconnection is shown in the photograph below:

Figure 1.5: Biomass Cogeneration Facility Steam Interconnection

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#### **Domestic Water**

A 2" domestic water line will be installed to serve plant potable water needs such as bathrooms, utility sinks, showers, and eye wash stations. The new water line will connect to the existing domestic water

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header located outside of the nearby industrial water treatment plant, located approximately 0.3 miles east of the cogeneration facility. Domestic water usage is expected to be minimal (5-10 gpm) and used for sink, lavatory, and maintenance requirements. Annual consumption is expected to be approximately 2600 kilogallons (kgal). The domestic water interconnection will be designed per M&O standards and permitted as required by the SCDHEC.

#### **Process Water**

River water will be used as the water source for all process and fire water. The process water usage includes boiler feedwater, cooling tower makeup water, water treatment regeneration cycles, and cogeneration facility service water. The river water will be supplied from Building 681-3G, the water pump house, through an existing distribution system and pump station. A new 12" ductile iron line will be routed underground from the existing C Area valve house (refer to *Figure 1.6*) to the cogeneration facility site following the route of the abandoned steam line from the C Area, and then diverting off of the route through existing vegetated areas to the site. Routing through the vegetated area will reduce the new distribution pipe route by approximately ½ mile. The specific routing is shown on the site drawing which is included in the drawing package (Volume III). The peak make-up requirement to the site is 2200 gpm; this would occur if the system was operating at full capacity and if all the regeneration cycles of the water treatment system were occurring at the same time. Normal operations will use 600 gpm. Annual river water consumption will average around 450,000 kgal.

To ensure there is adequate redundancy and back-up for the site river water source, in addition to the installation of the new distribution line a new pump skid (identical to the P-10 skid) will be installed to replace the pump, P-4, located inside the water pump house (Bldg 681-3G). The new pump will be used as a backup for P-10 and be designed with a 19.8" impeller size (600 hp motor.) Other components to be installed with the new pump include:

- Rework of the existing suction pipe
- Installation of isolation valve in suction pipe
- Installation of flow control valve & flow meter
- Installation of instrumentation and valves setup (duplicate system to the P-10 skid)
- Control modification to allow the pumps to automatically operate based on system requirements

# Figure 1.6: Biomass Cogeneration Facility River Water Interconnection

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#### Site Outfall

A new 24" high density polyethylene pipe will be routed from the cooling tower basin to Upper Three Runs Creek. The pipe will be installed underground and follow the natural topography of the land. A new outfall structure will be constructed next to the cooling tower to allow for flow monitoring and effluent testing. Process waste water and the storm water runoff will be discharged to the outfall. The storm water system includes collection piping to catch basins which will divert the storm water to the site

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retention pond. The retention pond will discharge to the outfall. The outfall will be permitted under the site National Pollutant Discharge Elimination System (NPDES) permit.

#### **Sanitary Sewer**

The bathrooms and fixtures located in the cogeneration facility and in the administration building will connect to the existing sanitary sewer system via a 4" polyvinyl chloride (PVC) pipe and be pumped using a new lift station. The line will connect upstream to the 607-91G lift station located approximately 0.3 mile east of the cogeneration facility. The sanitary sewer interconnection will be designed per M&O standards and permitted as required by the SCDHEC. Annual discharge is expected to be 2,600 kgal.

#### **Electrical System**

Power will be delivered to the existing F Area substation at 13.8 kV from the cogeneration facility. The power feeder from the cogeneration facility will be approximately 7,600 feet and will be routed in a combination of overhead pole mounted transmission line and underground duct bank where required in the F Area. The feeder will connect to an existing spare breaker cell in the metal-clad switchgear lineup at 251-F. The breaker cell shall be unit 101A, 101B, 206A, or 206B as deemed suitable by Ameresco and the Government. The interconnection scope of work includes a compatible circuit breaker, multifunction utility-grade numerical relay and instrumentation, and a 15kV class line potential transformer (PT) (either outdoor on feeder or indoor in a top-hat structure added to the existing switchgear). Existing bus PT secondary sources and existing station direct current (DC) battery sources are to be tapped as-is without improvement. Ameresco will utilize as-is or improve existing lockout relays and circuit breaker auxiliary contacts where no spare contacts or similar status points are available. Where such improvements are not possible due to the limitations of existing equipment, Ameresco will propose a solution to the Government (e.g. interposing relays, SCADA outputs, etc.). Ameresco assumes that the subject devices either as existing or improved, sufficiently indicate the operation of distribution and transmission level switching to determine when the generation system is unintentionally islanded from the utility source. Where transfer trip capability is required or determined to be best practice for protection of the proposed generation system, transfer trip facilities are to be derived from existing utility protective relaying equipment installed at 251-F. The scope excludes special or upgraded SCADA communications between 251-F and electrical utility operator. This scope is limited to the feeder circuit breaker at 251-F used to service the proposed generator plant and the primary protection described. The scope does not include other feeders at 251-F or any other upstream devices that are not impacted by the project (e.g. transformer secondary or primary protective devices and features, transmission-level protective devices and features). To insure appropriate coordination with the existing F area electrical distribution equipment, SRS will need to supply required load-flow, short-circuit, and intertie relay settings. Ameresco will prepare a transient study if deemed necessary for design.

Power at the new cogeneration facility is generated at 13.8 kV and is connected to a main 13.8 kV switchgear unit identified as "HVS". "HVS" is equipped with six (6) breakers. Breaker "52G" is utilized for the main generator breaker and is complete with required protective and synchronizing relaying. Breaker "52-4160" feeds a 7500/9375 kilovolt amperes (KVA) transformer "ATX-2" that steps down to 4160 volts alternating current (VAC) for large motor loads. Breaker "52-480" feeds a 2500/333 KVA

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transformer "ATX-1" that steps down to 480 VAC for all the remaining facility power distribution loads. Breaker "52-SG-1" and "52-SG-2" are utilized as feeders from two 1500 kW standby generators. Breaker "52U" is the tie breaker that feeds power to and from the F Area. This breaker will also be complete with all required protective and synchronizing relaying. The 13.8kV switchgear "HVS" and transformers "ATX1" and "ATX2" are located in the electrical room in the new cogeneration facility.

# D Area Electrical Feeder

A new feeder will be installed in the D Area to provide continued electrical service to both the D Area and the TNX Area when the 484-D Power Plant is either dismantled or demolished and to reduce the annual SCE&G costs associated with O&M of Station 41. The new feeder will be a #2 aluminum conductor, steel reinforced (ACSR) overhead 13.8 KV 3 phase line that will run from the existing overhead line in the vicinity of Barricade 3 at the entrance to D Area, down the east side of the entry road to a point roughly 80' short of the 115 KV line crossing, turn east and run across country paralleling the 115 KV line just outside of its right of way (ROW) until it is terminated with a tie-in to an existing 3 phase line crossing at the back of D Area. By connecting to this line, the new feeder will be able to power the TNX complex without any further modifications to the existing overhead system. Fused sectionalizing switches will be installed at each end of the new line. The recloser currently installed back across the Highway on the line being tapped will be recalibrated to reflect the addition of the line extension to D Area.

Before turning east at the 115 KV line, the new line will cross a CSX railroad main line. A complete design/permitting package will be developed and submitted to the railroad for their review and approval. Initial filing fees for this permitting process are included, but any ongoing fees due CSX are excluded from this proposal and will be the responsibility of the Government.

The addition of this feeder will result in monthly O&M savings currently paid to SCE&G to maintain the equipment in Station 41. The annual savings is \$75,000 (10% reduction of the current O&M charge to SCE&G).

# L Area Capacitor Work

The single 6 megavolt ampere reactive (MVAR) capacitor bank currently sitting on the L Area site will be installed on a new concrete pad in the grassy area across the access drive on the northwest side of the switchgear building, and connected to existing breaker 2-6 within substation 151-1L. New cable and cable tray will be installed in the basement beneath the switchgear to the northwest wall where spare sleeves will be used to exit the building. A new underground duct bank will be run from the building wall under the drive to the new pad for the capacitor bank connecting the capacitor. Spare 4" conduits will also be provided stubbed out from beneath the new pad for future connections to other systems. The capacitor bank will be interfaced with the existing SRS SCADA system. The actual location in the grassy area will be coordinated with the proposed installation of a future grounding transformer. The drive and associated curbs will be replaced after the duct is installed.

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We have been advised that several capacitor cells are defective. These will be replaced with available spare cells to the extent possible. These are the only repair efforts included in the installation of this capacitor bank which has been sitting out in the weather unprotected for some time. Any other repairs necessary to get the bank into fully operational condition are not the responsibility of Ameresco.

Installation of this existing capacitor bank will assist SRS in maintaining their power factor as close as possible to the minimum required by the utility company before penalties are assessed.

#### 1.2.4 Proposed Equipment

The proposed ECM 1 will include the major components as described in *Section 1.1*. An equipment list and manufacturer's literature for the boiler and turbine system is included in *Appendix C*.

#### 1.2.5 Expected Lifetime

The combustor/boiler and turbine components have an expected lifetime of 25-30 plus years. Ameresco will repair and replace components to ensure the continuous operation of the equipment throughout the contract performance period.

## 1.2.6 Physical Changes to Existing Equipment or Facilities

The cogeneration facility will be located on an unoccupied area of the SRS. The actual site will not impact or require physical changes to the existing facilities; however, there are changes required at other areas of the reservation as a result of operations of the new cogeneration facility.

These include the following:

- D-Area Electrical Feeder
- Pump and Controls Replacement in Building 681-3G, Water Pump Station
- Installation of existing capacitor at the L-Area Substation 151

#### 1.2.7 Savings Proposed

The annual savings associated with ECM 1 are based on the avoided cost of operating and maintaining the existing D Area Plant. The energy savings result from using a more efficient boiler and steam distribution system and the energy cost savings from using biomass as the primary fuel source in place of coal.

## 1.2.7.1 Annual Project Savings Overview

In order to calculate the annual savings, [\*\*]. Thus, the annual savings from the ECM equals:

Annual Savings = [\*\*].

Annual savings [\*\*]. *Table 1.3* provides a summary of the annual Post-ECM Implementation Costs, as escalated, that will be determined annually and Other Energy Savings and O&M Cost Savings, as escalated, which are herein agreed to by the Government and Ameresco for the contract term associated with ECM 1. [\*\*] per year.

Table 1.3: ECM 1 Annual Savings Summary

	Annual Utility	Annual O&M	Post-ECM Implementation	Total Annual
	Savings	Cost Savings	Costs	Savings
Baseline Year (CY 2009)	[**]	[**]	[**]	\$30,658,617
Escalated to Project Year 1 (CY 2012)	[**]	[**]	[**]	\$33,181,197
Year 2	[**]	[**]	[**]	\$34,404,421
Year 3	[**]	[**]	[**]	\$35,322,289
Year 4	[**]	[**]	[**]	\$36,399,646
Year 5	[**]	[**]	[**]	\$37,676,281
Year 6	[**]	[**]	[**]	\$39,368,611
Year 7	[**]	[**]	[**]	\$40,858,535
Year 8	[**]	[**]	[**]	\$42,100,018
Year 9	[**]	[**]	[**]	\$43,817,394
Year 10	[**]	[**]	[**]	\$47,247,150
Year 11	[**]	[**]	[**]	\$49,023,439
Year 12	[**]	[**]	[**]	\$50,831,412
Year 13	[**]	[**]	[**]	\$52,654,059
Year 14	[**]	[**]	[**]	\$54,705,813
Year 15	[**]	[**]	[**]	\$56,773,136
Year 16	[**]	[**]	[**]	\$58,856,493

Table 1.3: ECM 1 Annual Savings Summary

			Post-ECM	
	Annual Utility	Annual O&M	Implementation	<b>Total Annual</b>
	Savings	Cost Savings	Costs	Savings
Year 17	[**]	[**]	[**]	\$60,921,492
Year 18	[**]	[**]	[**]	\$63,483,800
Year 19	[**]	[**]	[**]	\$65,849,637
Year 20	[**]	[**]	[**]	\$68,447,514

The following subsections present the assumptions and methodology for establishing the baseline cost and baseline energy consumption for the D Area Plant & Substation, the annual savings calculations, and the performance guarantee for the proposed project.

#### 1.2.7.2 Annual Energy Baseline Consumption & Costs

The D Area Plant uses [\*\*]. The annual energy consumption and operations costs data for the D-Area Plant was developed to [\*\*] were escalated two years to accurately represent 2009 as the baseline. Total O&M Cost Savings are escalated to 2012 dollars and are \$[\*\*]

Table 1.4: O&M Baseline Costs for D-Area Plant

Month	2006 O&M Costs	2007 O&M Costs	Baseline O&M Cost Savings
January	[**]	[**]	[**]
February	[**]	[**]	[**]
March	[**]	[**]	[**]
April	[**]	[**]	[**]
May	[**]	[**]	[**]
June	[**]	[**]	[**]
July	[**]	[**]	[**]
August	[**]	[**]	[**]
September	[**]	[**]	[**]
October	[**]	[**]	[**]
November	[**]	[**]	[**]
December	[**]	[**]	[**]
		Total	\$ 10,692,844

<sup>\*\*</sup> Data was not available, so used 2006 data with escalation on labor only

The annual energy consumption for the D Area plant is based on the amount of coal utilized to produce steam for SRS thermal demand and for SRS power supply. The baseline consumption was determined using monthly averages for the latest two years of fuel usage data. The average annual amount of coal

<sup>\*\*\*</sup> Data in this table is presented using 2006 & 2007 dollars and not Baseline year

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consumed for the past two years was [\*\*] tons, which is used as the agreed upon energy savings baseline. The baseline for energy cost is determined by the product of the baseline energy consumption times the baseline cost of coal. The baseline cost of coal, as provided by SRS and agreed upon, is \$[\*\*] per ton of delivered coal. Thus the baseline energy cost is agreed to be \$[\*\*]. Currently, all electric power required by the site above the net output of the D Area power plant is procured from SCE&G under Rate Schedule 23 and Rate Schedule 60. The energy charge is [\*\*] per kWh and the average demand charge is \$[\*\*] per kW for load over 20 MW. The baseline power export from the D Area plant was determined using monthly averages for the last two years of data. Refer to *Table 1.5* for a summary of the fuel consumption and the net power exported from the D Area plant.

**Table 1.5: Baseline Energy Consumption** 

	2006 Energy Use Net Output of D-					2007 Energy Use Net Output of D-			Baseline Energy Use Net Output of D-			
Month	Coal Use (tons)	Coal Use (MBtu)	Area Plant (MWh)	Power Export (MW)	Coal Use (tons)	Coal Use (MBtu)	Area Plant (MWh)	Power Export (MW)	Coal Use (tons)	Coal Use (MBtu)	Area Plant (MWh)	Power Export (MW)
January	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
February	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
March	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
April	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
May	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
June	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
July	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
August	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
September	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
October	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
November	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
December	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
						Totals			161,839	3,978,008	131,889	

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## 1.2.7.3 Annual Energy Savings Calculations

The annual savings are determined by calculating the baseline annual O&M cost for the existing plant, plus the annual energy cost as presented in the previous section. The annual savings are then adjusted to account for the cost to be incurred by SRS to purchase additional power from SCE&G and to account for the Post-ECM Implementation Costs to be incurred by SRS for the non fuel utilities of the new cogeneration facility.

The additional future cost of purchased electricity is calculated using the [\*\*]

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The annual savings are also adjusted to account for the Post-ECM Implementation Costs incurred by SRS to provide non-fuel utilities to the new facility. This includes the cost for river water, sanitary sewer, and for domestic water. The annual consumption for each of these utilities is shown in *Table 1.6.* 

The net estimated annual savings for ECM 1 is \$33,181,197 for the first year of the performance period (2012).

#### 1.2.7.4 ECM 1 Performance Measurement

The ECM performance will be measured using the flow output (via a steam flow meter) of the two biomass boilers. Measuring and totalizing the steam production permits for flexibility to make use of this steam to meet the thermal and electrical demands of SRS while allowing for normal seasonal variations and adjustments for expected future load changes. The Annual Steam Guarantee (ASG) for ECM 1 will be 1,759,485 kilopounds per year (klbs/yr) of steam using an annual fuel consumption of [\*\*] MBtu/yr and is shown in *Table 1.6 — ECM 1 Post-ECM Implementation Facility Performance*. The ASG will remain set throughout the performance period; however, the electrical output and the steam export output will vary. Annual biomass costs are calculated based on meeting the ASG and will be adjusted only when the actual steam production for ECM 1 exceeds the ASG: refer to *Section 1.3.1.2*.

Ameresco proposes to produce additional steam from the cogeneration facility above the ASG, unless notified otherwise in writing by the contracting officer, provided that the Government compensates Ameresco for the incremental cost of biomass annually. Additional steam may be used for power generation or for thermal energy. Excess delivered steam above the ASG will be paid for by the Government as described in *Section 1.3*. Further increase in green power generation due to excess steam production will result in additional annual savings and will be documented in the annual M&V report.

The planned Post-ECM Implementation Costs for Ameresco to operate and maintain ECM 1 are included in the performance period expenses set forth on Schedule DO-3. The performance period expenses include the costs necessary for Ameresco to provide operations and maintenance of the new cogeneration facility including fuel (biomass and fuel oil for backup), personnel, daily operations and maintenance, routine and non-routine repair and replacement costs, and operations management to meet the ASG.

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# <u>Post ECM Installation Cogeneration Facility Performance</u>

The data in *Table 1.6* is derived from the output of energy modeling software (Thermoflex), from vendor data for equipment efficiency, and from using the steam load data provided by the Government (refer to *Table 1.1*). The following paragraphs are an overview of the general methodology of the performance calculations.

# **Steam Use:**

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# **Power Generation:**

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# **Fuel Supply:**

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**Table 1.6: ECM 1 Post-ECM Implementation Facility Performance** 

Plant Parameter	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6-9	Year 10-20
Total Boiler Capacity Steam Load (k-							
lbs/yr)	2,102,400	2,102,400	2,102,400	2,102,400	2,102,400	2,102,400	2,102,400
Annual Steam Guarantee (k-lbs/yr)	1,759,485	1,759,485	1,759,485	1,759,485	1,759,485	1,759,485	1,759,485
Steam Use							
SRS Export Steam Load (k-lbs/yr)	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Steam Load for Power Generation (k-							
lbs/yr)	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Aux Steam Load (k-lb/yr)	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Power Generation							
Net Green Generation (kWh/yr)	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Net Green Generation (MBtu/yr)	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Baseline Power Export from D Area							
Plant (kWh/yr)	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Post-ECM Implementation Electricity							
Purchased from SCE&G (kWh/yr)	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Post-ECM Implementation electricity							
Purchased from SCE&G (\$/yr) (*see							
note)	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Fuel Supply							
Annual Fuel Consumption for ECM 1							
(MBtu/yr)	2,727,205	2,727,205	2,727,205	2,727,205	2,727,205	2,727,205	2,727,205
Fuel Required for ECM 1, 100%							
Biomass (tons/yr)	317,118	317,118	317,118	317,118	317,118	317,118	317,118
Fuel Cost for ECM 1, 100% Biomass (\$/yr) (**see note)	[**]	[**]	[**]	[**]	[**]	[**]	[**]

# **Table 1.6: ECM 1 Post-ECM Implementation Facility Performance**

Plant Parameter	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6-9	Year 10-20
Post-ECM Non Fuel Utilities ***							
River Water (k-gals/yr &	460.215	456,015	459,033	460.261	457,981	461,026	454,418
	,	,	,	, .	,		
\$/yr)	\$(346,699)	\$(353,842)	\$(366,869)	\$(378,886)	\$(388,319)	\$(402,627)	\$ (446,666)
Domestic Water (k-gals/yr	456	456	456	456	456	456	456
& \$/yr)	\$ (4,692)	\$ (4,833)	\$ (4,978)	\$ (5,128)	\$ (5,281)	\$ (5,440)	\$ (6,123)
Sanitary Sewer	456	456	456	456	456	456	456
(k-gals/yr)	\$ (3,621)	\$ (3,730)	\$ (3,842)	\$ (3,957)	\$ (4,076)	\$ (4,198)	\$ (4,725)

<sup>\*</sup> The power purchased cost is per 2009 unit cost, however the DO schedules are escalated per NIST to account for future price of power.

<sup>\*\*</sup> Annual biomass cost for years 7-9 and 11-20 are not shown in this table, but escalated from previous year using an escalation factor of 5%

<sup>\*\*\*</sup> Non fuel utility consumption is calculated on full load on expected maximum each year so the consumption is constant throughout the term; the actual cost is escalated each year.

### 1.2.8 Utility Interruptions

The utility interconnections are described in detail in *Section 1.2.3*. It is anticipated that these connections will be made with minimal interruption to the SRS site. Any necessary interruptions will be coordinated and scheduled in advance with SRS personnel and with M&O site personnel. The shutdown of the D area plant and the start-up of the new cogeneration facility will be coordinated with SRS personnel and D Area site personnel to allow for minimal interruptions during transition.

## 1.2.9 Agency Support Required

Ameresco will continue to work with the Government as the project moves through the final design and the construction period. Support from the Government's engineering, contracting, and maintenance units, as well as management will be required for continued success of the proposed project. The Government, through its M&O Contractor Environmental Support Section will be responsible for processing the storm water management permit, the final site use permit, the National Environmental Policy Act (NEPA) document, domestic water permit, sanitary sewer permit, wetland permit, and the new outfall into the site NPDES Permit. Refer to *Section 3.2* for a description of the environmental permit and documentation required for this ECM.

#### 1.2.10 Potential Environmental Impact

Refer to Section 3.0 for environmental benefits and impacts from both ECMs.

#### 1.2.11 ECM Property Ownership

As approved under the BAMF Contract, title to all contractor-installed equipment proposed under this ECM will vest with the Government upon its acceptance of such ECM or the date that commercial operations begin, whichever occurs earlier.

#### 1.2.12 ECM Project Schedule

The construction schedule will be developed using Primavera P-6 software and submitted to the contracting officer. The following table shows the major milestones of the design and construction period.

**Table 1.7: Project Milestones** 

Activity	ECM 1	ECM 2
Site Work	09/01/09	07/01/09
Site Utility*	09/01/09	09/01/09
Concrete/Foundation Work	12/01/09	11/01/09
Building Package	06/01/10	01/01/10
Mechanical Install Work	06/01/10	05/01/10
Process Piping Work	08/01/10	05/01/10
Electrical Plant Work	12/01/10	05/01/10
Instrumentation & Controls Work	12/01/10	05/01/10
Insulation Work	12/01/10	05/01/10
Start up & Commissioning	06/01/11	07/01/10

<sup>\*</sup> Design Packages to be submitted throughout the first year of project

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## 1.3 BAMF Project Components

#### 1.3.1 BAMF Resource

ECMs 1 and 2 will require approximately 322,118 tons of forest residue biomass per year to meet Ameresco's ASG and approximately 385,000 tons of forest residue biomass per year to operate at design capacity. For such calculation of tons, Ameresco used a heating value of 4,300 Btu/lb from forest residue. Ameresco intends to procure both clean biomass and biomass derived fuel (BDF). Clean biomass includes forest residues, some urban waste, untreated wood pallets, and residue from lumber processes. BDF includes urban wood waste and tire derived fuel and will only be used in connection with ECM 1. There are numerous sources of clean biomass within a 100 mile radius of the SRS site, including within the SRS Forest. The following sections describe available BAMF supply, BAMF pricing, and BAMF acquisition.

#### 1.3.1.1 BAMF Supply

Following several discussions with the local office of the U.S. Forest Service and SRS personnel, Ameresco proposes to assume responsibility for the fuel procurement and intends to meet the biomass fuel requirements for ECMs 1 and 2 through purchases from local biomass suppliers. This responsibility shall include the right to validate, verify, and sell any carbon credits, but not renewable energy certificates, which may be obtainable from the ECMs and their associated operation and activities. Ameresco will consult with the Government concerning the design, validation, and verification for carbon offset credits and will make reasonable commercial efforts to obtain carbon offset credits which may be associated with the ECMs. Those credits may arise from the substitution of biomass residues for use in lieu of fossil fuels, and the use of biomass from onsite activities, including those from forest reforestation and working forest activities.

#### **BAMF Deliveries**

There will be deliveries of biomass and other BAMF fuel scheduled daily, Monday through Friday (normal operations), throughout the contract performance period. It is estimated that up to 60 trucks may enter and depart the C and Burma Road location each day, five days per week. It is anticipated that deliveries will be accepted from 7:00 AM to 7:00 PM although the exact hours may vary by season and/or supplier. Acceptable delivery hours will be established with each biomass supplier. Following meetings with SRS personnel, Ameresco has agreed to minimize the number of deliveries departing the site at the C Road traffic signal from 6:30 to 8:30 AM to accommodate arriving SRS personnel turning left at that traffic signal. Ameresco has been given assurance, and this proposal is predicated upon biomass delivery vehicles being permitted to enter and depart the SRS reservation at any of the available (open) gates and not be limited to just the Aiken and Jackson Barricades.

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Drivers of the BAMF delivery vehicles will be required by Ameresco to obtain a permanent (one year) site badge and to comply with SRS vehicle safety and site entry requirements, except as noted above.

Ameresco has conducted many discussions and met with potential fuel suppliers within the past few months. Ameresco is currently working primarily with [\*\*].

[\*\*] as described below.

## 1.3.1.2 BAMF Pricing

Ameresco's annual expense [\*\*]

The intended purpose in establishing the [\*\*].

- (c) To the extent that Ameresco's [\*\*]
- (d) To the extent that Ameresco's [\*\*]
- (e) Ameresco, upon [\*\*] Ameresco may [\*\*].

#### 1.3.1.3 BAMF Acquisition

Ameresco may enter into an agreement with one or more biomass suppliers. Ameresco will also attempt to secure from each supplier a fixed fuel price for as long a term as possible.

# 1.3.2 BAMF Transportation, Metering, & Delivery

#### 1.3.2.1 BAMF Transportation & Delivery

The biomass will be delivered from the suppliers using trucks with live bottom feeders, self-dumping trucks, or trucks with high-side trailers. Typically, each of the larger trucks has the capacity to hold approximately 120 cubic yards of fuel per load. The smaller self dumping/end dump trucks typically only carry about 50 cubic yards of fuel and will be used primarily for BDF waste sources or for larger unprocessed fuel. Actual loads may vary with the density of the fuel. Normal truck deliveries will be arranged to be made Monday through Friday.

## 1.3.2.2 BAMF Metering

Woodwaste is commonly measured in units of weight and volume such as in tons, truck loads, or cubic yards, rather than in units of energy. For this proposal, the higher heating value of biomass is about 4,300 Btu/lb since the majority of the fuel will be from forest residues and is typically high in moisture. The fuel supply will be tracked and recorded using the truck scale tickets. Periodic testing will be done on the fuel to determine the composition and the heating value.

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# 1.3.3 BAMF End-Use Project

## 1.3.3.1 BAMF End-Use Demand

End use of the biomass source was calculated utilizing forest residue as the main fuel source to meet the ASG. Forest residues for the Carolina area are typically high in moisture with heating values in the range of 4,100-4,600 Btu/lb. For the design basis and end use demand calculations, a higher heating value of 4,300 Btu/lb was used to determine boiler feed input. At this heating value, the boiler efficiency is expected to be 70%. At these conditions, the expected annual fuel use for ECM 1 is 317,118 tons a year of biomass consisting of forest residues.

## 1.3.3.2 BAMF End-Use Operations & Maintenance

Ameresco will retain operational and maintenance responsibility for the cogeneration facility and equipment installed at the cogeneration facility, described in *Section 5.2.7.1* of this proposal.

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#### 2.0 ECM 2 DESCRIPTION

#### 2.1 ECM Summary Schedule DO-4

Pricing Schedule DO-4 is included in Section 6.0, Proposal Pricing Information.

## 2.2 ECM #2:Biomass Heating Plants for K& L Areas

#### 2.2.1 Detailed Description of ECM

#### 2.2.1.1 ECM Summary

ECM 2 includes the installation of biomass heating plants in the K Area and the L Area. These new heating plants will replace the existing fuel oil-fired boiler plant located in the K Area that currently serves heating loads in both the K and L Areas. The two existing 30,000 and 60,000 lb/hr steam boilers are in poor condition and are now vastly oversized for the current load (estimated by SRS personnel to be approximately 7,000 PPH of steam in each area at design conditions). The existing 30,000 lb/hr boiler has been utilized as the primary boiler during the most recent years, due to the large reduction in load from the original design. Currently steam is produced at 150 psig to distribute to the K and L Areas and reduced inside the secure areas for use at 30 psig or less. By decentralizing the existing plant and providing local boiler systems in both the K and L Areas, the losses from the existing aboveground 2.5 mile, 6-inch steam line running from the K Area to the L Area will be eliminated. Additional efficiency gains are made from the right-sizing of the new heating plants to match existing loads.

The heating plants are each sized to provide a continuous availability for supply of steam to site end-users in the K and L areas during the typical heating season of December through mid April. The individual site demand was based on fuel oil consumption data for the past 5 years. The system is designed using applicable national codes and standards for steam plants and specific site standards (refer to *Appendix D*). Previously, conceptual design drawings were submitted to the site for review prior to issuance of this final proposal; a draft version of the "issued for pricing" drawings is included in Volume III of this proposal. Finalized "issued for construction" drawings will be submitted to the government for concurrence throughout the first year of the construction as major equipment items are ordered and the design drawings are finalized.

Implementation of this project provides utility savings resulting from 1) The elimination of losses from 2.5 miles of existing steam distribution piping between the K and L Areas; and 2) Improved operations from properly sized boilers, and the fuel cost differential in switching from fuel oil to clean biomass. Annual savings are over \$1.1 M for this ECM.

This proposal includes the procurement and installation of the new equipment, the support facilities, all auxiliary systems and controls, and utility tieins required to connect the new heating plants to the K and L Area distribution systems, as well as ongoing O&M and environmental compliance of both heating plants for the contract duration.

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## 2.2.1.2 ECM Process Description

This ECM includes two major components for each of the proposed heating plants: 1) Biomass fuel storage system, and 2) combustion/boiler system. Each new heating plant will be installed in an enclosed building with an adjacent covered shelter to house the wood fuel storage and delivery equipment. Biomass fuel will be delivered to both heating plants by Ameresco personnel from the fuel processing yard of the Biomass Cogeneration Facility. The fuel delivered to each of these heating plants will be clean biomass (refer to *Section 1.3*). The clean biomass will be used as the primary fuel source for two new wood waste combustor boilers to supply steam to the K and L Areas. Each boiler system will be designed to generate 10,500 PPH of saturated steam at 135 psig.

#### **Biomass Fuel Storage System**

The fuel storage area consists of the storage system and feeder to the combustion system. The components of this system are recommended to minimize equipment at each site and to provide maximum automation to each of the heating plants. Ameresco personnel will employ tractor-trailers to transfer the biomass fuel from the fuel yard at the cogeneration facility to both the K and L Area heating plants. The tractor-trailers will be parked in the new fuel storage shelter bays, one at each heating plant location. Each tractor-trailer is equipped with a walking floor-bed installation for the automated transfer of fuel to the stationary metering bin at each heating plant. The metering bin utilizes augers to feed the fuel into the combustion system.

The flow of fuel is controlled by an integrated direct digital control (DDC) system that automates the flow of fuel from the walking-bed to the metering bin, and from the metering bin to the combustor, based on input signals (and required safeties) to maintain steam pressure at the output of the boiler.

Fuel Storage System components for each area (K and L) includes:

- Tractor trailer with walking bed for fuel feed
- Fuel storage shelter bay
- Main fuel bin and auger to feed combustor

#### **Combustion/Boiler System**

One combustion/boiler system will be located in each area, in a separate, enclosed bay connected to the fuel storage shelter bay. The system proposed is manufactured by Hurst Boiler & Welding Company, Inc., and is designed specifically for the combustion of solid waste fuels to optimize energy recovery and minimize air emissions. Refer to *Appendix C* for manufacturer cut sheets.

When there is a demand for steam the biomass is augered from the fuel storage bin into the combustor, where the biomass begins to burn by the use of three levels of air directed into the combustion zone. The primary air is forced into the combustion zone from beneath the fuel grates (on which the fuel rests during combustion). The secondary air is forced through side grates, and the tertiary air comes through the side

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of the cast refractory to keep unburned ash from exiting the unit. The primary combustion zone is lined with high-insulating value, cast refractory ceramics to minimize radiant heat losses from the unit exterior.

A similar, secondary ceramic chamber fired at 3,100°F is included between the primary combustion zone and the boiler to allow for an extended combustion zone. The extended retention time in the secondary zone ensures the additional combustion of the biomass and reduces emissions. The appropriate combustion temperature is maintained by adjusting fuel feed, fan speed, and air intake.

Each boiler will be equipped with an auxiliary burner to allow for the firing of fuel oil for full output capacity of the boiler. Fuel oil will be used for pilot lighting on startup, and as a back-up emergency fuel source only. Each boiler has the capacity to produce up to 10.5 k-lb/hr of 135 psig steam when the combustion system is operated at full output. Each is a 2,600 sq ft unit, with 2 pass design and includes standard instrumentation, rear furnace access door, and air-operated soot blowers. Downstream of each steam boiler, the exhaust gas will go through a multi cyclone which reduces the particulate matter in the exhaust gas by 70%. The exhaust stacks will be equipped with appropriate lighting as required for on-site helicopter travel.

Boiler/Combustion System components for each area include:

- Metering Bin Feeder
- 10.5 MBtu/hr combustion unit
- Full-capacity fuel oil burner
- Steam heat recovery boiler
- Multi cyclone
- SCADA system
- Automated ash removal system
- Exhaust stack with aviation lights
- Boiler auxiliaries
- Air compressor for L Area
- Water treatment skid for L Area
- Fuel Oil Storage

## 2.2.1.3 ECM Operation

Ameresco will be responsible for operating and maintaining the heating plant facilities and equipment throughout the contract term. Both boilers will be operated by Ameresco as needed to meet the steam demand as more fully described in *Section 2.2.7.3*.

Both heating plants will be remote monitored via a telephone modem and using the Site PA system from the control system at the cogeneration facility. Maintenance and inspection of the systems will be performed by Ameresco operations personnel from the cogeneration facility. Refer to *Table 2.1*, which

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defines the interconnection and utility O&M responsibility for this ECM. Refer to Section 5.2.7.1 for a detailed description of the O&M responsibilities of each party.

#### 2.2.2 Location Affected

The biomass heating plant at the K Area will be constructed in the same vicinity as the existing plant, behind the two existing 30,000 gallon fuel oil tanks. The existing fence will be modified to allow for the construction of a new gate which the biomass delivery trucks will use for accessing the heating plant. A new facility will be constructed to house the biomass heating plant, while the biomass fuel storage and feeder area will be located under a covered bay attached to the new heating plant. For the L Area, a replica of the K Area heating plant will be installed northeast of the abandoned cooling water basin. The footprint for each system is approximately 2,600 square feet, including an enclosed sound proof control booth. Refer to *Figure 2.1* and *Figure 2.2* for site location plans for each area.

Figure 2.1: K Area Biomass Heating Plant Location

Figure 2.2: L Area Biomass Heating Plant Location

#### 2.2.3 ECM 2 Interface with Government Equipment

Title to all Ameresco installed equipment will transfer to the Government at the time of Government acceptance of an ECM. For the sake of clarity, ECM 2 will interface with *existing* Government equipment at the utility interconnections as described in this section. The installation of utility interconnections required for the new heating plants are included in the project implementation cost and the installation will be Ameresco's responsibility; however, the SRS M&O Contractor will retain O&M responsibility including repair and replacement for the utility interconnections and utility distribution systems. *Table 2.1* provides a summary of the utility interface and the scope of O&M responsibility for the utility systems. Ameresco and the SRS M&O Contractor will enter into an agreement that will provide the heating plants with utility services to include river water, process sewer service, backup electrical power, and domestic water service. A PSUP form will be completed by Ameresco prior to construction of utility interconnections. Utility meters will be installed to measure usage. It is proposed the Government will incur the cost for the cogeneration facility's non fuel utilities. These Post-ECM Implementation Costs have been factored into the annual savings. The annual consumption and costs of the utilities are shown in *Table 2.5*, and the unit cost used for each utility is shown in *Table 4.2*. Refer to *Section 5.2.7.1* for operation and maintenance responsibility.

**Table 2.1: Utility Interconnection Summary** 

Utility	Interconnection	O&M Responsibility
Steam	New 6" 150 psig to existing steam line (PRV station in K Area)	Ameresco: to new valve located in new line just prior to POIC with existing steam line; SRS: downstream of valve.
Domestic water (K & L Area)	30 gpm, new 2" line from plant to header located outside existing water treatment plant. A new 2" line will be installed from the domestic water header to the L Area heating plant to be used as a backup source for feedwater and as a source for the safety shower and eyewash.	Ameresco: to new utility valve outside of water treatment building; SRS: downstream of tie-in.
River water (L Area)	New 4", 30 gpm, line from river water header in L Area	Ameresco: to new valve located in new line outside of heating plant; SRS: upstream of utility valve.
Process Sewer	2" connection to existing line to Ash Basin for K Area & 2" connection to basin to L-07 outfall for L Area	Ameresco: to new valve located in new line outside of heating plant; SRS: downstream of utility valve. (Ameresco responsible for meeting discharge emission requirements of these lines from the K and L heating plants)

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Utility	Interconnection	O&M Responsibility
Electrical	New line from 151-2K in K Area and add new line from 183-2L to the heating plant for the L Area	Ameresco: from connection at heating plant; SRS: upstream of each heating plant.
Telephone Line/PA System	Verizon New Line	Verizon/Ameresco

#### **Electrical System**

K Area: At the time Ameresco performed the initial field survey, SRS staff were beginning the process of designing a dedicated overhead 300A, 480V feeder and panel board. This system has not been installed to date, so a new feeder from the 151-2K substation will be provided as part of the ECM 2 work scope. New motor control center(s) and associated low-voltage distribution equipment, lighting, and related requirements associated with the new boiler and fuel handling equipment will be provided.

L Area: Based on information provided by SRS, the switchgear, 183-2L is available for interconnection and has adequate capacity for the load of the heating plant. Ameresco will run a new feeder from 183-2L to serve a new overhead wood-pole distribution line to the proposed boiler plant site. A new feeder will supply the motor control center and distribution panel(s) required for the new equipment.

#### **Steam Distribution System**

K and L Area: Each new boiler will be connected to the existing steam distribution lines within each area. The new boiler system will operate at 135 psig and pass through the existing PRV station for distribution to end users at 30 psig.

#### **Boiler Feedwater**

K Area: Existing boiler feedwater services will be utilized for the new heating plant. Ameresco will use and maintain the existing water treatment system. If the existing well water treatment plant is not upgraded to produce domestic water prior to project startup, a small water tank will be installed to hold domestic water for use in the safety shower and eye wash station.

L Area: River water will be used as the source for boiler feedwater for the heating plant. There will also be a domestic water feeder used as a backup source for boiler feedwater and to feed the safety shower and eyewash. A new water treatment facility will be installed to treat the water for suitability of the new biomass boiler.

#### **Process Sewer**

K Area: The boiler blow down will connect to the process sewer system that runs to the existing ash basin.

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L Area: The boiler blow down will be discharged to the existing L-07 Outfall. Ameresco will be responsible for ensuring this (L Area heating plant) effluent is compliant with the NPDES Site Permit.

#### 2.2.4 Proposed Equipment

The proposed equipment is described in the previous section and an equipment list and manufacturer information for the combustor/boiler system is included in *Appendix C*.

## 2.2.5 Expected Lifetime

The major equipment components have an expected lifetime of 20 — 30 years. Annualized repair and replacement costs have been included in this proposal. Ameresco will be responsible for all repair and replacement required to maintain heating plant operation.

## 2.2.6 Physical Changes to Existing Equipment or Facilities

Both proposed heating plants will be located outside of the process areas; however, this ECM proposes to make the following modifications within the K Area:

- The K Area water treatment building will be left in place and existing water treatment components will be utilized. Ameresco will maintain the water treatment equipment and building throughout the term of this contract.
- The air compressor located next to the existing fuel boilers in the K Area will be used for the new biomass combustor system. Ameresco will
  maintain the air compressor throughout the contract term.

#### 2.2.7 Savings Proposed

The annual savings associated with this ECM are based on the avoided cost of operating and maintaining the existing K Area Plant including the distribution system between the K and L Area, the annual energy savings resulting from using a more efficient boiler, and by using biomass instead of fuel oil as the primary fuel source. Additional energy consumption savings will be realized by replacing the K Area plant with two smaller heating plants, which eliminates the 2.5 mile distribution line between the two areas.

Table 2.2 summarizes the annual savings associated with ECM 2. Annual Energy Savings [\*\*]. Annual Energy Savings and O&M Cost Savings shown on Table 2.2 are herein agreed to by the Government and Ameresco for the term of the contract.

Table 2.2: ECM 2 Annual Savings Summary

	Annual Energy Savings	Annual O&M Cost Savings	Post-ECM Implementation Costs	Total Annual Savings
Current Year (FY 2009)	[**]	[**]	[**]	\$1,188,383
Escalated to Project Year 1 (FY 2012)	[**]	[**]	[**]	\$1,171,260
Year 2	[**]	[**]	[**]	\$1,182,735
Year 3	[**]	[**]	[**]	\$1,207,952
Year 4	[**]	[**]	[**]	\$1,233,416
Year 5	[**]	[**]	[**]	\$1,245,632
Year 6	[**]	[**]	[**]	\$1,284,832
Year 7	[**]	[**]	[**]	\$1,324,974
Year 8	[**]	[**]	[**]	\$1,385,220
Year 9	[**]	[**]	[**]	\$1,446,124
Year 10	[**]	[**]	[**]	\$1,481,648
Year 11	[**]	[**]	[**]	\$1,537,014
Year 12	[**]	[**]	[**]	\$1,593,421
Year 13	[**]	[**]	[**]	\$1,643,974
Year 14	[**]	[**]	[**]	\$1,708,160
Year 15	[**]	[**]	[**]	\$1,773,132
Year 16	[**]	[**]	[**]	\$1,832,320
Year 17	[**]	[**]	[**]	\$1,898,294
Year 18	[**]	[**]	[**]	\$1,972,045
Year 19	[**]	[**]	[**]	\$2,053,597
Year 20	[**]	[**]	[**]	\$2,129,145

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### 2.2.7.1 Annual Energy Savings

The annual savings are based on the avoided cost to operate and maintain the K Area plant including the distribution system between the K and L Area and the cost of energy required to produce steam in the existing boilers minus the Post ECM cost of the non fuel utilities for each heating plant. The savings will be applied to fund the capital cost of the project and to fund the ongoing performance period expenses throughout the contract performance period term. The performance period expenses include the costs to operate and maintain the new heating plants such as biomass and fuel oil cost, labor cost, consumable costs, maintenance costs, repair and replacement cost, and operation management. The following subsections show the baseline cost and energy consumption for the existing K Area Plant, the calculations of fuel and operating costs of the new heating plants, and the savings summary for the proposed project.

#### 2.2.7.2 Annual Energy Baseline Consumption & Costs

Currently the K Area plant utilizes one 60,000 lb/hr fuel oil boiler and one 30,000 lb/hr fuel oil boiler to serve both the K Area and the L Area facilities via a 2.5 mile steam pipeline. Data provided by SRS indicates that the 30,000 lb/hr boiler is the primary boiler, with the 60,000 lb/hr not having run in the past 3 years. Steam is produced at 150 psig and is reduced to an operating pressure of 30 psig for each site. The existing boilers are oversized and past their useful life, and are currently a costly maintenance issue.

In order to calculate the annual savings for this ECM, a baseline was developed to depict the most reasonable representation of the annual energy determined by taking the average consumption of the past 5 years, and to determine the annual O&M costs which were based the average of the past 5 years as shown in the following tables:

Table 2.3: Baseline Operating and Maintenance Cost for K Area Plant

O&M Expense	2003	2004	2005	2006	2007	Baseline Year (2009)	Average Annual Costs
Labor Total	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Material Total	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Other Consumable Total	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Steam Distribution O&M	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Subcontracts for Repair &							
Replacement	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Overhead for O&M	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Total O&M Cost Savings	[**]	[**]	[**]	[**]	[**]	[**]	\$551,189

Table 2.4: Baseline Annual Energy Consumption for K Area Plant

K Plant Production	2003	2004	2005	2006	2007	Average
Fuel Use						
Fuel Use Gallons	345,594	380,806	343,987	277,061	200,707	309,631
Fuel Use MBtu	47,865	52,742	47,642	38,373	27,798	42,884
Steam Production						
Total k-lbs/yr	36,648	40,382	36,478	29,381	21,284	32,835
Hours in Season	3264	2904	3264	2424	2112	2,794
Average Load lbs/hr	11,228	13,906	11,176	12,121	10,078	11,754

Using the past 5 years of data for fuel oil consumption, the annual average consumption is 309,631 gallons. The current price of fuel oil is \$2.13 per gallon; therefore, the baseline energy cost is \$659,514.

The annual savings for ECM 2 are equal to the O&M cost savings plus the annual energy costs baseline minus the post-ECM non-fuel energy costs. The annual savings for ECM 2 is \$1,188,383 for the current year and \$1,171,260 for Year 1 (2012).

## 2.2.7.3 Annual Heating Plant Performance

For ECM 2, heating plant performance is based on heating plant availability to provide steam to the K and L Areas, with outages no longer than a period of a week (seven continuous days) at any one time, during the typical heating season of December through April up to a maximum of 33,300 klbs/yr (Availability Guarantee). The annual fuel cost for this ECM has been calculated using an annual steam production of 33,300 klbs. If the steam load for the heating season is lower than 33,300 klbs and therefore the fuel consumption is lower, the difference will be reconciled as described in *Section 1.3*. It is expected there will be a reduction of 10% of the steam load due to the shutdown of the steam line between the two areas. If the steam production is higher due to an increase in either Area's demand, the fuel cost will be adjusted annually. Annual fuel costs are calculated based on meeting the Availability Guarantee and will be adjusted annually on actual steam production and actual fuel consumption (Refer to *Section 1.3*). The expected heating plant performance is shown in the following table:

### Table 2.5: ECM 2 Post ECM Heating Plant Performance

	ECN	M Post-ECM
Heating Plant Parameter		rformance
Typical Operation	Decem	nber- April 15
Expected Steam Production (k-lbs/yr)		33,300
Fuel Required for ECM 2, 100% Biomass (MBtu/yr)		42,844
Fuel Required for ECM 2, 100% Biomass (tons/yr)		5,000
Fuel Cost for ECM 2, 100% Biomass (\$/yr) 2009	\$	110,000
Fuel Cost for ECM 2, 100% Biomass (\$/yr) 2012 — Year 1	\$	120,200

The non-fuel utilities consumed at each of the heating plants are to be incurred by the Government. The Post-ECM implementation cost has been deducted from the annual savings for each year of the performance period. The water consumption is based on the Availability Guarantee and the electricity consumption is based on the load of the heating plants for the typical heating season. The annual utility cost was calculated by multiplying the consumption by the unit cost of the utility (refer to *Table. 4.2*). The unit cost of the utilities is escalated using the NIST values and the [\*\*]% escalation for the water cost.

Table 2.6: ECM 2 Annual Post ECM Non-Fuel Utilities Cost & Consumption

Utility	Annual Consumption	Annual Cost
Domestic Water	2,004 k-gal/yr	\$ 22,861
River Water	2,004 k-gal/yr	\$ 922
Electricity	345,600 kWh/yr	\$ 32,141

## 2.2.8 Utility Interruptions

The utility interconnections are described in detail in Section 2.2.3. It is anticipated that these connections will be made with minimal interruption to SRS functions. Any necessary interruption will be coordinated and scheduled in advance with site personnel.

# 2.2.9 Agency Support Required

Ameresco will continue to work with the Government as the project moves through the final design and the construction period. Support from the Government's engineering, contracting, and maintenance units, as well as management will be required for continued success of the proposed project.

## 2.2.10 Potential Environmental Impact

Refer to Section 3.0 for environmental benefits and impacts for both ECMs.

## 2.2.11 ECM Property Ownership

As approved under the BAMF Contract, title to all contractor-installed equipment proposed under this ECM will vest with the Government upon its acceptance of such ECM, or the date that commercial

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operations begin, whichever occurs earlier. Refer to Section 5.2.7.1 for an explanation of O&M responsibilities.

# 2.2.12 ECM Project Schedule

A detailed project schedule (in Primavera) will be issued to the Government following contract award.

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#### 3.0 ENVIRONMENTAL IMPACT OVERVIEW

By utilizing on and off site biomass sources (rather than coal and fuel oil) to produce steam and energy, the proposed ECMs will provide a positive impact the environment. However, since both ECMs introduce new equipment and structures onto the site/area, assessments and permits are necessary in order to comply with the applicable local, state, and federal requirements. The positive impacts and benefits of the project are highlighted in *Section 3.1. Section 3.2* describes the environmental permitting required by the SCDHEC and other required environmental documents.

#### 3.1 Overview of Environmental Benefits

- The proposed plants will decrease the overall air emissions rates for 1) particulate matter (PM) by more than 400 tons a year, 2) nitrogen oxides (NOx) by more than 2,500 tons a year, and 3) Sulfur Dioxide (SOx) by more than 3,500 tons a year. This will result in a positive impact to the air quality of the local area.
- Both ECMs will reduce energy consumption by eliminating over 6 miles of steam distribution lines (3.5 miles for ECM 1 and 2.5 miles for ECM 2). The reduced steam distribution pipe will decrease fuel consumption by at least 10% from reduction of in-line steam losses.
- The proposed cogeneration facility will decrease the amount of river water currently drawn from the Savannah River by over 1,412,000 kgal
  per year. This is especially significant as the level of the Savannah River is low and this project will support efforts to protect the water level.
- By replacing fossil fuels with a renewable energy fuel source, green house gas emissions will be reduced by at least 100,000 tons a year significantly decreasing the carbon footprint of the SRS.
- Although cogeneration facility and heating plants are not practical feasible buildings for Leadership in Energy and Environmental Design (LEED) certifications, both ECMs will incorporate sustainable design methods and incorporate energy efficient technologies into the design.

## 3.2 Overview of Environmental Permitting & Assessment

Since the proposed projects will be located at a new site and/or require the installation of new equipment there will be new emission sources for air, water, and waste water. The resulting emissions require environmental permits through the Environmental Protection Agency (EPA), SCDHEC, and SRS. The following table is a summary of the permits required for the project, the status of the permit, and the expected issuance of the permit. Each of these is further described in the paragraphs below. The schedule and proposal are based on the dates in the table; significant deviation of these dates could potentially delay construction. Ameresco will have responsibility for maintaining compliance with the permits through the construction period and the contract performance period.

**Table 3.1: Environmental Permits & Documents** 

Permit/Document (responsible for permit)	Status	Completion Date/ Expected Issuance (responsible for approval)	Schedule Impact
Site Use Permit (M&O)	Site Use Permit approved in October 2007, revision will be submitted to include river water routing, outfall routing and electrical feeder routing.	Initial Site Use Permit Approved, Revision approved in June 2008. (SRS)	Required for Construction & Operation
Power Services Utilization Permit(s) (Ameresco)	PSUP to be submitted upon approval of IFC drawings.	Approval by end of 2009 (M&O)	Approval before operation
Site Clearance Permit (M&O)		Approval by SRS	Approval before start of construction work.
Environmental Assessment (Ameresco/DOE SRS)	Finalizing Draft, currently out for public comment	Issuance of Findings of No Significant Impact (FONSI) received in July 2008	Prior to process discharge to outfall (operation of plant)
Construction Air Permit (Ameresco)	Submitted in February 2008 to SCDHEC	Approval received in November 2008 (SCDHEC)	Required before Construction Start or Issue of Notice to Start Construction by Government
Operating Air Permit (Ameresco)	To be submitted 180 days after plant commissioning	(SCDHEC)	Required within 180 days of plant commissioning
NPDES 2D Permit (National Pollutant Discharge Elimination System) (Ameresco/M&O)	Resubmitted April 11, 2008 to M&O to submit to SCDHEC as modification to site permit	Draft permit issued in March of 2009 (SCDHEC) with June 2009 being likely the permit issue date	Prior to process discharge to outfall (operation of plant)
401 Water Quality Certification (Ameresco)	This permit application is submitted simultaneously with the Section 404 permit,	Expected 120 days from submittal of permit (SCDHEC)	Prior to operation of plant
Wetlands Section 404 Permit (Ameresco/M&O)	To be submitted by June 2009	Expected 120 days from submittal of permit (US Army Corps of Engineers)	Prior to operation of plant

**Table 3.1: Environmental Permits & Documents** 

Permit/Document (responsible for permit)	Status	Completion Date/ Expected Issuance (responsible for approval)	Schedule Impact
SC R.19-450 Construction in Navigable Waters Permit (Ameresco)	This permit application is submitted simultaneously with the Section 404 permit	Expected 120 days from submittal of permit (SCDHEC)	Prior to operation of plant
Industrial Wastewater Treatment Permit for oil separator, neutralization tank and for retention pond (Ameresco)	To be submitted following the NPDES permit modification approval	Expected by April of 2010 (SCDHEC)	Prior to operation of plant
Notice of Intent for Storm Water Discharges from Large & Small Construction Activities (Ameresco)	To be submitted by June 2009	M&O ESS Review & Approval within 30	Prior to construction of start of any site work activities
Storm Water Pollution Prevention Plan Including Soil & Erosion Control (Ameresco)	To be submitted with NOI for Storm water Discharges from Large/Small Construction Activities	See Above	Prior to construction of start of any site work activities
Grading Permit Application (Ameresco)	To be submitted with NOI for Storm water Discharges from Large/Small Construction Activities	M&O ESS approval expected within 30 days	Prior to construction of start of any site work activities
Construction Permit for Domestic Water Tie-in, Permit 1970 (Ameresco)	To be submitted by December 2009	M&O ESS approval expected within 30 days (M&O ESS acting authority)	Prior to construction of water tie- in & inspection/approval required prior to operation of new line
Construction Permit for Sanitary Sewer Connection, Permit 1970 (Ameresco)	To be submitted by December 2009	M&O ESS approval expected within 30 days (M&O ESS acting authority)	Prior to construction of sanitary sewer tie-in

Additional information is provided below for major permits and for the NEPA compliance.

# **Construction & Operating Air Permit**

The equipment in both ECMs are permitted under one new construction air permit and will be under the Ameresco permit rather than site permit. Ameresco will be responsible for the air permit and for future air permit renewals throughout the contract term. The following table shows the potential air emissions

of the proposed facility for the criteria air pollutants at expected load and at plant capacity. Annual potential air emissions are typically calculated based on the potential to emit, which is defined as the emissions for continuous operation at maximum system capacity. The maximum capacity would be if the boilers are operated at the full load of 120,000 lbs/hr for 8,760 hours. The controlled emission rates are based on vendor supplied data for the technology proposed in previous section.

Table 3.2: Annual Emissions Summary for Biomass Cogeneration Facility

Pollutant	Controlled Emission Rate [lb/MBtu]	Annual Potential Emissions Actual/Capacity [tons/yr]
Nitrogen Oxides	0.15 (with SCNR)	227/295
Carbon Monoxide	0.13	137/195
Volatile Organic Compounds (VOCs)	0.15	26/31
Particulate Matter Total	0.023	35/42
Particulate Matter 10	0.0203	31/37
Sulfur Dioxides	0.025/0.2 with BDF fuel	46/143

Table 3.3: Annual Emissions Summary for K&L Heating Plants

Pollutant	Controlled Emission Rate [lb/MBtu]	Annual Potential Emissions [tons/yr]
Nitrogen Oxides	0.219	15
Carbon Monoxide	0.6	25
VOCs	0.0128	1
Particulate Matter Total	0.2 (with multiclone)	9
Particulate Matter 10	0.119 (with multiclone)	6
Sulfur Dioxides	0.025	1

The construction air permit was issued in November of this year (2008).

## **NPDES Permit**

The proposed outfall for ECM 1 will be included as part of the SRS NPDES Permit. The modification to site permit was submitted to the site for approval this past month; it is expected to be incorporated into the Site permit by March 2009. For ECM 2, the K Area boiler blowdown will discharge into the K Area Ash Basin, as opposed to being discharged to an NPDES outfall. The NPDES outfall L-07 was modified to include boiler blowdown discharges for the L Area Biomass Heating Plant. As part of the Memorandum of Understanding/Memorandum of Agreement (MOU/MOA) between Ameresco and M&O Contractor, language will be incorporated to require Ameresco to retain responsibility for compliance of the cogeneration facility outfall and for the K and L Area heating plant effluents.

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# **Storm Water Management Permit**

The storm water management prevention plan is currently being developed. Once this plan is submitted, the permit application will be submitted to the M&O Contractor staff for approval. It is expected it will be approved within 30 days of submittal.

#### **NEPA**

Under the National Environmental Policy Act (NEPA), any modification to a federal facility or site requires determination of the environmental impact of the proposed change or new process. This requires issuance of a CATEX (categorical exclusion), development of an environmental assessment (EA) to determine finding of no significant impact (FONSI), or development of an environmental impact statement. During the DES phase, the EA was developed to include both proposed ECMs. The document has been placed for public review. The FONSI was issued in July of 2008.

#### 4.0 ECM PERFORMANCE MEASUREMENT

#### 4.1 Overview of Proposed Annual Savings

Implementation of the proposed ECMs will result in an estimated annual savings of approximately \$34 million. Savings estimates are detailed in DO Schedule 4 in Section 6.0.

#### 4.2 M&V Plan Executive Summary

Measurement and Verification (M&V) options include A, B, C, and D as detailed in M&V Guidelines of the International Performance Measurement and Verification Protocol (IPMVP).

Table 4.1: M&V Plan Summary

ECM No.	ECM Description	M&V Option Used*	Summary of M&V Plan		
ECM 1	Biomass Cogeneration Facility	В	Equipment and system performance factors continuously measured. Steam produced from the boilers will be measured and totaled for each performance period year. Fuel Usage will be recorded. Power exported to the site will also be measured and recorded to determine annual green power export.		
ECM 2	K & L Area Heating Plants	В	Equipment and system performance factors continuously measured. Steam produced from the boilers will be measured and totaled for each performance period year.		

<sup>\*</sup> M&V options include A, B, C, and D. Guidelines include M&V Guidelines: Measurement & Verification for Federal Energy Projects, Version 2.2; and International Performance Measurement & Verification Protocol (IPMVP), Volume I, March 2002, available at www.eere.energy.gov/femp/financing/superespcs\_mvresources.cfm.

Annually, Ameresco will complete an M&V report for the project following a visit to the site and an analysis of system performance. During the annual site visit, Ameresco staff will collect the monthly performance/operational data, determine the actual fuel use and costs, and then provide report of the output of each of the sites. Further, monthly reports will be made available to SRS which include total steam production from each system and fuel usage. Monthly reports will also include electrical production parameters in addition to steam.

As stated in the individual ECM description sections, annual savings will be based on the avoided baseline energy and operations and maintenance costs for the existing plants. Therefore, the annual savings amount is pre-determined for each year of the contract term and will only change with annual escalation or a mutually agreed upon baseline adjustment, as the existing plants will no longer operate once the new biomass plants become operational. The annual avoided baseline energy and operations and

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maintenance costs for the existing plants are deemed to have been met upon acceptance of the ECMs by the Government.

Annual performance requirements are satisfied if, for ECM 1 the ASG is met, and if for ECM 2 each of the heating plants is operated during the heating season as required to meet the Availability Guarantee.

If Ameresco is able to produce more steam than the ASG in any given year from the cogeneration plant, the Government may receive such additional steam for power generation or for thermal use. If the Government requires and Ameresco is able to produce more than 33,300 klbs in any given year from the total of both the K and L Area heating plants, the Government may receive such excess steam for additional thermal use. To the extent the actual steam production exceeds the ASG, the Government will compensate Ameresco for the additional fuel consumption as proposed pursuant to *Section 1.3.1.2*.

#### 4.3 Whole Project Data / Global Assumptions

#### 4.3.1 Risk and Responsibility

Ameresco will be responsible for project construction including the installation, testing, and commissioning of the equipment to deliver a complete and usable facility. Subsequent to construction, Ameresco will be responsible for ongoing operations and maintenance of the equipment installed under ECM 1 and ECM 2. Additionally, Ameresco will provide annual M&V reconciliation services and an annual M&V report which will include documentation of infrastructure and material condition, and a summary of equipment performance for the previous performance period.

The risk and responsibility of the Measurement and Verification activities for this project are addressed in the Risk/Responsibility Matrix in Section 5.4 of this proposal.

#### 4.3.2 Energy, Water, and Operations and Maintenance (O&M) Rate Data

#### **Utility Rates**

The energy costs (rates) used to develop the baseline annual cost for ECMs 1 and 2 were provided by SRS based on historical costs. Annual savings were calculated using the current unit cost and for coal and fuel oil and the baseline consumption data as described in *Sections 1.2.7* and *2.2.7*. Post-ECM implementation non fuel utility costs required for operation of the cogeneration facility and of the heating plants were factored into the savings at the following previously agreed upon unit costs as shown in the following table:

# **Table 4.2: Utility Cost for ECM (Post)**

Utility	Unit Costs
Electricity	\$0.093 / kWh
River Water	\$0.69 / k-gallon

# Table 4.2: Utility Cost for ECM (Post)

Utility	Unit Costs
Domestic Water	\$9.42 / k-gallon
Sanitary Waste Treatment	\$7.27 / k-gallon

# **Performance Period Rate Adjustment Factors**

For both ECMs, the annual energy rates used for savings calculations were adjusted using the latest escalation factors available from the 2008 National Institute of Standards & Technology (NIST). The applicable NIST escalation rates are shown in *Table 4.3* below. O&M cost savings and the performance period O&M cost use an annual escalation factor of 3%.

**Table 4.3: NIST Escalation Rates** 

Year         Escalation Rates         NIST Coal Escalation Rates         Escalation Rates         O&M Escalation Rates           2012         [**] </th <th></th> <th></th> <th></th> <th>NIST Fuel Oil</th> <th></th>				NIST Fuel Oil	
2012       [**]		NIST Electrical		Escalation	O&M Escalation
2013	Year	Escalation Rates	<b>Escalation Rates</b>	Rates	Rates
2014	2012	[**]	[**]	[**]	[**]
2015       [**]	2013	[**]	[**]	[**]	[**]
2016       [**]	2014	[**]	[**]	[**]	[**]
2017     [**]	2015	[**]	[**]	[**]	[**]
2018     [**]	2016	[**]	[**]	[**]	[**]
2019     [**]	2017	[**]	[**]	[**]	[**]
2020     [**]	2018	[**]	[**]	[**]	[**]
2021     [**]	2019	[**]	[**]	[**]	[**]
2022     [**]	2020	[**]	[**]	[**]	[**]
2023     [**]	2021	[**]	[**]	[**]	[**]
2024     [**]	2022	[**]	[**]	[**]	[**]
2025 [**] [**] [**] [**] 2026 [**] [**] [**] [**] 2027 [**] [**] [**] [**] 2028 [**] [**] [**]	2023	[**]	[**]	[**]	[**]
2026 [**] [**] [**] [**] 2027 [**] [**] [**] [**] 2028 [**] [**] [**]	2024	[**]	[**]	[**]	[**]
2027 [**] [**] [**] [**] [**] 2028 [**] [**] [**]	2025	[**]	[**]	[**]	[**]
2028 [**] [**] [**]	2026	[**]	[**]	[**]	[**]
	2027	[**]	[**]	[**]	[**]
2020 [**] [**] [**] [**]	2028	[**]	[**]	[**]	[**]
	2029	[**]	[**]	[**]	[**]
2030 [**] [**] [**]	2030	[**]	[**]	[**]	[**]

# 4.3.3 Schedule & Reporting for Verification Activities

The modified BAMF Super Energy Savings Performance Contract (ESPC) requires Ameresco to submit to the Government a post-installation report, and thereafter, an annual M&V report documenting equipment performance. Ameresco will follow the Federal Energy Management Program (FEMP) guidelines in generating these reports. The post-installation report will be submitted to the Government within 60 days following notification of an ECM's substantial completion and beneficial use as given by

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Ameresco. The performance period report will be submitted each year within 120 days following the anniversary date of the ECMs substantial completion date.

#### 4.3.4 Status of Utility Company Incentives

There are no known incentives through the utility company for any of the ECMs in this proposal.

# 4.4 ECM-Specific M&V Plan and Savings Calculation Methods

# 4.4.1 Overview of ECM Specific M&V Plans

A specific M&V plan based on DOE FEMP Guidelines and the IPMVP for Measurement and Verification activities during the term of the contract is described for both ECMs in the following paragraphs.

# 4.4.1.1 ECM 1: Biomass Cogeneration Facility

#### **M&V** Overview

Option B — ECM Isolation will be used for verification of the performance of ECM 1. Option B focuses [\*\*].

# 4.4.1.2 ECM 2: Biomass Heating Plants for K& L Areas

#### **M&V Overview**

Option B will be used for [\*\*] to the K and L Areas.

# 4.4.2 Energy and Water Baseline Development

Refer to the summaries of savings calculations in Sections 1.7 and 2.7 of this proposal.

# 4.4.3 Proposed Energy & Water Savings Calculations and Methodology

Refer to the summaries of savings calculation in Sections 1.7 and 2.7 of this proposal.

#### 4.4.4 Operations and Maintenance Cost Savings

The K Area plant is operated by SRS personnel and the D Area plant operations are subcontracted by the M&O Contractor to a subsidiary company. Both ECMs will result in the shutdown of an existing plant and eliminate the operation and maintenance expenses required for these sites. Therefore, SRS will realize an annual savings of \$ [\*\*] of O&M costs for ECM 1 and \$[\*\*] of O&M costs for ECM 2 during the first year of the contract performance period. The O&M cost savings have been escalated at a previously agreed upon rate of [\*\*]% per year the contract term.

 $\label{thm:contained} \textit{Use or disclosure of data contained on this sheet is subject to the restriction on the first page of this proposal}$ 

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#### 5.0 MANAGEMENT APPROACH

#### 5.1 Integrated Management Review Team (IMRT)

Ameresco's Initial Proposal recommended establishing an Integrated Management Review Team (IMRT) made up of senior managers from both the Government and Ameresco. While there have been frequent meetings, conference calls, and project reviews, it is strongly recommended that the IMRT be activated (in some form) immediately following contract award. As we progress with finalizing the engineering details and begin mobilizing for construction, the IMRT will be a valuable asset for promptly resolving any serious challenges that may arise and ensuring that SRS executive level managers are fully cognizant of project status at all times. It is further recommended the IMRT be chaired by the Director of the Infrastructure Support & Oversight Division or his designee. The primary mission of the IMRT will be to assure that appropriate management personnel from each organization are aware of the project status, informed of key milestones, and if necessary, involved in securing project approvals.

It is recommended that IMRT membership consists of key personnel from each of the four organizations participating in the project — DOE SRS, DOE Headquarters, the site M&O contractor staff, and Ameresco. A proposed IMRT organizational chart, designating team member organizations, is included as *Figure 5.1*. The IMRT should be established immediately and convene at least quarterly throughout the implementation and operations phases to assure senior management is informed, issues resolved, and decisions are rendered timely.

IMRT Chair SRS Director of Infrastructure Support & Oversight Division SRS Ameresco Program Manager Program Manager Energy Engineering/ Environmental Manager Construction Site DOE Staff Operations SRS M & O Site Operations Contractor Staff

Figure 5.1: Integrated Management Review Team

# 5.2 Ameresco Management Approach

Ameresco will be responsible for the design, construction, and operation of both ECMs as included in this proposal. This includes the responsibility for the management of design, quality control, safety, construction, and operation. Ameresco's management approach is outlined into following sections and includes the key strategies listed below:

- Design in accordance with applicable industry codes and design standards for industrial heating plants and power plants (Refer to Appendix D
  for list of standards) and in accordance with the electrical standards, fire protection standards and stacking lighting standards provided by
  Government.
- Design documents will be issued to the Government for review and final concurrence intermittently throughout the first year of the construction period.
- Acceptance of changes to the approved design requested by the government is at the discretion of Ameresco.

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- Ameresco is the responsible authority for the job sites of the proposed ECMs. This includes authority for site management, safety
  enforcement, document control, quality control, receipt and acceptance of project deliveries, and construction procurement.
- Ameresco will be responsible for document control management including review and approval of all construction submittals. Ameresco will
  make electronic copies of major construction submittals available to government representatives upon request.

#### **Project Implementation Phase (Construction)**

Ameresco's approach to managing the implementation (construction phase) of the proposed measures will be to assign a fully competent management staff at the construction site and give them the resources and authority to complete our contract obligations safely, timely, and in a professional manner. Each member of the on-site management team, headed by the Site Manager, will have the authority to make project decisions commensurate with their position. Key members of the site project management team include the Site Manager who will also be the Senior Construction Manager, Project Construction Manager (engineering subcontractor representative), Job Superintendent, Site Safety Manager, and Project Documentation Manager. We are currently recruiting, interviewing, and identifying personnel for most site management positions. However, the Site Safety Manager was identified early in the DES phase and has been involved with the project for some time. Mr. Clinton Sandmel will manage the safety program during the construction phase and has interacted with the SRS Safety Office in completing the project safety analyses and plans, as well as overseeing the safety efforts of the geotechnical subcontractor. He is an experienced safety manager and also has experience managing construction safety programs at DOE installations. Mr. Sandmel and other members of the project management team will be relocated (if not already in the local area) to the Aiken/Augusta area for the 30 month construction period mitigating travel and per diem expenses.

Construction subcontractors are being recruited and interviewed from the local area as well as on a regional and national basis. Ameresco will attempt to maximize the use of local contractor firms in an effort to support the local economy and mitigate mobilization and travel costs associated with using subcontractors from outside the local area. Of course, the construction subcontractors will be key to successful project implementation, and qualifications and price are both considerations in subcontractor selection. Each subcontractor will provide a project foreman and safety and quality control personnel. A detailed plan for completing the implementation phase is included in *Section 5.2.6* below.

The site project team will have all the resources necessary to ensure project success available, including the support of corporate resources from anywhere within the Ameresco organization from anywhere in North America beginning with the Ameresco corporate staff. While most construction and project administration activities will be accomplished by the onsite staff, contract administration, accounting, subcontract administration, and project legal counsel will be self-performed by division or corporate staff. Technical oversight of engineering, construction management, and safety will also be accomplished by the corporate resources.

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# **Operations Phase (Contract Performance Period Services)**

Once construction is complete and the Government accepts the project as operational and the Contract Performance Period begins, the Ameresco staff will shift from implementation to operations using primarily an onsite staff of Ameresco managers, technicians, and support personnel supplemented as necessary by subcontractors and other personnel from within Ameresco's corporate resources. The cogeneration facility will operate, and be staffed, 24 hours a days, 7 days a week, 365 days a year while the K and L Area plants, although not staffed, will operate 24 hours a day, 7 days a week during the winter heating season.

The Site Operations Manager will lead all facets of ECM operations. This person has not been determined at this time; however, it is anticipated they will be in place (at the project location) well before testing and commissioning begins. Key members of the operations staff will be the Plant Manager, Safety/Environmental Manager, Fuel Procurement Manager, and the Office Manager. Although we continue to recruit, and have interested candidates, none of the operations staff managers have been identified at this time. Also, maintenance personnel and plant operators currently working at the D Area plant will be given an opportunity to join the Ameresco team at the new cogeneration facility. All site operations and maintenance personnel will reside in the local community eliminating travel and per diem expenses. Detailed plans for operating the cogeneration facility and heating plants are included in *Section 5.2.7* below.

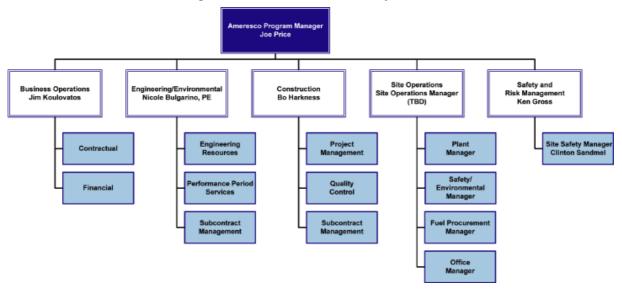
To the maximum extent practical, project implementation and subsequent plant operations will be performed under the watchful eye of the skilled and experienced leadership of the onsite management team; however, the onsite project team will have the full support and backing of additional corporate resources as necessary.

#### 5.2.1 Ameresco Corporate Management Team

Ameresco's corporate management team from the ESCO Selection Interview, Initial Proposal, and Detailed Energy Survey remains intact and will continue to direct, facilitate, and coordinate Ameresco's activities into the construction and subsequent operational phase of the biomass ESPC. Safety and Risk Management have already been added to the corporate team and other additions, including the Site Manager and Site Operations Manager, will be added at the appropriate time. Mr. Keith Derrington, Vice President and General Manager will continue as the senior corporate executive ultimately responsible for assuring success of Ameresco's Savannah River activities.

An organizational chart depicting the composition of the Ameresco project team is included as Figure 5.2.

Figure 5.2: Ameresco's SRS Biomass Project Team



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#### 5.2.2 Program Manager

Mr. Joe Price will continue as Program Manager, although much of the interaction and interface that he previously facilitated with the DOE and M&O staffs will be transferred to the Site Manager during construction and ultimately to the Site Operations Manager once the ECMs become operational. Mr. Price reports to Mr. Derrington and has overall responsibility for Ameresco's contract performance and client relationships at SRS. The Program Manager will also lead Ameresco's representation to the IMRT, most likely through the implementation phase before passing that responsibility to the permanent Site Operations Manager, although no decision has been made on that at this time.

#### 5.2.3 Engineering

Ms. Nicole Bulgarino will continue as Ameresco's Lead Project Engineer for the cogeneration facility and the heating plants and will represent the engineering and environmental activities at the IMRT. Ms. Bulgarino is responsible for project engineering and design, as well as the subsequent construction and performance period services. Responsibility for performance period services including equipment performance issues and annual M&V activities will also fall under purview of the Engineering Team but will be accomplished by the site operations staff.

#### 5.2.4 Business Operations

Mr. James Koulovatos, Ameresco's Director of Finance, leads the offices within the business operations group. Responsibilities of those offices to support the cogeneration facility and heating plant projects include accounting, contracting, financing, etc. Pending contract award, Mr. Koulovatos' staff will manage the development of competitive financing bid packages, work with 3<sup>rd</sup> party lenders to secure financing for the program, and prepare the final DO Schedules and Termination Liability Schedule once financing is secured and the interest rate is locked. Contractual activities include day to day contract administration functions and accounting will maintain invoicing and accounts receivables ledgers.

#### 5.2.5 Safety and Risk Management

Mr. Kenneth Gross, Ameresco's Director of Safety and Risk Management, has overall responsibility for the company's safety program. Site or project safety personnel will report directly to Mr. Gross who has been involved with the development of the Worker Health and Safety Plan (WSHP) to ensure compliance with 10 CRF 851 requirements.

#### 5.2.5.1 Site Safety Management

The Site Safety Manager (SSM) will report to the Director of Safety & Risk Management and is charged with ensuring the safety of the entire job site. The SSM, Mr. Clinton Sandmel, participated in development of the WSHP and the associated Job Hazard Analyses (JHA). The SSM is charged with ensuring that contractor and subcontractor personnel compliance with all applicable safety regulations. In carrying out site safety duties, the SSM will conduct safety (toolbox) meetings and inspections and complete the required periodic reports. The SSM will immediately report unsafe conditions and safety

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incidents to the DOE Facility Representatives and the Ameresco Site Manager, Director of Safety and Risk Management, and the SRS Program Manager.

#### 5.2.6 Construction

As Director of Construction, Mr. Bo Harkness oversees all construction activities within the federal business unit. The Site Manager, who reports to Mr. Harkness, will be charged with the day-to-day site management responsibilities during the project implementation phase. Mr. Harkness will work hand-in-hand with the Program Manager and Lead Engineer to ensure quality construction completed on schedule and on budget. The Site Manager will also be the on-site point of contact for SRS/ M&O personnel during the construction phase.

#### 5.2.6.1 Subcontract Management

Onsite construction work will be subcontracted to companies from all parts of the country. The Director of Construction and Subcontract Administrator will manage all subcontracts, while the project Site Manager and project Job Superintendent will execute and oversee the subcontracts, having authority to schedule, inspect, and accept subcontractor work. The Subcontract Administrator or Director of Construction will respond to any financial or contract management issues. Invoicing and payments to subcontractors will be handled through standard accounting procedures and using American Institute of Architects (AIA) contract formats and forms.

#### 5.2.6.2 Construction Management

The Site Manager will be charged with the day-to-day site management responsibilities during the project construction phase and is tasked with overall responsibility for job site activities. The Site Manager will also be the on-site point of contact for DOE Facility Representatives and other SRS/ M&O personnel during the construction phase. Assisted by other Construction Managers and Job Superintendent personnel, the Site Manager will lead all aspects of project construction including scheduling, coordination, construction, commissioning, and contract closeout with the strictest adherence to safety, quality, and cost control procedures.

Project Quality Control (QC) is the responsibility of everyone involved in project activities; however, ultimate responsibility for the Ameresco QC program rests with the Director of Construction. Those responsibilities are delegated to the site Quality Control Manager (QCM) who is tasked to oversee project specific QC activities. The Site Manager or Job Superintendent may be delegated as the site QCM overseeing the QC activities of all QC personnel, Ameresco and subcontractors, or a dedicated QCM may be assigned to the project team reporting to the Site Manager or Job Superintendent.

The site QCM is responsible for individual project quality control. The QCM maintains the Project Submittal, Testing, and Inspection Logs. The QCM will ensure that project documents (submittals, shop drawings, reports, etc.) are complete, accurate, and processed in a timely manner. The QCM is also charged with ensuring testing and inspections are conducted properly and in a manner that will insure

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accuracy. If necessary, the QCM will contract with specialty/professional testing companies (i.e. concrete tests and welding x-rays).

Ameresco employs the standard Army Corp of Engineers three-phase quality control process that includes the preparatory phase, initial phase, and follow-up phase. The preparatory phase is performed prior to each definable work feature. Actions such as reviewing the drawings and specifications, checking submittal status, and examining the work area, including a hazard analysis, are done at this time. The initial phase is performed at the beginning of each definable work feature. Preliminary work is inspected to insure compliance with the contract, establish the level of workmanship, and ensure compliance with the safety plan. The follow-up phase is ongoing during performance of work to ensure compliance with contract requirements, perform testing, and ensure correction of deficiencies.

# 5.2.7 Site Operations

Once the ECMs are accepted by the government the project will transition to the site operations phases, which will continue for the remainder of the delivery order performance term. It is anticipated the cogeneration facility will be staffed with 20 people whose scope of responsibilities will include the Biomass Cogeneration Facility and the K and L Area heating plants.

Ameresco intends to have a Site Operations Manager that will oversee the total operation from fuel procurement and delivery to plant operations and maintenance. The Site Operations Manager has not yet been identified; however, we have already received inquiries and resumes from interested parties.

Ameresco will use reasonable diligence to provide a regular and uninterrupted supply of steam (100% reliability) to the government-owned distribution systems, but shall not be liable for any damages, losses, costs, or expenses to the government for failure, suspension, diminution, or other variations of service occasioned by or in consequence of any cause beyond the control of Ameresco, including but not limited to acts or omissions of the Government and its agents and contractors, force majeure conditions e.g. acts of the public enemy, acts of God, fires, floods, earthquakes, etc., or failure or breakdown of the Government-owned distribution system or end-user facilities.

#### 5.2.7.1 Operations and Maintenance Responsibilities

Ameresco will perform the following operations and maintenance of the equipment and facilities installed within the Biomass Cogeneration Facility under ECM 1 and for the heating plants installed in the K and L Areas under ECM 2 for the duration of the contract performance period.

- Equipment, instrumentation and control systems installed at the Biomass Cogeneration Facility
- Equipment, instrumentation and control systems installed at the heating plants
- Buildings and Infrastructures installed at the Biomass Cogeneration Facility Site
- Building and Infrastructure installed at the K Area Heating Plant Site
- Building and Infrastructure installed at the L Area Heating Plant Site
- Utilities within the Facility and the Heating Plant (as defined in *Table 1.2* and *Table 2.2*)

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- Access drives and parking lot at the Cogeneration Facility
- Maintenance of Old Burma Road
- The existing boiler water treatment equipment and shed at the K Area
- The existing air compressor at the K Area

The Government, and/or its M&O Contractor will retain responsibility for operating and maintaining the following items:

- Utility interconnections as defined in *Table 1.2* and *Table 2.2*
- Existing utility distribution systems
- All roads except for facility access roads and the reconstructed Old Burma Road
- New pump system installed at the River Pump House
- F Area Substation
- New D Area electrical feeder
- L Area capacitors
- All other existing site infrastructure and systems

The operations and maintenance expenses include the annual costs of labor (Ameresco costs and service contractor costs from major equipment suppliers) to operate and maintain the plant for both ECMs and operating costs including chemical costs, fuel oil cost, ash disposal costs, and other consumables. The operations and maintenance costs are shown on Schedule DO-3 as performance period expenses.

# **Operations Overview**

The operation of the new plants will be lead by the Ameresco Site Operations Manager or Site Manager. The Site Manager will oversee operations and maintenance activities to ensure the following occur:

- Operate the facility to meet thermal demand of the Savannah River Site in compliance with applicable local, state and federal permits and regulations.
- Provide Quality Control for biomass deliveries.
- Provide a safe work environment for workers and visitors.
- Perform preventive maintenance in accordance with manufacturer recommendations.
- Perform major service requirements in accordance with manufacturer recommendations.
- Maintain professional and positive working relationship with Savannah River Site personnel, SCDHEC, and surrounding neighbors and community.
- Provide reports as required for M&V activities to meet plant performance guarantees.

The Site Operations Manager will [\*\*]
The Safety/Environmental Manager will [\*\*]
The Office Manager will [\*\*]
The Fuel Procurement Manager will [\*\*]
The Plant Manager will [\*\*]

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The following diagram (Figure 5.3) shows the proposed cogeneration facility staffing for operation of the cogeneration facility and the heating plants.

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# Figure 5.3: Proposed Operations Staffing

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Biomass Cogeneration Facility and Heating Plants Savannah River Site Contract DE-AM36-02NT41457

#### **Maintenance Overview**

Ameresco will perform the following:

- Operations including materials and consumables for the cogeneration facility and heating plants, such as costs for the chemicals, urea, diesel
  fuel, fuel oil, turbine filter, lube oil, and ash disposal.
- Preventive maintenance includes change out of parts, boiler inspection, boiler cleaning, turbine oil/filter changes, DA tank inspection, pump servicing, grinder and hogger inspection, instrumentation calibration, engine testing, HVAC servicing, building upkeep, Old Burma Road repair, and other service as recommended by equipment suppliers.
- Unscheduled maintenance includes cost for service and repair not planned on as part of ongoing maintenance. This mainly consists of
  contracted service support.

# 5.2.7.2 Repair & Replacement Responsibilities

The repair and replacement annual expense includes the annual costs expected for the replacement of materials such as grinder teeth, baghouse filters, sand (bed material) for both boilers, spare part inventory, and limestone replacement for SOx reduction. These costs will occur every year regardless of the age of the plant. The repair and replacement costs also include costs expected to occur for ongoing replacement and repair of boiler in bed tubes, turbine parts, motor bearings, conveyor belts, and general plant repair fund.

Repair and replacement of the equipment and systems for both ECMs as defined above includes budgeting and funding an inventory of spare parts, as well as funding and completing minor and major repairs and equipment replacements. Major repairs and replacements include boiler tubes, turbine seals, combustor refractory, combustion fans, feedwater pumps, grinders, and augers. Examples of minor replacements include minor components such as thermocouples, grinder cutters, instrumentation, motors, motor bearings, filters, chains, and auger components, etc.

# 5.3 ECM Training

An ongoing O&M Training and Safety Program will be a necessity and training will be provided to the personnel working at the three sites on a scheduled and recurring basis. Maintaining training and certification current and in good standing will be required of all personnel. The training program will also include training with suppliers to ensure the operators are familiar with the equipment operation and maintenance requirements.

#### 5.4 Risk/Responsibility Matrix

The following pages contain the ESPC Contract Risk/Responsibility Matrix.

#### RISK/RESPONSIBILITY MATRIX

# RESPONSIBILITY/DESCRIPTION

#### AMERESCO'S PROPOSED APPROACH

#### DOE-SR ASSESSMENT

#### 1. FINANCIAL:

a. <u>Interest rates</u>: Neither the Contractor nor the agency has significant control over prevailing interest rates. During all phases of the project, interest rates will change with market conditions. Higher interest rates will increase project cost, financing/project term, or both. The timing of the Contract award may impact the available interest rate and project cost. Ameresco has included preliminary interest rate information in Schedule DO-3. The interest rate shown is indicative of the financial market at the time of this Revised Final Proposal and is provided for information purposes only.

Once locked with Ameresco's lender, the interest rate will remain fixed for the term of the contract, thereby providing the DOE-SR with protection against increased interest charges resulting from a variable rate.

In 6.10 of the Revised Final Proposal, the DOE-SR agrees, among other things, to not withhold, reduce, or setoff the "TOTAL DEBT SERVICE" amount on Schedule DO-3 in the event of an Ameresco default. The reason for this is to provide assurance to Ameresco's lender that its investment is

The DOE-SR expects the Ameresco to obtain the lowest possible interest rate and will competitively seek financing from several financial institutions. The DOE-SR expects, as consideration for 6.10, that Ameresco will obtain a lower interest rate than the one indicated in the Final Proposal, dated December 8, 2008.

b. Energy prices: Neither the Contractor nor the agency has significant control over actual energy prices. For calculating savings, the value of the saved energy may either be constant, change at a fixed inflation rate, or float with market conditions. If the value changes with the market, falling energy prices place the Contractor at risk of failing to meet cost savings guarantees. If energy prices rise, there is a small risk to the agency that energy

The D Area plant that is being replaced by the Biomass Cogeneration Facility is fueled by coal purchased from SCE&G. Ameresco proposes to establish the pre-installation baseline for ECMs 1 and 2 based on the consumption and cost information provided by SRS and M&O Ameresco personnel. The baseline costs are escalated at 2008 published NIST rates for each year of the performance period.

The energy savings for all ECMs are calculated based

The rates used to establish the energy baseline are different than what has been included in DOE HQ's database, Energy Management System 4. Based on the unprecedented increases in coal costs over the previous year, the baseline costs associated with coal will come from SRS's current one-year coal contract for the D-Area Powerhouse, which took effect on

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#### RESPONSIBILITY/DESCRIPTION

saving goals might not be met while the financial goals are. If the value of saved energy is fixed (either constant or escalated), the agency risks making payments in excess of actual energy cost savings. Clarify how future energy costs will be treated.

#### RISK/RESPONSIBILITY MATRIX

#### AMERESCO'S PROPOSED APPROACH

on the reduced fuel costs associated with improved system efficiencies. To determine this reduction, the following items are predetermined for establishing the preinstallation baseline: the unit cost of fuel oil and coal, and the amount of energy produced by the existing D Area and K Area plants.

The pre-installation baseline data used in this proposal consists of cost and consumption data for a 24 month period as provided by SRS and M&O personnel for ECM 1, and 5 years of data was used to develop the baseline for ECM 2. The future cost of each of these utilities has been escalated by the applicable NIST factors for each year throughout the contract term.

Ameresco proposes the DOE-SR assume responsibility for the actual unit cost of utilities (i.e. electricity, coal, water, etc.) including any escalation or de-escalation. If at any time during the term of this contract, the ECMs do not create sufficient savings on an annual basis to fund the amount due Ameresco for reasons within SRS' control or for reasons related to changes in unit price of utilities, then SRS will pay Ameresco as agreed or renegotiate the payment schedule and term in a form mutually agreeable to both parties and Ameresco's lender such that the outstanding balance of contract payments is fully repaid.

Ameresco proposes to assume responsibility for biomass procurement and has estimated the price of biomass based on current local market conditions escalated at [\*\*]% per year.

# DOE-SR ASSESSMENT

November 1, 2008. Based on market research, coal is not expected to decrease in cost based on current and world demand. In addition, SRS's electrical rates have also increased dramatically over the last two years based on the increased costs of coal and natural gas that the Site's electrical supplier must recoup through its electric rates that have been approved by the South Carolina Public Service Commission. These baseline rates will be escalated in accordance with NIST standards

Throughout the performance period, Ameresco will be supplied utilities at no cost but the consumption data will be metered and supplied to the Site's utility department to be included in calculating the true cost of generating steam and/or electricity from the new biomass plants for inclusion in Site supplied utilities.

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#### RESPONSIBILITY/DESCRIPTION

c. Construction costs: The Contractor is responsible for determining construction costs and defining a budget. In a fixed-price design/build Contract, the agency assumes little responsibility for cost overruns. However, if construction estimates are significantly greater than originally assumed, the Contractor may find that the project or measure is no longer viable and drop it before Contract award. In any design/build Contract, the agency loses some design control. Clarify design standards and the design approval process (including changes) and how costs will be reviewed.

#### RISK/RESPONSIBILITY MATRIX

# AMERESCO'S PROPOSED APPROACH

A significant portion of Ameresco's business is focused on energy engineering, design and consulting. Ameresco staff, complemented by subcontracted experts, are developing the ECM designs for this proposal. Additionally, Ameresco's in-house construction management team has collaborated extensively with the design team, potential subcontractors, and equipment suppliers to assure project constructability, review budgeted costs, and provide insight into procurement options. Having all these functions involved throughout the DES Phase substantially lowers the risk of construction cost overruns, and ensures a realistic and balanced approach to innovation and realism in project design.

To manage the risk associated with escalating prices for construction materials and equipment, Ameresco will hold material and labor pricing set forth in Schedule DO 2 included herein through May 15, 2009. The proposal acceptance period may be extended; however, there may be changes in project pricing. The parties will share the risk of construction cost increases that occur prior to contract award; however, Ameresco will assume sole responsibility for cost increases occurring in normal market conditions after contract award as well as responsibility for managing the risks of such increases. However, should cost increases be caused by extraordinary market conditions, the parties will negotiate changes to the construction completion schedule and/or financial terms of the contract as mutually agreeable to both parties.

# DOE-SR ASSESSMENT

Upon submittal of the Revised Final Proposal, a Cost Reasonableness Review of Ameresco's Implementation Costs will be performed. Ameresco shall submit a breakdown of the Implementation costs with the Revised Final Proposal to allow the DOE-SR to perform the review.

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#### RESPONSIBILITY/DESCRIPTION

#### AMERESCO'S PROPOSED APPROACH

Design-build will be the means of project implementation, and the proposed project will be designed and constructed to meet industry and those local SRS standards identified in this proposal, and included with the contract award.

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The basic contract establishes maximums for Ameresco mark-ups for both the implementation and performance periods. Mark-ups proposed in this proposal are below the maximums allowed by the BAMF Contract. Mark-ups associated with changes resulting from concealed or environmental conditions of the project site, customer requests, or a change in contract requirements will be negotiated at the time the change is incorporated into the contract delivery order, but shall never exceed the maximum allowed by the BAMF Contract.

d. M&V costs: The agency assumes the financial responsibility for M&V costs directly or through the Contractor. If the agency wishes to reduce M&V cost, it may do so by accepting less rigorous M&V activities with more uncertainty in the savings estimates. Clarify how project savings are being verified (e.g. equipment performance, operational factors, energy use) and the impact on M&V costs.

Ameresco proposes that M&V Option B-ECM Isolation be used to verify the performance of ECM 1 and ECM 2. Project performance will be continuously metered and reported to the DOE-SR on a monthly basis. The metering equipment installed for the project, in combination with the established baseline energy costs and NIST-based annual adjustments, will provide sufficient M&V of project performance without unnecessarily increasing project costs. Section 4.4 describes the M&V plan in detail.

DOE-SR ASSESSMENT

The DOE-SR concurs with the M&V approach for the project.

#### RISK/RESPONSIBILITY MATRIX

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annually at a fixed rate of [\*\*]%.

e. Non-Energy Cost Savings: The agency and the ESCO may agree that the project will include savings from recurring and/or one-time costs. This may include one-time savings from avoided expenditures for projects that were appropriated but will no longer be necessary. Including one-time cost savings before the money has been appropriated entails some risk to the agency. Recurring savings generally result from reduced O&M expenses or reduced water consumption. These O&M and water savings must be based on actual spending reductions. Clarify sources of non-energy cost savings and how they

f. Delays: Both the Contractor and the agency can cause delays. Failure to implement a viable project in a timely manner costs the agency in the form of lost savings, and can add cost to the project (e.g., construction interest, remobilization). Clarify schedule and

how delays will be handled.

will be verified.

# Performance Period M&V costs are escalated

Both proposed ECMs will result in the shutdown of existing DOE-SR operated plants eliminating significant O&M expenses currently incurred by SRS. The O&M cost baseline is presented for each ECM and was developed based on information, and is collaborative effort

The annual O&M savings have been escalated annually at a fixed rate of [\*\*]%.

between Ameresco, SRS and M&O technical

personnel.

**NOTE:** There will be a significant reduction in the consumption of water taken from the Savannah River, although no cost savings related to such reduction in water usage have been included in this proposal.

Ameresco will fully support the DOE-SR during the review, approval, and award of the proposed ECMs to mitigate potential delays as much as is within Ameresco's control. Further, Ameresco will honor the pricing proposed herein through May 15, 2009; delays in contract award beyond that time may result in increased project cost and will result in project implementation delays.

Major milestones for obtaining project approvals, delivery order award, and project implementation are indentified in Table 1.7 herein. Ameresco will provide a

#### DOE-SR ASSESSMENT

The DOE-SR has provided actual O&M costs for both the D-Area Powerhouse and the K-Area Package Boilers. The DOE-SR will review such costs included in the Revised Final Proposal and, if acceptable, provide its concurrence.

SRS will fully support Ameresco during the review, approval, and award of the proposed ECMs to mitigate potential delays, and award the Delivery Order on schedule. In addition, DOE and the M&O Contractor will work with Ameresco to facilitate a smooth mobilization to the Site and coordinate the interfaces for key support requirements provided by SRS. Critical interface requirements should be identified on Ameresco's schedule to allow for adequate up front coordination.

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detailed project schedule subsequent to contract award reflecting the scheduled completion date for each major element of ECM 1 and 2. The schedule will be closely monitored throughout the construction phase by Ameresco's on-site management team as well as corporate management. Their proactive involvement will mitigate the occurrence of delays. Should a delay occur, Ameresco management will immediately develop a mitigation plan, discuss it with the DOE-SR staff, and then take the necessary actions to ensure the project remains on schedule.

# Schedule Risks & Mitigation Schedule Delays

The potential for schedule delays will be constantly monitored, and immediate and appropriate mitigation actions will be taken by Ameresco management personnel if necessary. The schedule is being structured both logically and realistically to minimize the potential for delays; however, should an unavoidable delay occur, Ameresco will work closely with DOE-SR engineers to determine the best course of action and, if necessary, a revised schedule will be developed and proposed. The primary objective of any revision will be to get the work back on track without extending the completion date.

# **Subcontractor Management**

Ameresco has pre-qualified many firms and will continue to pre-qualify firms that may be selected as

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#### DOE-SR ASSESSMENT

DOE-SR ASSESSMENT

#### RISK/RESPONSIBILITY MATRIX

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subcontractors. However, Ameresco will continue to evaluate qualifications and the firm's current workload prior to executing any subcontracts. If manpower later becomes an issue, Ameresco will either direct the firm to hire additional personnel, hire additional subcontractors, or replace the subcontractor.

Ameresco will manage subcontractors and suppliers through close control and monitoring of all critical activities. Monitoring and controls include the following procedures: weekly progress meetings, schedule updates, and materials management plan.

# Late Delivery of Materials/Equipment

In order to protect against late delivery of material or equipment and keep the project on schedule, Ameresco will implement and maintain a materials management plan and constantly monitor production and delivery dates

g. Major changes in facility: The agency (or Congress) controls major changes in facility use, including closure. Clarify responsibilities in the event of a premature facility closure, loss of funding, or other major change.

The SRS is not considered a candidate for closure at any time in the foreseeable future. Based on information provided by SRS personnel, a build-up in operations is projected to continue past 2020. The electrical and steam demand are projected to change in future years, but it is assumed (almost certain) that the site will be a viable entity throughout the contract term and well beyond.

The structure of the proposed project significantly reduces risk associated with changes at the site. Ameresco will be producing steam that will provide two The DOE-SR concurs with Ameresco's projection of the longevity of SRS operations. If a termination were necessary, the DOE

proceed utilizing the applicable Federal Acquisition Regulation (FAR) and Department of Energy Acquisition Regulation (DEAR) requirements.

Contracting Officer and Ameresco would

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DOE-SR ASSESSMENT

benefits to the DOE-SR; steam for thermal processes and electricity. Should changes at the facility result in reduced thermal requirements, Ameresco will produce more electricity. The first priority will be to satisfy the site's steam needs. Should there be excess capacity (delta between guaranteed steam production and site steam requirements) the steam will be processed through a turbine to produce electricity. The versatility of the process to satisfy both thermal and electrical needs of the site mitigates this rick

Ameresco has assessed the potential for closure of the site and considers it a minimal risk at this time. However, if SRS should close or experience a significant reduction, then Ameresco will be responsible for characterizing and quantifying the impact of the changes on the project. In a severe case, though highly improbable, it may necessitate either a partial or full termination for convenience; however, the contract will include a Termination Liability Schedule to facilitate arriving at appropriate termination costs. If a termination becomes necessary, Ameresco would comply with the applicable Federal Acquisition Regulation (FAR) and Department of Energy Acquisition Regulation (DEAR) requirements.

# 2. OPERATIONAL:

a. Operating hours: The agency generally has control over the operating hours. Increases and decreases in operating hours can show up as increases or decreases in "savings" depending on

Operating hours of the proposed cogeneration facility and heating plants have been predetermined. The operating hours of SRS facilities obtaining service from the Ameresco plants (i.e., steam and/or electricity)

The DOE-SR concurs with this approach since the ASG will not be dependent on facility operating hours. Excess steam above the customer requirements will be

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the M&V method (e.g. operating hours multiplied by improved efficiency of equipment vs. whole building/utility bill analysis). Clarify whether operating hours are to be measured or stipulated and what the impact will be if they change. If the operating hours are stipulated, the baseline should be carefully documented and agreed to by both parties.

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were also determined for purposes of establishing baseline consumption data, but will have little to no impact on the operations of the proposed ECMs unless increased operating hours contributes to the site requiring more steam than provided by the ASG.

ECM 1, the cogeneration facility (replacing existing D Area plant) shall operate 24/7 year round and ECM 2, the K and L Area plants will operate 24/7 as necessary over approximately a four month period each year to meet building heating loads. Although operating hours are predetermined, steam delivery requirements will be both pre-determined and measured.

Over the past two years, SRS' energy consumption has been relatively consistent in conjunction with the operating hours. Therefore, the energy baseline and guarantees assume predetermined operating hours for the term of the delivery order; however, Ameresco will guarantee an annual quantity of steam production that will not be impacted by changes to facility operating hours.

The DOE-SR will control and be responsible for its increasing or decreasing facility operating hours.

The overall site steam load is expected to decrease in the out years of the contract performance period. Ameresco and DOE-SR personnel worked closely during the DES phase to construct a model of out year steam requirements to accommodate the decreases. Project performance calculations are based on load

DOE-SR ASSESSMENT

dispatched for electrical generation.

b. Load: Equipment loads can change over time. The agency generally has control over hours of operation, conditioned floor area, intensity of use (e.g. changes in occupancy or level of automation).
 Changes in load can show up as increases or decreases in "savings" depending on the M&V

The DOE-SR agrees with Ameresco's proposed approach. Additional steam requested by the DOE-SR above the ASG will be compensated for at Ameresco's incremental biomass expense with a mutually negotiated markup.

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method. Clarify whether equipment loads are to be measured or stipulated and what the impact will be if they change. If the equipment loads are stipulated, the baseline should be carefully documented and agreed to by both parties.

#### AMERESCO'S PROPOSED APPROACH

projections shown in Table 1.1, which were provided by site personnel and are assumed by Ameresco to be correct. Decreasing steam requirements will be accommodated by increasing net green power generation. Increasing steam requirements above ASG (excess production) will be accommodated up to the maximum plant capacity. Compensation for the excess steam production will be included in the annual cost adjustment.

It is proposed that the DOE-SR and Ameresco share the risk of increased load requirements. Ameresco will assume responsibility for providing the steam to meet increased loads up to the maximum plant capacity. However, Ameresco will be compensated for steam deliveries above the guaranteed annual production quantities as provided for by the fuel adjustment provision found in Section 1.3.1.2 of this proposal.

c. Weather: A number of energy efficiency Neither Ameresco nor the DOE-SR has control measures are affected by weather. Neither over the weather and changes in weather can the Contractor nor the agency has control increase or decrease the amount of steam needed over the weather. Changes in weather can by SRS facilities. However, the metric for increase or decrease "savings" depending determining whether Ameresco has satisfied its performance guarantees are not weather dependent; therefore, weather corrections are not be necessary. Ameresco proposes that no weather corrections be made as neither ECM will be significantly impacted by the weather since the baseline has been developed from historical consumption data.

NOTE: Although weather could impact the amount of steam needed for heating purposes, that risk has been

DOE-SR ASSESSMENT

The DOE-SR agrees with Ameresco's proposed approach.

actual savings could be less than payments for a given year, but will average out over the long run. Clearly specify how weather corrections will be performed.

on the M&V method (e.g. equipment run

improvement vs. whole building utility

bill analysis). If weather is "normalized,"

hours multiplied by efficiency

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addressed by increased electrical generation as outlined in paragraph b above.

d. User participation: Many energy conservation measures require user participation to generate savings (e.g. control settings). The savings can be variable and the Contractor may be unwilling to invest in these measures. Clarify what degree of user participation is needed and utilize monitoring and training to mitigate risk. If performance is stipulated, document and review assumptions carefully and consider M & V to confirm the capacity to save (e.g. confirm that the controls are functioning properly).

Ameresco will operate and maintain the systems proposed under both ECMs as defined in Section 5.2.7.1. The ECMs will interconnect with site utility distribution systems that will be maintained by the site M&O Contractor, as is currently the case. The DOE-SR will be the end user of the steam produced by the Ameresco plants. The Government must accept steam deliveries and the site M&O contractor must ensure utility services are available for the ECMs to be effective. The risk of either the DOE-SR not accepting steam deliveries (within the baseline amounts) or the utility systems being down over prolonged period of time is minimal

The DOE-SR agrees with Ameresco's proposed approach.

#### 3. PERFORMANCE:

a. Equipment performance: Generally the Contractor has control over the selection of equipment and is responsible for its proper installation, commissioning, and performance. Generally the Contractor has responsibility to demonstrate that the new improvements meet expected performance levels including specified equipment capacity, standards of service, and efficiency. Clarify who is responsible for initial and long-term performance, how it will be verified, and what will be done if performance does not meet expectations.

Ameresco will retain responsibility for the performance of the equipment throughout the term of the performance period for both ECMs as defined in *Section 5.2.7.1*. Ameresco has experience and is familiar with the equipment. It selected the equipment based upon efficiency, performance level, and reliability, and in conjunction with the manufacturer's service and performance guarantees. Performance of the equipment will be reflected in the annual M&V documentation provided by Ameresco.

The DOE-SR agrees with Ameresco's proposed approach.

Operations: Responsibility for operations is negotiable, and it can impact performance. Clarify

Ameresco will retain operations responsibility and assumes the risks associated with ECM operations

The DOE-SR agrees with the Ameresco's proposed approach.

DOE-SR ASSESSMENT

#### RISK/RESPONSIBILITY MATRIX

#### RESPONSIBILITY/DESCRIPTION

responsibility for operations, the implications of equipment control, how changes in operating procedures will be handled, and how proper operations will be assured.

#### AMERESCO'S PROPOSED APPROACH

throughout the contract term as defined in Section 5.2.7.1. Proper operations will be assured by appropriate staffing levels of the plant by local Ameresco personnel and/or contracted employees.

Ameresco site management will implement and oversee plant operations to ensure equipment is operated and maintained to provide an efficient and safe operation that satisfies manufacturer and contract requirements.

Title to the biomass fuel will pass to the DOE-SR upon delivery to the plant site. Should the biomass fuel become damaged or destroyed due to the fault or negligence of Ameresco, then Ameresco shall bear responsibility for replacing such damaged biomass fuel. Otherwise, DOE-SRS shall be responsible for any biomass fuel damaged or destroyed for any other reason.

Ameresco assumes responsibility for all maintenance and repairs of the equipment installed in the new facility under the contract term as defined in Section 5.2.7.1. This includes a preventative maintenance program, incidental repairs, and warranty work. Ameresco will verify performance of the maintenance on an on-going basis, with an in-depth review of the maintenance program conducted during annual performance reconciliation. The ongoing costs of operations and maintenance for the equipment is included in the performance period expenses and escalated annually at [\*\*]% for the inadequate preventive maintenance duration of the performance period.

proposed approach.

The DOE-SR agrees with Ameresco's

Use or disclosure of data contained on this sheet is subject to the restriction on the first page of this proposal

c. Preventive Maintenance: Responsibility for maintenance is negotiable, and it can impact performance. Clarify how longterm preventative maintenance will be assured, especially if the party responsible for long-term performance is not responsible for maintenance (e.g., Contractor provides maintenance checklist and reporting frequency). Clarify who is responsible for long-term preventive maintenance to maintain operational performance throughout the Contract term. Clarify what will be done if

impacts performance.

Biomass Cogeneration Facility and Heating Plants Savannah River Site Contract DE-AM36-02NT41457

#### RESPONSIBILITY/DESCRIPTION

d. Equipment Repair and Replacement:
Responsibility for repair and replacement of Contractor-installed equipment is negotiable; however it is often tied to project performance. Clarify who is responsible for the replacement of failed components or equipment throughout the term of the Contract. Specifically address potential impacts on performance due to equipment failure. Specify expected equipment life and warranties for all installed equipment. Discuss replacement responsibility when equipment life is shorter than the term of the Contract.

# RISK/RESPONSIBILITY MATRIX AMERESCO'S PROPOSED APPROACH

Ameresco will assume responsibility for the repair and/or replacement of failed components and equipment throughout the term of the contract as specified in Section 5.2.7.2 except for such damaged or destroyed ECM equipment for which the DOE-SR self-insures pursuant to Section 6.5 of the Revised Final Proposal.

# DOE-SR ASSESSMENT

As part of the Performance Period expenses, Ameresco has included, and is clearly responsible for, all Repair & Replacement functions. Only Ameresco-installed equipment that is damaged or destroyed for reasons beyond the control and without the fault or negligence of Ameresco, may result in consideration as noted in Section 6.5 of the Revised Final Proposal.

Biomass Cogeneration Facility and Heating Plants Savannah River Site Contract DE-AM36-02NT41457

#### 6.0 PROPOSAL PRICING INFORMATION

Schedules DO-1 through DO-5(a) (the "DO-Schedules") presented at the end of this section provide the economic and financial details of the proposed project based on SRS making annual debt service payments at the beginning of each performance period and monthly performance period expenses.

In addition to price quotes and estimates provided by suppliers and vendors, price estimates were developed using Ameresco software cost models, historical project cost data, and cost estimating guides (e.g. RS Means, etc.).

#### 6.1 Interest Rate

Ameresco's locked interest rate of 8.19% as shown on Schedule DO-3 is based on Moody's AA Corporate Index, as published by Bloomberg on May 12, 2009, of 6.14% plus a spread above the Index of 2.05%.

# **6.2 Finance Procurement Price**

The finance procurement price set forth on Schedule DO-3 consists of the following three components and will fluctuate until the project interest rate mentioned above is fixed:

- a) Performance/Payment Bond Performance and payment bonds are a requirement of the Contract. The performance bond is purchased by Ameresco to protect the Government and the third party lender against Ameresco non-performance during the implementation period. The performance bond applies only to the installation portion of the work under this contract and does not apply in any way to energy savings guarantees, payments or maintenance provisions, except that the performance bond shall guarantee that the installation will be free of defective materials and workmanship for a period of twelve (12) months following completion and acceptance of the work. Ameresco's lender will require the execution a Dual-Obligee Rider naming such lender as an additional or dual-obligee under the performance bond.
- b) Interest During Construction ("IDC") This cost represents the interest costs accruing to Ameresco during the proposed implementation period. Ameresco's DO-Schedules assume a traditional upfront funding of the Total Amount Financed into an interest bearing escrow account upon award of the contract, Ameresco will be charged interest on the amount funded at the project interest rate and will net these interest charges with interest earnings on the escrow account's remaining principal balance. Ameresco will receive progress payments

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for implementation expenses from the escrow account. In addition to the traditional escrow funding approach, Ameresco is exploring a delayed funding structure in lieu of the traditional escrow funding structure proposed herein. Under the delayed funding structure, Ameresco's lender will advance progress payments to Ameresco periodically during the construction period. Interest will begin to accrue only on the progress payments made to Ameresco and accrued interest will negatively amortize the outstanding balance. Ameresco believes if it is able to utilize the delayed funding structure it will provide significant savings on interest during construction.

c) <u>Finance Processing Fee</u> – The finance processing fee represents expenses Ameresco will incur to finance the contract. Typically, this fee is a combination of the following applicable expenses: legal fees, origination fees, fees for rating agencies, rate lock fees to fix the interest rate during the implementation period, trustee or fiscal agent fees, and any rate buydown costs.

#### 6.3 Sales Tax

Ameresco intends to pursue a sales tax exemption with the South Carolina Department of Revenue ("SCDOR") with respect to the ECM equipment pursuant to S.C. Code Ann. section 12-36-2120(29). This exemption provides the following sales are exempt from sales tax: "tangible personal property purchased by persons under a written contract with the federal government when the contract necessitating the purchase provides that title and possession of the property is to transfer from the contractor to the federal government at the time of purchase or after the time of purchase. This exemption also applies to purchases of tangible personal property which becomes part of real or personal property owned by the federal government or, as provided in the written contract, is to transfer to the federal government. This exemption does not apply to purchases of tangible personal property used or consumed by the purchaser." The SCDOR also issued South Carolina Revenue Ruling No. 04-9, which outlines the requirements for contractors to qualify for the exemption contained in S.C. Code Ann. section 12-36-2120(29). For the contractor's purchases to be exempt from sales tax, the contractor must have a written contract with the federal government which provides that title and possession of the property is to transfer from the contractor to the federal government at the time of purchase or after the time of purchase and such title and possession actually transfers to the federal government in accordance with the contract or the property becomes part of a real or personal property owned by the federal government or is to transfer to the federal government.

Ameresco must obtain an exemption certificate issued by the SCDOR to purchase tangible personal property exempt from sales tax. Ameresco will submit an application (S.C. Form ST-10G) together with a copy of the executed contract to obtain the required exemption certificate. Due to the fact that Ameresco will not receive an exemption certificate until after contract award is executed, Ameresco has included a sales tax reserve in its proposal in the approximate amount of \$4,600,000. Should Ameresco receive an exemption certificate, Ameresco will request that its lender deposit the sales tax reserve into the PPEF upon the Government's acceptance of the ECMs. Ameresco proposes to wait until acceptance

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to fund the PPEF with the sales tax reserve to avoid paying interest on such reserve during the construction period. To the extent that Ameresco is denied an exemption certificate by the SCDOR, Ameresco will notify the Government of such determination and the sales tax reserve shall be dispersed to Ameresco by its lender via progress payments.

#### 6.4 Property Tax

Title to all contractor-installed equipment associated with each ECM shall vest in the Government. Therefore, the Government is the owner of all contractor-installed equipment for property tax purposes and Ameresco has not included property taxes in this proposal. In the event the Government elects not to accept title to the contractor-installed equipment, Ameresco would need to revise this proposal to include all applicable property taxes.

#### 6.5 Insurance

Ameresco will maintain builder's risk insurance coverage on all contractor-installed equipment during the implementation period. Ameresco's proposal does not include any cost related to insuring any contractor-installed equipment post-acceptance. Title to all equipment installed by Ameresco shall be vested with the Government after acceptance by the Government of the commercial operation of such ECM and the Government will self-insure all such Contractor-installed equipment throughout the Delivery Order term for the Total Amount Financed as shown on Schedule DO-3. This acceptance shall not relieve Ameresco's responsibility for ECM performance. Ameresco will be responsible for operating and maintaining all ECMs throughout the contract term as set forth herein. If such Ameresco-installed equipment is damaged or destroyed, for reasons beyond the control and without the fault or negligence of Ameresco, the Government shall have the option to (i) terminate the Delivery Order (either in part or in whole) and hold Ameresco harmless for the savings and performance associated with the damaged or destroyed equipment for the remainder of the term, (ii) pay Ameresco, by separate contract action to repair or replace the damaged or destroyed equipment and continue making its scheduled payments to Ameresco, or (iii) repair or replace the damaged or destroyed equipment at its cost and continue making its scheduled payments to the Ameresco. If the repair/replacement work is performed by any party other than Ameresco, a commissioning of the repair/replacement work must be conducted, witnessed and approved by both the Government and Ameresco. This requirement is necessary for Ameresco to continue to guarantee the related energy savings as set herein.

#### 6.6 Payment/Term

Ameresco will submit its initial invoice for payment with respect to an ECM upon the earlier of (i) completion of the ECM and acceptance by the Government or (ii) when the Government has beneficial use of such ECM. Following the initial invoice submittals by Ameresco, Ameresco will invoice the Government on or before the first day of April each year thereafter such that the Government's annual

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Debt Service payment will be paid annually on or before the first day of May. Performance Period Expenses will be paid monthly on the first day of each month in an amount equal to one-twelfth (1/12) of the Total Performance Period Expenses due for each Performance Period. Submission of or revisions to the Post Installation Completion Report, As-Built drawings, or O&M Manuals, or delays in providing training that do not affect savings, shall not delay acceptance with respect to the commencement of making payments to Ameresco, but will be noted as punch list items and addressed by Ameresco in a timely manner. Ameresco is proposing annual debt service payments be made at the beginning of each performance period because it reduces the principal balance the fastest and results in the lowest interest expense to the Government. The annual debt service period will occur and payment will be due prior to Ameresco's submission of the applicable year's Annual M&V Report. However, any shortfall in Annual Savings set forth in such report will be adjusted from future performance period payments as provided in Section G.4 of the BAMF Contract. Payments from the government will be applied first to prompt payment interest, then to performance period expenses, then to interest and then to principal.

#### 6.7 Cancellation/Termination/Buyout

Schedule DO-5(a) — Termination Liability Schedule is provided with this proposal in addition to Schedule DO-5(a) provides an amortization of the project's outstanding principal balance along with the calculation used to determine the Termination Liability and is provided for use in the event that the Government prepays or terminates the project for its convenience. Schedule DO-5(a) represents Ameresco and its third-party lender's recovery of allowable contract expenditures, and associated profit, incurred as of the date of termination or buyout and assumes all payments are received by Ameresco (or its assignee) when due. The column titled "Outstanding Principal Balance" represents Ameresco's recovery of costs associated with the installation work in connection with implementing the ECMs. The column titled "Lender's Termination Premium" over the original project cost represents the third-party lender's immediate recovery of administrative, placement, legal, and investment banking expenses associated with the original financing as well as its termination. These financing costs are not represented in the project cost as a line item, but are built into the interest rate spread and recovered over time as debt service. If Schedule DO-5(a) only reflected the project costs, Ameresco's third party lender would fail to recover their allowable contract expenses and associated profit in the event of a termination or buyout. The lender's termination premium is a cost recovery alternative that the third-party lender must rely on in the event of a termination or buyout in lieu of amortizing fees and costs over time.

In the event of a termination for convenience in whole, cancellation in whole, or prepayment in whole, the Government acknowledges and agrees that it shall be obligated to pay the specific Termination Liability amount set forth on Schedule DO-5(a) for the month corresponding to the effective date the Government intends to make payment to Ameresco. In the event of a termination for convenience in part, cancellation in part or reduction in requirements in part, the Government acknowledges and agrees that Ameresco shall apply any such payment made by the Government to the Outstanding Balance and Lender's Termination Premium amounts set forth on Schedule DO-5(a) corresponding to the effective date of such payment in part. Following the application of such payment in part, the Government will enter into a contract

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modification to incorporate a revised Schedule DO-5(a) reflecting, at the Government's option, a reduction in the total number of payments or reduction in amount per payment over the remaining term such that, in either case, the Outstanding Principal Balance is fully repaid. In the event of a prepayment or buydown, the Government acknowledges and agrees that Ameresco shall apply any such payment made by the Government as set forth in *Section 6.8* below.

Any termination for convenience of the Performance Period portion of the contract shall be handled in accordance with FAR 52.249-2.

#### 6.8 Prepayments/Buydowns

In the event the Government chooses to make prepayments or buydowns during the performance period of the contract term, with the purpose of reducing the outstanding unamortized balance of the financing for the ECMs, and thereby reducing the price/payments and overall term of the contract, the following method shall be used to apply those prepayments to the delivery order price:

The prepayment amount will be placed by the third-party financier into an account to be identified in the prepayment modification to the delivery order, to be reinvested at a fixed rate, and at which rate the amount shall earn and accrue interest, for the shorter of (a) the remaining term of the delivery order, as revised by delivery order modification of the award Schedules at the time of any prepayment; or (b) the period up to the date the delivery order may be terminated by the Government. Determination of the fixed rate at which the prepayment amount shall earn and accrue interest shall be by mutual agreement of the parties based on then-current reinvestment rates. The sum of (i) the prepayment amount and (ii) projected accrued interest shall be the total amount applied against the remaining delivery order payments, as reflected in the task order, in reverse order of the scheduled contract payments. Thereby, the scheduled term of the contract shall be reduced, and the payment schedule revised and overall price reduced, as reflected in a revised schedule incorporated into the contract by modification. A revised schedule will also be provided and incorporated into the delivery order award by modification. This process may be repeated to incorporate subsequent prepayments.

#### 6.9 Protection of Financier's Interest

All cure or show-cause notices of notices of default will be mailed by the Government to Ameresco's assignee, as set forth in the Notice of Assignment delivered to the Contracting Officer, at least 15 days in advance of any termination of this contract for default. The Government will consider requests by such assignee to extend the applicable cure or show-cause response period so long as such cure is being diligently pursued.

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# 6.10 Security Interest in ECM Equipment

During the implementation period and prior to title to the ECM equipment vesting in the Government, the Government agrees to subordinate any security interest it may have in any Ameresco installed ECM equipment to Ameresco's lender, and grants such lender a first priority security interest in the ECM equipment. Upon the Government's acceptance of each ECM, Ameresco will cause its lender to release its security interest in such ECM equipment and to deliver evidence of such to the Contracting Officer.

# 6.11 Assignment of Claims

Pursuant to DOE FAR subpart 932.803 Policies, Ameresco proposes to finance the ECMs through an assignment of the Government's payments under the contract awarded in connection with this proposal in compliance with FAR 52.232-23 Assignment of Claims, Alternate I (Apr 1984). Ameresco or its lender will remit to the Government the required Notice of Assignment together with the Instrument of Assignment. The Government agrees to acknowledge receipt of such notice and incorporate such assignment in a contract modification.

#### 6.12 Title to and Responsibility for Contractor-Installed Property

The Government acknowledges that, with respect to the ECMs, the Government is obligated to accept delivery thereof pursuant to the contract upon satisfaction of the conditions thereto. After acceptance by the Government of the installed ECMs and vesting of title with the Government to the equipment installed by Ameresco, the Government agrees that there shall be no withholding, reduction or setoff by the Government in the payment of the specific amounts as set forth in the row labeled "TOTAL DEBT SERVICE" on Schedule DO-3 as a result of (i) any termination for default, in whole or in part, pursuant to FAR Clause 52.249-8 (Default-Fixed Price Supply and Service) by the Government of the Performance Period (as defined in Modification M005 to Contract No. DE-AM36-02NT41457, Section J, Attachment 1) portion of the contract, or (ii) any costs assessed against Ameresco pursuant to FAR Clause 52.246-4 (Inspection of Services-Fixed Price).

In the event of any termination for default, in whole, of the Performance Period portion of the contract, the Government may elect to, but in no way is obligated or required to, buyout the Ameresco installed equipment by paying the sum of the columns labeled "Outstanding Principal Balance" and "Lender's Termination Premium" on Schedule DO-5(a) for the month corresponding to the effective date of such termination (the "Buyout Amount"). In the event of such an election by the Government, the Government agrees that, with respect to the Buyout Amount, there shall be no withholding, reduction or setoff by the Government in the payment thereof.

In the event of any termination for default, in whole or in part, of the Performance Period portion of the contract pursuant to FAR Clause 52.249-8 (Default-Fixed Price Supply and Service) or assessment of costs against Ameresco pursuant to FAR Clause 52.246-4 (Inspection of Services-Fixed Price), the

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Government reserves the right to exercise any and all of its rights and remedies against Ameresco (including any and all rights to recover excess reprocurement costs that the Government may incur as a result of Ameresco's default and/or Ameresco's failure to perform the Performance Period portion of the contract), except for the withholding, reduction or setoff restrictions expressly provided for herein.

### **6.13 Construction Milestones**

The Government agrees, from time to time during the implementation period, to provide its written acknowledgement of the satisfaction of certain predetermined construction milestones set forth on Table 1.7 Project Milestones. Any such acknowledgement by the Government will not constitute acceptance of the ECM on the part of the Government and will not require the Government to commence making payments until such ECM is operational as described herein.

### DO SCHEDULES

#### **SCHEDULE DO-1 (Final)**

#### **Guaranteed Annual Cost Savings and Annual Contractor Payments**

If selected, the Contractor shall complete the installation of all proposed ECMs not later than 34 months after delivery award.

Delivery Order No.:	Contractor Name:	Project Site	
DE-AT09-09SR22572 dated 15-May-2009	Ameresco Federal Solutions	Savannah River	
Performance Period Year	(a) Initial Estimated Annual Cost Savings S	(b) Proposed Guaranteed Annual Cost Savings \$	(c) Annual Contractor Payments \$
ZERO (6)	[**]	[**]	[**]
ONE	[**]	[**]	[**]
TWO	[**]	[**]	[**]
THREE	[**]	[**]	[**]
FOUR	[**]	[**]	[**]
FIVE	[**]	[**]	[**]
SIX	[**]	[**]	[**]
SEVEN	[**]	[**]	[**]
EIGHT	[**]	[**]	[**]
NINE	[**]	[**]	[**]
TEN	[**]	[**]	[**]
ELEVEN	[**]	[**]	[**]
TWELVE	[**]	[**]	[**]
THIRTEEN	[**]	[**]	[**]
FOURTEEN	[**]	[**]	[**]
FIFTEEN	[**]	[**]	[**]
SIXTEEN	[**]	[**]	[**]
SEVENTEEN	[**]	[**]	[**]
EIGHTEEN	[**]	[**]	[**]
NINETEEN	[**]	[**]	[**]
TWENTY	[**]	[**]	[**]
TWENTY-ONE	[**]	[**]	[**]
TWENTY-TWO	[**]	[**]	[**]
TWENTY-THREE	[**]	[**]	[**]
TWENTY-FOUR	[**]	[**]	[**]
TWENTY-FIVE	[**]	[**]	[**]
TOTALS	[**]	[**]	[**]

<sup>(1)</sup> The first year DES Proposed Annual Cost Savings shall reflect technical proposal & engineering estimates as presented in DO-4. above represents a 16 month period (January 2012 to April 2013) and is calculated by dividing the DO-4 savings by 12 months and then multiplying such amount by 16 months.

- (a) Energy Rates Table S-3; Water Rates [\*\*]%.
- (b) Energy Related O&M Savings [\*\*]%.
- (6) Year Zero Contractor Payment includes \$300,000 deposit into the PPEF.

<sup>(2)</sup> The Guaranteed Annual Cost Savings are based on the site specific M&V plan.

<sup>(3)</sup> The Annual Contractor Payments represent the deliver order price and should be supported by information submitted in Schedules DO-2 and DO-3.

<sup>(4)</sup> The Guaranteed Annual Cost Savings must exceed the Annual Contractor Payments for each performance period year.

<sup>(5)</sup> Provider escalation rates applied to DES Proposed Annual Cost Savings in column (a) as follows:

### SCHEDULE DO-2

### IMPLEMENTATION PRICE BY ECM

	Project Site:		Delivery Order No.:		C	ontractor Nan	ne:	
	Savannah River Site	;	DE-AT09-09SR22572 dated 15-Ma	y-2009	Amere	esco Federal Sc	lutions	
7	C.2.2 Fechnology Category Letter	ECM No.	ECM Description - Title	ECM Size	(a) Total Implementation Expense	(b) Mark-up %		) = (a) x (1+b) ementation Price
							\$	_
			DES/Proposal Development Costs		[**]	[**]%	\$	1,164,800
	r	1	D Area Biomass Replacement Plant	240,000 pph; 20 MW	[**]	[**]%	\$	137,500,762
	r	2	K&L Area Biomass Replacement P	lant (2) 10,500 pph	[**]	[**]%	\$	10,507,004
					[**]		\$	149,172,566
	Bonded Amount (\$)	)	\$ 149,	172,566				

### Notes:

- 1) Total Implementation Expenses shall include direct costs as specified in the Contract or in negotiated B Schedules.
- 2) Contractor shall propose bonded amount representing the basis of establishing performance and payment bonds per Section H in IDIQ.
- 3) Proposed bonded amount is assumed to include markup applied to ECM expenses above, unless otherwise specified by Contractor.
- 4) Bonded Amount (\$) negotiated will be used to establish Performance and Payment Bond sums per Section H.

### **SCHEDULE DO-3**

#### Performance Period Cash Flow (PAGE 3)

Project Site: Savannah River Site

Delivery Order No: DE-AT09-09SR22572 dated 15-May-2009

**Contractor:** Ameresco Federal Solutions

Delivery Order No: SRS BAMF Revised Final Proposal 11-May-2009

•		
	Project Capitalization	
Total Implementation Price (DO-2 Total)		\$149,172,566
Finance Procurement Price (\$)		\$ 25,003,318
Add: Financed PPEF Deposit (See Note 5)		\$ 9,200,000
Less: Pre-Performance Period Payments		<b>\$</b> —
TOTAL AMOUNT FINANCED		\$183,375,883
Applicable Financial		
Index		Moody's AA Corporate
Term (Years)		12.0
Index Rate		6.14%
Added Premium		2.05%
Project Interest Rate		8.19%
Issue Date:		May 12, 2009
Source:		Bloomberg
T 40 .4		

Effective Through:																				I	N/A
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Term 19 years	_	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20 Totals
Annual Cash Flow (Performance Period)																					
Debt Service:																					
Interest (\$)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
Principal Repayment (\$)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
TOTAL DEBT SERVICE(a)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Performance Period Expenses:																					
Management/Administration (\$)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Maintenance & Operation (\$)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Repair and Replacement (\$)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Measurement and Verification (\$)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Permits and Licenses (\$)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Insurance (\$)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Property Taxes (\$)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Other — Biomass Fuel (\$)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
SUBTOTAL Performance Period								. ,											. ,		. , . ,
Expenses	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Performance Period Mark-Up — All	. ,	. ,		. ,		. ,	. ,	. ,		. ,									. ,		. , . ,
PPEs other than Biomass at 28%	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Performance Period Mark-Up (%) -																					
Biomass at 22%	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Performance Period Mark-Up (\$)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]
TOTAL PERFORMANCE PERIOD																					
EXPENSES (b)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
PPEF Deposit - ECM-2 from Year 0	- 1	- 1	- 1	- 1	- 1		- 1		- 1	- 1	- 1	- '	- '	- '	- '	- '	- '	- 1	- 1	- 1	
Savings(c)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]
Total Amount Contractor Payments(a) +				_																	
(b) + (c)	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**]	[**] [**]

#### Notes:

- 1) Performance Period Expenses shall include only direct costs.
- 2) Contractor shall specify escalation rate applied to performance period expenses or other sources, in accordance with the IDIQ contract.
- 3) If applicable, contractor shall specify escalation rate applied to performance period expenses: Applicable escalation is [\*\*]%, with the exception of Biomass which is [\*\*]%
- 4) Year 0 savings will be applied to Performance Period Expenses for ECM-2 and the PPEF deposit shown in Year 0 above.
- 5) The PPEF amount represents the aggreagate of the following amounts to financed and deposited into the PPEF:

a) Sales tax reserve (see Section 6.3 of the Final Proposal)	\$4,613,228
b) PPEF Funding Amount upon Acceptance	\$4,586,772
PPEF Deposit from financing proceeds	\$9,200,000

# SCHEDULE DO-4 First Year Energy and Cost Savings by ECM, Technology Category and Delivery Order

									Con	tractor: Amer	esco Federal	Solutions		Project Square I	Footage (KSI	7):			
			Delivery Order	No.: DE-AT09	-09SR22572	dated 15-	May-2009					(f)	(g)	(h)			(k)	N/A	
Project Site:			(a)	(b)(1)	(b)(2)	(c)(1)	(c)(2)	(d)(1)	(d)(2)	(e)(1)	(e)(2)	b1+d1+e1	b2+c2+d2+e2	Other Energy-			g+h+j		(m)
C.2.2			Project or	Electric	Electric	Electric	Electric	Fuel	Fuel	Oher	Other	Total	Total	Related and	(i)	(j)	Estimated	(1)	m=l/k
Tech	Sava	nnah River Site	ECM Energy	Energy	Energy	Demand	Demand	Oil	Oil	Energy	Energy	Energy	Energy	O&M	Water	Water	Annual	Implementation	Simple
Category	ECM		Baseline	Savings	Savings		Savings		Savings	Savings	Savings	Savings	Cost Savings		Savings	Savings	Cost Savings	Price	Payback
Letter	No.	Description	(MBTU/yr)	(kWh/yr)	(\$/yr)	(kW/yr)	(\$/yr)	(Mbtu/yr)	(\$/yr)	(Mbtu/yr)	(\$/yr)	(Mbtu/yr)	(\$/yr)	(\$/yr)	(k-gal/yr)	(\$/yr)	(\$/yr)	\$	(yrs)
q		DES/Proposal																	
		Development																	
		Costs		:	s —	_	s —	_	s —	— 5	s —	_	s —	\$ —	_	_	s —	\$ 1,164,800	N/A
r	1	D Area Biomass																	
		Replacement Plant	3,978,008	(55,415,523)	\$ (3,941,118)	-	s —	_	s —	3,978,008	\$24,994,446	3,788,874	\$21,053,328	\$ 12,482,882	(460,671)	(355,013)	\$ 33,181,197	\$ 137,500,762	4.14
r	2	K&L Area Biomass Replacement																	
		Plant	42,884	(345,600)	(35,355)	—	s —	42,884	\$593,563	— 5	s —	41,704	\$ 558,208	\$ 638,970	(4,007)	(25,917)	\$ 1,171,260	\$ 10,507,004	8.97
			_																
TOTAL				(55,761,123)	\$ (3,976,474)	_	s —	42,884	\$593,563	3,978,008	\$24,994,446	3,830,579	\$21,611,535	\$ 13,121,852	(464,678)	\$ (380,930)	\$ 34,352,457	\$ 149,172,566	4.34

#### Notes:

- 1) Project Square Footage (in 1000 SF) Include only building square footage affected by installed ECMs in project.
- 2) For column (a) insert estimated energy baseline by ECM and total project in MBTU based on M&V approach in technical proposal and DES.
- 3) Energy conversion factors for MBTU: MBTU= $10^6$  BTU; Electricity 3413 BTU/kWh; Natural Gas 1031 BTU/100CF; Coal 12,290 BTU/lb; #2 Oil 138,700 BTU/gal.
- 4) "Other" energy savings in (e)(1) and (e)(2) represent coal savings.

### **SCHEDULE DO-5**

### Annual Cancellation Ceiling Schedule

<b>Project Site:</b> Savannah River Site	DE-AT09-09	livery Order No.: SR22572 dated 15-May-2009 utstanding Capital Investment	Ameres	ontractor Name: sco Federal Solutions tal Cancellation Ceiling
Installation Acceptance	\$	183,375,883	\$	192,544,677
End of Year One	\$	173,872,203	\$	182,565,813
End of Year Two	\$	169,186,687	\$	177,646,021
End of Year Three	\$	163,908,479	\$	172,103,903
End of Year Four	\$	157,863,143	\$	165,756,300
End of Year Five	\$	150,837,374	\$	158,379,243
End of Year Six	\$	142,344,922	\$	149,462,168
End of Year Seven	\$	132,506,118	\$	139,131,424
End of Year Eight	\$	121,479,677	\$	127,553,661
End of Year Nine	\$	108,734,351	\$	114,171,068
End of Year Ten	\$	92,487,417	\$	97,111,788
End of Year Eleven	\$	74,132,095	\$	77,838,700
End of Year Twelve	\$	53,511,954	\$	56,187,552
End of Year Thirteen	\$	30,483,995	\$	32,008,195
End of Year Fourteen	\$	4,662,037	\$	4,895,139
End of Year Fifteen	\$	<del></del>	\$	_
End of Year Sixteen	\$	<del>_</del>	\$	_
End of Year Seventeen	\$		\$	
End of Year Eighteen	\$	<del>-</del>	\$	_
End of Year Nineteen	\$		\$	_
End of Year Twenty	\$	<del>_</del>	\$	_
End of Year Twenty-one	\$	<del></del>	\$	_
End of Year Twenty-two	\$	<del>_</del>	\$	_
End of Year Twenty-three	\$		\$	_
End of Year Twenty-four	\$	<del>-</del>	\$	_
End of Year Twenty-five	\$	<del></del>	\$	_

 $<sup>(1) \</sup>quad \hbox{Outstanding Capital Investment} -- Remaining \ Unamortized \ principal \ on \ Total \ Amount \ Financed.$ 

<sup>(2)</sup> In the event of contract cancellation or termination for convenience the Termination Liability amount set forth on the Termination Liability Schedule will apply for amounts due Contractor's lender as set forth in Section 6.7 of Contractor's Proposal.

<sup>(3)</sup> The Contractor has attached a monthly Financing Termination Liability Schedule which must correspond to the annual amounts submitted above in each year for Outstanding Capital Investment.

### SCHEDULE DO-5(a) — TERMINATION LIABILITY SCHEDULE

Termination Premium	5.0%
Service Period Payments	467,331,605
PPEF Deposit — ECMs Savings During Construction	300,000
Interest Payments	144,023,365
Principal Payments	183,375,883
Total Payment	795,030,853

		et Site: Savannah River Site		Delivery Or	der No.: DE-AT09-098	R22572 dated 1	5-May-2009	Contractor Na	me: Ameresco Federal Sol	lutions
	Payment Due		. p . l E	DDEE D 4	DIAC ' D		n · · ·	0 / / !	Lender's Termination	m
Month ()	06/01/00	Government Payment Serv	rice Period Expenses	PPEF Deposit	Dept Service Payment	Interest	Principal	Outstanding Principal Balance		Termination Liability 192,544,677
-	06/01/09	_	_	_	_	_	_	183,375,883	9,168,794	- )- )
1	07/01/09	_	_		_			183,375,883	9,168,794	192,544,677
2	08/01/09	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
3	09/01/09	_		_			_	183,375,883	9,168,794	192,544,677
4	10/01/09	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
5	11/01/09	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
6	12/01/09	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
7	01/01/10	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
8	02/01/10	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
9	03/01/10	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
10	04/01/10	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
11	05/01/10							183,375,883	9,168,794	192,544,677
12	06/01/10							183,375,883	9,168,794	192,544,677
13	07/01/10	_		_	_		_	183,375,883		
					_		_		9,168,794	192,544,677
14	08/01/10	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
15	09/01/10	_	_	_	_		_	183,375,883	9,168,794	192,544,677
16	10/01/10	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
17	11/01/10	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
18	12/01/10	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
19	01/01/11	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
20	02/01/11	141,914	91,914	50,000	_	_	_	183,375,883	9,168,794	192,544,677
21	03/01/11	70,957	45,957	25,000	_	_		183,375,883	9,168,794	192,544,677
22	04/01/11	70,957	45,957	25,000				183,375,883	9,168,794	192,544,677
23	05/01/11	70,957	45,957	25,000	_			183,375,883	9,168,794	192,544,677
										192,544,677
24	06/01/11	70,957	45,957	25,000	_	_		183,375,883	9,168,794	
25	07/01/11	70,957	45,957	25,000	_		_	183,375,883	9,168,794	192,544,677
26	08/01/11	70,957	45,957	25,000	_	_	_	183,375,883	9,168,794	192,544,677
27	09/01/11	70,957	45,957	25,000	_	_	_	183,375,883	9,168,794	192,544,677
28	10/01/11	70,957	45,957	25,000	_	_	_	183,375,883	9,168,794	192,544,677
29	11/01/11	70,957	45,957	25,000	_	_	_	183,375,883	9,168,794	192,544,677
30	12/01/11	70,957	45,957	25,000	_	_	_	183,375,883	9,168,794	192,544,677
31	01/01/12	· —	· —	· —	_	_	_	183,375,883	9,168,794	192,544,677
32	02/01/12	_	_	_	_	_	_	183,375,883	9,168,794	192,544,677
33	03/01/12	<u> </u>	_	_	_	_	_	183,375,883	9,168,794	192,544,677
34	04/01/12							183,375,883	9,168,794	192,544,677
35	05/01/12	31,167,469	6,652,639		24,514,830	15,011,150	0.502.680	173,872,203	8,693,610	182,565,813
36	06/01/12		1,330,528		24,514,650	13,011,130	9,505,000		8,693,610	
		1,330,528		_	_	_	_	173,872,203		182,565,813
37	07/01/12	1,330,528	1,330,528					173,872,203	8,693,610	182,565,813
38	08/01/12	1,330,528	1,330,528	_	_	_	_	173,872,203	8,693,610	182,565,813
39	09/01/12	1,330,528	1,330,528	_	_	_	_	173,872,203	8,693,610	182,565,813
40	10/01/12	1,330,528	1,330,528	_	_	_	_	173,872,203	8,693,610	182,565,813
41	11/01/12	1,330,528	1,330,528	_	_	_	_	173,872,203	8,693,610	182,565,813
42	12/01/12	1,330,528	1,330,528	_	_	_	_	173,872,203	8,693,610	182,565,813
43	01/01/13	1,330,528	1,330,528	_	_	_	_	173,872,203	8,693,610	182,565,813
44	02/01/13	1,330,528	1,330,528	_	_	_	_	173,872,203	8,693,610	182,565,813
45	03/01/13	1,330,528	1,330,528	_	_	_	_	173,872,203	8,693,610	182,565,813
46	04/01/13	1,330,528	1,330,528			_		173,872,203	8,693,610	182,565,813
47	05/01/13	20,307,715	1,389,020	_	18,918,695	14,233,179	4,685,516	169,186,687	8,459,334	177,646,021
					18,918,093	14,233,179	т,000,010			
48	06/01/13	1,389,020	1,389,020	_				169,186,687	8,459,334	177,646,021
49	07/01/13	1,389,020	1,389,020		_			169,186,687	8,459,334	177,646,021
50	08/01/13	1,389,020	1,389,020	_	_	_	_	169,186,687	8,459,334	177,646,021
51	09/01/13	1,389,020	1,389,020					169,186,687	8,459,334	177,646,021
52	10/01/13	1,389,020	1,389,020		_	_	_	169,186,687	8,459,334	177,646,021
53	11/01/13	1,389,020	1,389,020	_	_	_	_	169,186,687	8,459,334	177,646,021
54	12/01/13	1,389,020	1,389,020	_	_	_	_	169,186,687	8,459,334	177,646,021
55	01/01/14	1,389,020	1,389,020	_	_	_	_	169,186,687	8,459,334	177,646,021
56	02/01/14	1,389,020	1,389,020	_		_	_	169,186,687	8,459,334	177,646,021
57	03/01/14	1,389,020	1,389,020	_	_	_	_	169,186,687	8,459,334	177,646,021
58	04/01/14	1,389,020	1,389,020	_				169,186,687	8,459,334	177,646,021
59	05/01/14	20,578,026	1,389,020		19,127,830	13,849,622		163,908,479	8,195,424	177,046,021
				_	12,147,030	13,077,022	5,210,200			
60	06/01/14	1,450,196	1,450,196	_	_	_	_	163,908,479	8,195,424	172,103,903
61	07/01/14	1,450,196	1,450,196				_	163,908,479	8,195,424	172,103,903
62	08/01/14	1,450,196	1,450,196	_	_	_	_	163,908,479	8,195,424	172,103,903
63	09/01/14	1,450,196	1,450,196	_	_	_	_	163,908,479	8,195,424	172,103,903
64	10/01/14	1,450,196	1,450,196	_	_	_	_	163,908,479	8,195,424	172,103,903
65	11/01/14	1,450,196	1,450,196	_	_	_	_	163,908,479	8,195,424	172,103,903
66	12/01/14	1,450,196	1,450,196	_	_	_	_	163,908,479	8,195,424	172,103,903
	01/01/15					_				
67		1,450,196	1,450,196	_	_		_	163,908,479	8,195,424	172,103,903
68	02/01/15	1,450,196	1,450,196	_	_	_	_	163,908,479	8,195,424	172,103,903
69	03/01/15	1,450,196	1,450,196		_		_	163,908,479	8,195,424	172,103,903
	04/01/15	1,450,196	1,450,196	_	_	_	_	163,908,479	8,195,424	172,103,903
70			1 51 4 100		19,462,884	13,417,548	6.045.336	157,863,143	7,893,157	165,756,300
71	05/01/15	20,977,066	1,514,182	_	19,402,884	13,717,370	0,045,550			
	05/01/15 06/01/15	20,977,066 1,514,182	1,514,182 1,514,182	_	19,402,884	-	-	157,863,143	7,893,157	165,756,300

74	08/01/15	1,514,182	1,514,182	_	_	_	_	157,863,143	7,893,157	165,756,300
75	09/01/15	1,514,182	1,514,182	_	_	_	_	157,863,143	7,893,157	165,756,300
76	10/01/15	1,514,182	1,514,182	_	_	_	_	157,863,143	7,893,157	165,756,300
77	11/01/15	1,514,182	1,514,182	_	_	_	_	157,863,143	7,893,157	165,756,300
78	12/01/15	1,514,182	1,514,182	_	_	_	_	157,863,143	7,893,157	165,756,300
79	01/01/16	1,514,182	1,514,182	_	_	_	_	157,863,143	7,893,157	165,756,300
80	02/01/16	1,514,182	1,514,182	_	_	_	_	157,863,143	7,893,157	165,756,300
81	03/01/16	1,514,182	1,514,182	_	_	_	_	157,863,143	7,893,157	165,756,300
82	04/01/16	1,514,182	1,514,182	_	_	_	_	157,863,143	7,893,157	165,756,300

Note: Interest will accrue on the Outstanding Principal Balance mothly between each Debt Service Payment date shown above.

### SCHEDULE DO-5(a) — TERMINATION LIABILITY SCHEDULE

Termination Premium	5.0%
Service Period Payments	467,331,605
PPEF Deposit — ECMs Savings During Construction	300,000
Interest Payments	144,023,365
Principal Payments	183,375,883
Total Payment	795,030,853

ning of	Payment Due	et Site: Savannah River Site			der No.: DE-AT09-09				Ameresco Federal Sol ender's Termination	
onth	Date	Government Payment Ser	rvice Period Expenses	PPEF Deposit 1	Debt Service Payment	Interest	Principal	Outstanding Principal Balance		Termination Liabi
83	05/01/16	21,529,558	1,581,111		19,948,446	12,922,677	7,025,769	150,837,374	7,541,869	158,379,24
84	06/01/16	1,581,111	1,581,111	_	_	_	_	150,837,374	7,541,869	158,379,24
85	07/01/16	1,581,111	1,581,111	_	_	_	_	150,837,374	7,541,869	158,379,24
86	08/01/16	1,581,111	1,581,111	_	_	_	_	150,837,374	7,541,869	158,379,24
87	09/01/16	1,581,111	1,581,111	_	_	_	_	150,837,374	7,541,869	158,379,24
88	10/01/16	1,581,111	1,581,111	_	_	_		150,837,374	7,541,869	158,379,24
89	11/01/16	1,581,111	1,581,111	_	_	_	_	150,837,374	7,541,869	158,379,24
90	12/01/16	1,581,111	1,581,111	_	_	_	_	150,837,374	7,541,869	158,379,24
91	01/01/17	1,581,111	1,581,111	_	_	_	_	150,837,374	7,541,869	158,379,2
92	02/01/17	1,581,111	1,581,111	_	_	_	_	150,837,374	7,541,869	158,379,24
93	03/01/17	1,581,111	1,581,111	_	_	_	_	150,837,374	7,541,869	158,379,24
94	04/01/17	1,581,111	1,581,111	_	_	_	_	150,837,374	7,541,869	158,379,2
95	05/01/17	22,491,123	1,651,124	_	20,839,999	12,347,547	8,492,452	142,344,922	7,117,246	149,462,1
96	06/01/17	1,651,124	1,651,124	_	_	_	_	142,344,922	7,117,246	149,462,1
97	07/01/17	1,651,124	1,651,124	_	_	_	_	142,344,922	7,117,246	149,462,1
98	08/01/17	1,651,124	1,651,124	_	_	_	_	142,344,922	7,117,246	149,462,1
99	09/01/17	1,651,124	1,651,124	_	_	_	_	142,344,922	7,117,246	149,462,1
00	10/01/17	1,651,124	1,651,124	_	_	_	_	142,344,922	7,117,246	149,462,1
.01	11/01/17	1,651,124	1,651,124	_	_	_	_	142,344,922	7,117,246	149,462,1
02	12/01/17	1,651,124	1,651,124	_	_	_		142,344,922	7,117,246	149,462,1
03	01/01/18	1,651,124	1,651,124	_	_	_	_	142,344,922	7,117,246	149,462,1
04	02/01/18	1,651,124	1,651,124	_	_	_		142,344,922	7,117,246	149,462,1
05	03/01/18	1,651,124	1,651,124	_	_	_	_	142,344,922	7,117,246	149,462,1
06	04/01/18	1,651,124	1,651,124	_	_	_	_	142,344,922	7,117,246	149,462,1
07	05/01/18	23,215,526	1,724,367	_	21,491,160	11,652,355	9,838,805	132,506,118	6,625,306	139,131,4
.08	06/01/18	1,724,367	1,724,367	_	_	_		132,506,118	6,625,306	139,131,4
.09	07/01/18	1,724,367	1,724,367	_	_	_	_	132,506,118	6,625,306	139,131,4
10	08/01/18	1,724,367	1,724,367	_	_	_		132,506,118	6,625,306	139,131,4
11	09/01/18	1,724,367	1,724,367	_	_	_	_	132,506,118	6,625,306	139,131,4
12	10/01/18	1,724,367	1,724,367	_	_	_	_	132,506,118	6,625,306	139,131,4
13	11/01/18	1,724,367	1,724,367	_	_	_	_	132,506,118	6,625,306	139,131,4
14	12/01/18	1,724,367	1,724,367	_	_	_	_	132,506,118	6,625,306	139,131,4
15	01/01/19	1,724,367	1,724,367	_	_	_	_	132,506,118	6,625,306	139,131,4
16	02/01/19	1,724,367	1,724,367	_	_	_		132,506,118	6,625,306	139,131,4
.17	03/01/19	1,724,367	1,724,367	_	_	_	_	132,506,118	6,625,306	139,131,4
18	04/01/19	1,724,367	1,724,367	_	_	_		132,506,118	6,625,306	139,131,4
19	05/01/19	23,674,383	1,800,991	_	21,873,391	10,846,951	11,026,440	121,479,677	6,073,984	127,553,6
20	06/01/19	1,800,991	1,800,991	_	_	_		121,479,677	6,073,984	127,553,6
21	07/01/19	1,800,991	1,800,991	_	_	_	_	121,479,677	6,073,984	127,553,6
22	08/01/19	1,800,991	1,800,991	_	_	_		121,479,677	6,073,984	127,553,6
23	09/01/19	1,800,991	1,800,991	_	_	_	_	121,479,677	6,073,984	127,553,6
24	10/01/19	1,800,991	1,800,991	_	_	_		121,479,677	6,073,984	127,553,6
25	11/01/19	1,800,991	1,800,991	_	_	_	_	121,479,677	6,073,984	127,553,6
26	12/01/19	1,800,991	1,800,991	_	_	_		121,479,677	6,073,984	127,553,6
.27	01/01/20	1,800,991	1,800,991	_	_	_	_	121,479,677	6,073,984	127,553,6
28	02/01/20	1,800,991	1,800,991	_	_	_		121,479,677	6,073,984	127,553,6
29	03/01/20	1,800,991	1,800,991	_	_	_	_	121,479,677	6,073,984	127,553,6
30	04/01/20	1,800,991	1,800,991	_	_	_	_	121,479,677	6,073,984	127,553,6
31	05/01/20	24,570,813	1,881,160	_	22,689,653	9,944,326	12,745,326	108,734,351	5,436,718	114,171,0
32	06/01/20	1,881,160	1,881,160	_	_	_	_	108,734,351	5,436,718	114,171,0
33	07/01/20	1,881,160	1,881,160	_	_	_	_	108,734,351	5,436,718	114,171,0
34	08/01/20	1,881,160	1,881,160		_		_	108,734,351	5,436,718	114,171,0
35	09/01/20	1,881,160	1,881,160	_	_	_	_	108,734,351	5,436,718	114,171,0
36	10/01/20	1,881,160	1,881,160					108,734,351	5,436,718	114,171,0
37	11/01/20	1,881,160	1,881,160	_	_	_	_	108,734,351	5,436,718	114,171,0
38	12/01/20	1,881,160	1,881,160	_	_	_		108,734,351	5,436,718	114,171,0
39	01/01/21	1,881,160	1,881,160	_	_	_	_	108,734,351	5,436,718	114,171,0
40	02/01/21	1,881,160	1,881,160	_	_	_		108,734,351	5,436,718	114,171,0
41	03/01/21	1,881,160	1,881,160	_	_	_	_	108,734,351	5,436,718	114,171,0
42	04/01/21	1,881,160	1,881,160	_	_	_		108,734,351	5,436,718	114,171,
43	05/01/21	27,112,968	1,965,040	_	25,147,928	8,900,994	16,246,934	92,487,417	4,624,371	97,111,
44	06/01/21	1,965,040	1,965,040	_	_	_		92,487,417	4,624,371	97,111,
45	07/01/21	1,965,040	1,965,040	_	_	_	_	92,487,417	4,624,371	97,111,
46	08/01/21	1,965,040	1,965,040			_	_	92,487,417	4,624,371	97,111,
47	09/01/21	1,965,040	1,965,040	_	_	_	_	92,487,417	4,624,371	97,111,
48	10/01/21	1,965,040	1,965,040	_	_	_	_	92,487,417	4,624,371	97,111,
49	11/01/21	1,965,040	1,965,040	_	_	_	_	92,487,417	4,624,371	97,111,7
50	12/01/21	1,965,040	1,965,040	_	_		_	92,487,417	4,624,371	97,111,7
51	01/01/22	1,965,040	1,965,040	_		_	_	92,487,417	4,624,371	97,111,
52	02/01/22	1,965,040	1,965,040		_	_	_	92,487,417	4,624,371	97,111,7
53	03/01/22	1,965,040	1,965,040	_	_	_	_	92,487,417	4,624,371	97,111,7
54	04/01/22	1,965,040	1,965,040	_	_		_	92,487,417	4,624,371	97,111,7
55	05/01/22	27,979,151	2,052,809	_	25,926,342	7 571 020	18,355,322	74,132,095	3,706,605	77,838,7
	33/01/22	2,052,809	2,052,809		23,720,342	7,571,020	10,000,022	74,132,095	3,706,605	77,838,7

157	07/01/22	2,052,809	2,052,809	_	_	_	_	74,132,095	3,706,605	77,838,700
158	08/01/22	2,052,809	2,052,809	_	_	_	_	74,132,095	3,706,605	77,838,700
159	09/01/22	2,052,809	2,052,809	_	_	_	_	74,132,095	3,706,605	77,838,700
160	10/01/22	2,052,809	2,052,809	_	_	_	_	74,132,095	3,706,605	77,838,700
161	11/01/22	2,052,809	2,052,809	_	_	_	_	74,132,095	3,706,605	77,838,700
162	12/01/22	2,052,809	2,052,809	_	_	_	_	74,132,095	3,706,605	77,838,700
163	01/01/23	2,052,809	2,052,809	_	_	_	_	74,132,095	3,706,605	77,838,700
164	02/01/23	2,052,809	2,052,809	_	_	_	_	74,132,095	3,706,605	77,838,700
165	03/01/23	2.052.809	2.052.809	_	_	_	_	74.132.095	3.706.605	77.838.700

Note: Interest will accrue on the Outstanding Principal Balance mothly between each Debt Service Payment date shown above.

### SCHEDULE DO-5(a) — TERMINATION LIABILITY SCHEDULE

Termination Premium	5.0%
Service Period Payments	467,331,605
PPEF Deposit — ECMs Savings During Construction	300,000
Interest Payments	144,023,365
Principal Payments	183,375,883
Total Payment	795,030,853

166 04/ 167 05/ 168 06/ 169 07/ 170 08/ 171 09/ 172 10/ 173 11/ 174 12/ 175 01/ 176 02/ 177 03/ 178 04/ 179 05/ 180 06/ 181 07/ 182 08/ 181 07/ 182 183 09/ 184 10/ 185 11/ 186 12/ 187 01/ 188 02/ 187 01/ 198 02/ 191 05/ 192 06/ 193 07/ 194 08/ 195 09/ 196 10/ 197 11/ 198 12/ 199 01/ 200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 211 01/ 212 02/ 213 03/	ment Due Date	Government Payment Ser 2,052,809 28,833,246 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,240,763 2,	vice Period Expenses 2,052,809 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,240,763 2,240	PPEF Deposit	Debt Service Payment  26,688,594	_	Principal — 20,620,141 — — — — — — — — — — — — — — — — — —	Outstanding Principal Balance 74,132,095 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 30,483,995	ender's Termination Premium  3,706,605 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 1,524,200	Termination Liability 77,838,700 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 32,008,195
166 04/ 167 05/ 168 06/ 169 07/ 170 08/ 171 09/ 172 10/ 173 11/ 174 12/ 175 01/ 176 02/ 177 03/ 178 04/ 179 05/ 180 06/ 181 07/ 182 08/ 183 09/ 184 10/ 185 11/ 188 02/ 187 01/ 188 02/ 191 05/ 192 06/ 193 07/ 194 08/ 195 09/ 194 08/ 195 09/ 197 11/ 198 12/ 199 01/ 200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	(01/23   (701/23   (701/23   (701/23   (701/23   (701/23   (701/23   (701/23   (701/24   (701/24   (701/24   (701/24   (701/24   (701/24   (701/24   (701/24   (701/24   (701/24   (701/24   (701/24   (701/24   (701/25   (701/	2,052,809 28,833,246 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,40,763 2,240,763 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	2,052,809 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,240,763 2,240,		26,688,594	6,068,453 	20,620,141	74,132,095 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 30,483,995	3,706,605 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 1,524,200	77,838,700 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 32,008,195
167 05/ 168 06/ 169 07/ 170 08/ 171 09/ 172 10/ 173 11/ 174 12/ 175 01/ 176 02/ 177 03/ 178 04/ 179 05/ 180 06/ 181 07/ 182 08/ 183 09/ 184 10/ 185 11/ 186 12/ 187 01/ 188 02/ 189 03/ 190 04/ 191 05/ 192 06/ 193 07/ 194 08/ 195 09/ 197 11/ 198 12/ 199 01/ 200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 211 03/	5/01/23 5/01/23 5/01/23 5/01/23 5/01/23 5/01/23 5/01/23 5/01/24 5/01/24 5/01/24 5/01/24 5/01/24 5/01/24 5/01/24 5/01/24 5/01/24 5/01/24 5/01/25	28,833,246 2,144,652 2,240,763 2,240	2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,144,652 2,240,763 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347		27,408,448 ——————————————————————————————————	4,380,489	23,027,959	53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 53,511,954 30,483,995	2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 2,675,598 1,524,200	56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 56,187,552 32,008,195
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188 02/ 189 03/ 190 04/ 191 05/ 192 06/ 193 07/ 194 08/ 195 09/ 196 10/ 197 11/ 198 12/ 200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	2/01/25 3/01/25 4/01/25 5/01/25 5/01/25 7/01/25 8/01/25 0/01/25 0/01/25 2/01/25	2,240,763 2,240,763 2,240,763 30,658,724 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	2,240,763 2,240,763 2,240,763 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347		28,317,378 —	2,495,420		30,483,995 30,483,995	1,524,200 1,524,200	32,008,195 32,008,195
189 03/ 190 04/ 191 05/ 192 06/ 193 07/ 194 08/ 195 09/ 196 10/ 197 11/ 198 12/ 200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 210 12/ 211 01/ 212 02/ 213 03/	8/01/25 8/01/25 8/01/25 8/01/25 8/01/25 8/01/25 8/01/25 8/01/25 9/01/25 1/01/25 1/01/25	2,240,763 2,240,763 30,658,724 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	2,240,763 2,240,763 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	    	28,317,378 —		25 921 059	30,483,995	1,524,200	32,008,195
190 04/ 191 05/ 192 06/ 193 07/ 194 088/ 195 09/ 196 10/ 197 11// 198 12/ 209 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	3/01/25 5/01/25 5/01/25 7/01/25 8/01/25 9/01/25 9/01/25 2/01/25	2,240,763 30,658,724 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	2,240,763 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	_ _ _ _ _	28,317,378 —					
191 05/ 192 06/ 193 07/ 194 08/ 195 09/ 196 10/ 197 11/ 198 12/ 199 01/ 200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	5/01/25 5/01/25 7/01/25 8/01/25 0/01/25 0/01/25 0/01/25 2/01/25	2,240,763 30,658,724 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	2,240,763 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	_ _ _		2,495,420 —	25 921 059			
192 06/ 193 07/ 194 08/ 195 09/ 196 100/ 197 11/ 198 12/ 199 01/ 200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	6/01/25 7/01/25 8/01/25 0/01/25 0/01/25 1/01/25 2/01/25	2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	_ _ _		2,495,420 —	25 921 059	30,403,993		52,000,193
193 07/ 194 08/ 195 09/ 196 10/ 197 11/ 198 12/ 199 01/ 200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 210 12/ 211 01/ 212 02/ 213 03/	7/01/25 8/01/25 0/01/25 0/01/25 0/01/25 2/01/25	2,341,347 2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	2,341,347 2,341,347 2,341,347 2,341,347	_ _			43,041,938	4,662,037	233,102	4,895,139
194 08/ 195 09/ 196 10/ 197 11/ 198 12/ 199 01/ 200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	3/01/25 0/01/25 0/01/25 0/01/25 0/01/25	2,341,347 2,341,347 2,341,347 2,341,347 2,341,347	2,341,347 2,341,347 2,341,347	_			_	4,662,037	233,102	4,895,139
195 09/ 196 10/ 197 11/ 198 12/ 199 01/ 200 02/ 201 03/ 202 044/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 210 12/ 211 01/ 212 02/ 213 03/	0/01/25 0/01/25 0/01/25 0/01/25	2,341,347 2,341,347 2,341,347 2,341,347	2,341,347 2,341,347			_	_	4,662,037	233,102	4,895,139
196 10/ 197 11/ 198 12/ 199 01/ 200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	0/01/25 ./01/25 ./01/25	2,341,347 2,341,347 2,341,347	2,341,347			_	_	4,662,037	233,102	4,895,139
197 11/ 198 12/ 199 01// 200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	/01/25 2/01/25	2,341,347 2,341,347			_	_	_	4,662,037	233,102	4,895,139
198 12/ 199 01/ 200 02/ 201 03/3/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 099/ 208 10/ 210 12/ 211 01/ 212 02/ 213 03/	2/01/25	2,341,347	2.341 347	_	_	_	_	4,662,037	233,102	4,895,139
199 01/ 200 02/ 201 033/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 210 12/ 211 01/ 212 02/ 213 03/			-,- 11,- 1/	_	_	_	_	4,662,037	233,102	4,895,139
200 02/ 201 03/ 202 04/ 203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	/01/26	2 3/1 2/7	2,341,347	_	_	_	_	4,662,037	233,102	4,895,139
201 03/ 202 044/ 203 05/ 204 06/ 205 077/ 206 08/ 207 09/ 208 10/ 209 11// 210 12/ 211 01/ 212 02/ 213 03/	01120	2,341,347	2,341,347	_	_	_	_	4,662,037	233,102	4,895,139
202 04/ 203 05/ 204 06/ 205 07// 206 08/ 207 09/ 208 10/ 209 11// 210 12/ 211 01/ 212 02/ 213 03/	2/01/26	2,341,347	2,341,347	_	_	_	_	4,662,037	233,102	4,895,139
203 05/ 204 06/ 205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	3/01/26	2,341,347	2,341,347	_	_	_	_	4,662,037	233,102	4,895,139
204 06/ 205 07// 206 08// 207 09// 208 10// 209 11// 210 12// 211 01// 212 02// 213 03//	/01/26	2,341,347	2,341,347	_	_	_	_	4,662,037	233,102	4,895,139
205 07/ 206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	5/01/26	7,490,287	2,446,615	_	5,043,672	381,634	4,662,037	_	_	_
206 08/ 207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	5/01/26	2,446,615	2,446,615	_	_	_	_	<del>-</del>	_	_
207 09/ 208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	7/01/26	2,446,615	2,446,615	_	_	_	_	_	_	_
208 10/ 209 11/ 210 12/ 211 01/ 212 02/ 213 03/	3/01/26	2,446,615	2,446,615	_	_	_	_	<del>-</del>	_	_
209 11/ 210 12/ 211 01/ 212 02/ 213 03/	0/01/26	2,446,615	2,446,615	_	_	_	_	_	_	_
210 12/ 211 01/ 212 02/ 213 03/	0/01/26	2,446,615	2,446,615	_	_	_	_	<del>-</del>	_	_
211 01/ 212 02/ 213 03/	/01/26	2,446,615	2,446,615	_	_	_	_	_	_	_
212 02/ 213 03/	2/01/26	2,446,615	2,446,615	_	_	_	_	<del>-</del>	_	_
213 03/	/01/27	2,446,615	2,446,615	_	_	_	_	_	_	_
	2/01/27	2,446,615	2,446,615	_	_	_	_	<del>-</del>	_	_
214 04/	3/01/27	2,446,615	2,446,615	_	_	_	_	_	_	_
214 04/	/01/27	2,446,615	2,446,615	_	_	_	_	_	_	_
215 05/	5/01/27	2,556,793	2,556,793	_	_	_	_	_	_	_
216 06/	01/27	2,556,793	2,556,793	_	_	_	_	_	_	_
	7/01/27	2,556,793	2,556,793	_	_	_	_	_	_	_
	3/01/27	2,556,793	2,556,793	_	_	_	_	_	_	_
219 09/	0/01/27	2,556,793	2,556,793	_	_	_	_		_	_
	0/01/27	2,556,793	2,556,793	_	_	_	_	_	_	_
221 11/	/01/27	2,556,793	2,556,793	_	_	_	_	_	_	_
222 12/	2/01/27	2,556,793	2,556,793	_	_	_	_	_	_	_
223 01/	/01/28	2,556,793	2,556,793	_	_	_	_	_	_	_
224 02/	2/01/28	2,556,793	2,556,793	_	_	_	_	_	_	_
225 03/	3/01/28	2,556,793	2,556,793	_	_	_	_	_	_	_
	/01/28	2,556,793	2,556,793	_	_	_	_	_	_	_
227 05/	5/01/28	2,672,116	2,672,116	_	_	_	_	_	_	_
228 06/	5/01/28	2,672,116	2,672,116	_	_	_	_	_	_	_
229 07/	7/01/28	2,672,116	2,672,116	_		_	_			_
230 08/	3/01/28	2,672,116	2,672,116	_		_	_	_	_	_
231 09/	0/01/28	2,672,116	2,672,116	_		_	_	_	_	_
	0/01/28	2,672,116	2,672,116	_	_	_	_	_	_	_
	/01/28	2,672,116	2,672,116	_	_		_	_	_	_
	01120	2,672,116	2,672,116						_	
		2,672,116	2,672,116							
	2/01/28	2,672,116	2,672,116	_	_					_
	2/01/28 2/01/29	2,672,116	2,672,116			_	_			
	2/01/28 2/01/29 2/01/29	2,0,2,110	2,672,116	_	_					_
239 05/	2/01/28 2/01/29	2,672,116	2,792,829		_	_	_			

240	06/01/29	2,792,829	2,792,829	_	_	_	_	_	_	_
241	07/01/29	2,792,829	2,792,829	_	_	_	_	_	_	_
242	08/01/29	2,792,829	2,792,829	_	_	_	_	_	_	_
243	09/01/29	2,792,829	2,792,829	_	_	_	_	_	_	_
244	10/01/29	2,792,829	2,792,829	_	_	_	_	_	_	_
245	11/01/29	2,792,829	2,792,829	_	_	_	_	_	_	_
246	12/01/29	2,792,829	2,792,829	_	_	_	_	_	_	_
247	01/01/30	2,792,829	2,792,829	_	_	_	_	_	_	_
248	02/01/30	2,792,829	2,792,829	_	_	_	_	_	_	_

Note: Interest will accrue on the Outstanding Principal Balance mothly between each Debt Service Payment date shown above.

## ${\bf SCHEDULE\ DO-5(a) - TERMINATION\ LIABILITY\ SCHEDULE}$

Termination Premium	5.0%
Service Period Payments	467,331,605
PPEF Deposit — ECMs Savings During Construction	300,000
Interest Payments	144,023,365
Principal Payments	183,375,883
Total Payment	795,030,853

Project Site: Savannah River Site				Delivery Order No.: DE-AT09-09SR22572 dated 15-May-2009			Contractor Name: Ameresco Federal Solutions				
Beginning of Payment Due								Lender's Termination			
Month	Date	Government Payment Ser	rvice Period Expenses	PPEF Deposit	Debt Service Payment	Interest	Principal	Outstanding Principal Balance	Premium	Termination Liability	
249	03/01/30	2,792,829	2,792,829	_	_	_			_	_	
250	04/01/30	2,792,829	2,792,829	_	_	_	_	_	_	_	
251	05/01/30	2,919,191	2,919,191	_	_	_	_	_	_	_	
252	06/01/30	2,919,191	2,919,191	_	_	_	_	_			
253	07/01/30	2,919,191	2,919,191	_	_	_	_	_	_	_	
254	08/01/30	2,919,191	2,919,191	_	_	_	_	_	_	_	
255	09/01/30	2,919,191	2,919,191	_	_	_	_	_	_	_	
256	10/01/30	2,919,191	2,919,191	_	_	_	_	_	_		
257	11/01/30	2,919,191	2,919,191	_	_	_	_	_	_	_	
258	12/01/30	2,919,191	2,919,191	_	_	_	_	_	_		
259	01/01/31	2,919,191	2,919,191	_	_	_	_	_	_	_	
260	02/01/31	2,919,191	2,919,191	_	_	_	_	_	_	_	
261	03/01/31	2,919,191	2,919,191	_	_	_	_	_	_	_	
262	04/01/31	2,919,191	2,919,191	_	_	_	_	_		_	

Note: Interest will accrue on the Outstanding Principal Balance mothly between each Debt Service Payment date shown above.

APPENDIX A
A total of 21 pages were omitted and filed separately with the Securities and Exchange Commission pursuant to a request for confidential treatment.

### APPENDIX B

A total of 2 pages were omitted and filed separately with the Securities and Exchange Commission pursuant to a request for confidential treatment.	
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Final Proposal — April 21, 2008 Ameresco Federal Solutions Appendix C, ECM 1 Equipment List, Page 1

Biomass Cogeneration Facility and Heating Plants Savannah River Site Contract DE-AM36-02NT41457

### ECM 1 Equipment List for Biomass Cogeneration Facility

<b>Equipment Description</b>	ESI Equipment #	P&ID	Company	Misc. Notes
Acid Regen Skid	520-522-600-001	D27		
Acid Storage Tank	520-522-300-001	D27		
Air Compressor #1	530-533-100-001	D31		
Air Compressor #2	530-533-100-002	D31		
Air Dryer Skid #1	530-533-500-001	D31		
Air Dryer Skid #2	530-533-500-002	D31		
Air Heater #1 Expansion Joint	610-616-200-004	D07		
Air Heater #2 Expansion Joint	610-616-200-008	D08		
Air Receiver	530-533-400-001	D31		
Amine Chemical Skid #1	510-515-200-002	D22		3 motors
Amine Chemical Skid #2	510-515-200-003	D22		2 motors
Antiscalant Pump	520-522-500-002	D26		
Ash Conditioner	460-462-100-001	D13	EPI	
Ash Conditioner Rotary Valve	460-462-101-001	D13	EPI	
Ash Exhauster #1	460-462-101-001	D13	EPI	
Ash Exhauster #1 Filter	460-462-102-001	D13	EPI	
Ash Exhauster #2	460-462-101-002	D13	EPI	
Ash Exhauster #2 Filter	460-462-102-002	D13	EPI	
Ash Silo	460-461-200-001	D13	EPI	
Ash Silo Aeration Blower	470-471-400-001	D13	EPI	
Ash Silo Double Dump Valve	460-461-201-001	D13	EPI	
Ash Silo Emergency Safety Shower	170-176-200-002	D32	EPI	
Ash Silo Truck Scale	430-431-200-003	D13		
Ash Silo VAC Filter	410-414-400-001	D13	EPI	
Ash Silo Vent Filter	410-414-400-002	D13		

<b>Equipment Description</b>	ESI Equipment #	P&ID	Company	Misc. Notes
Ash Silo Vent Filter Fan	410-414-303-001	D13	EPI	
Baghouse #1	320-322-100-001	D11	EPI	
Baghouse #1 Expansion Joint	610-616-200-011	D11	EPI	
Baghouse #2	320-322-100-002	D12	EPI	
Baghouse #2 Expansion Joint	610-616-200-017	D12	EPI	
BFB Boiler #1	210-211-100-001	D07	EPI	
BFB Boiler #1 Air Heater #1	250-252-200-001	D07	EPI	
BFB Boiler #1 Economizer #1	250-251-100-001	D07	EPI	
BFB Boiler #2	210-211-100-002	D08	EPI	
BFB Boiler #2 Air Heater #2	250-252-200-002	D08	EPI	
BFB Boiler #2 Economizer #2	250-251-100-002	D08	EPI	
Biofuel Disc Screen	440-441-100-001	D03		
Biofuel Hogger	440-442-100-001	D03		
Biofuel Metering Bin #1	410-412-100-001	D05	EPI	(VFDs) 6 motors
Biofuel Metering Bin #2	410-412-100-002	D05	EPI	(VFD's) 6 motors
Biofuel Truck Dump #1	430-431-100-001	D03		
Biofuel Truck Dump #2	430-431-100-002	D03		
Biofuel Truck Dump #3	430-431-100-003	D03		
Biofuel Truck Reclaimer #1	430-433-300-001	D03		
Biofuel Truck Reclaimer #2	430-433-300-002	D03		
Biofuel Truck Reclaimer #3	430-433-300-003	D03		
Biofuel Truck Scale #1	430-431-200-001	D03		
Biofuel Truck Scale #2	430-431-200-002	D03		
Bleach Chemical Pump Skid	510-515-300-001	D22		2 motors
Boiler #1 CBD Sample Cooler	510-518-100-009	D32	EPI	
Boiler #1 Hopper #1	610-611-100-001	D14	EPI	
Boiler #1 Hopper #2	610-611-100-002	D14	EPI	

<b>Equipment Description</b>	ESI Equipment #	P&ID	Company	Misc. Notes
Boiler #1 Hopper #3	610-611-100-003	D14	EPI	
Boiler #1 Hopper #4	610-611-100-004	D14	EPI	
Boiler #1 SNCR Distribution Module	340-341-400-001	D21	EPI	
Boiler #1 SNCR Metering Module Skid	340-341-401-001	D21	EPI	
Boiler #1 Steam Drum Sample Cooler	510-518-100-002	D32		
Boiler #2 CBD Sample Cooler	510-518-100-010	D32		
Boiler #2 Hopper #1	610-611-100-005	D14	EPI	
Boiler #2 Hopper #2	610-611-100-006	D14	EPI	
Boiler #2 Hopper #3	610-611-100-007	D14	EPI	
Boiler #2 Hopper #4	610-611-100-008	D14	EPI	
Boiler #2 SNCR Distribution Module	340-341-400-002	D21	EPI	
Boiler #2 SNCR Metering Module Skid	340-341-401-002	D21	EPI	
Boiler #2 Steam Drum Sample Cooler	510-518-100-003	D32		
Boiler Drag Chain	430-436-100-001	D05		
Boiler Feed Water Pump #1	540-541-100-001	D18		VFD
Boiler Feed Water Pump #2	540-541-100-002	D18		VFD
Boiler Feed Water Pump #3	540-541-100-003	D18		VFD
Boiler Feedwater Heater	530-534-100-001	D18		
Bottom Blowdown Separator	530-532-100-001	D33		
Brine Tank	520-522-100-001	D24		
C.I.P. Tank	520-521-700-001	D26		
C.I.P. Tank Pump	520-521-701-001	D26		
Carbon Filter #1	510-511-200-001	D25		
Carbon Filter #2	510-511-200-002	D25		
Carbon Filter #3	510-511-200-003	D25		
Caustic Regen Skid	520-522-600-002	D27		
Caustic Storage Tank	520-522-200-001	D27		

<b>Equipment Description</b>	ESI Equipment #	P&ID	Company	Misc. Notes
Chemical Injection Antiscalant	520-522-400-002	D26		
Chemical Injection PH Adjustment	520-522-400-001	D26		
Circular Stacker Reclaimer	410-412-400-002	D04		3 motors
Condensate Sample Cooler	510-518-100-008	D32		
Continuous Blowdown Flash Tank #1	530-532-200-001	D33		
Continuous Blowdown Flash Tank #2	530-532-200-002	D33		
Control Oil Filter #1	820-823-600-003	D36		
Control Oil Filter #2	820-823-600-004	D36		
Conveyor #1	430-435-100-001	D03		
Conveyor #1 Tramp Metal Electromagnet	430-438-400-001	D03		
Conveyor #2	430-435-100-002	D03		
Conveyor #2 Diverter Gate #1	430-438-200-001	D03		
Conveyor #3	430-435-100-003	D04		
Conveyor #4	430-435-100-004	D04		
Conveyor #5	430-435-100-005	D04		
Conveyor #6	430-435-100-006	D04		
Cooling Tower	820-821-100-001	D20		
Cooling Tower Fan #1	820-821-300-001	D20		VFD
Cooling Tower Fan #1 Expansion Joint	630-636-200-007	D20		
Cooling Tower Fan #2	820-821-300-002	D20		VFD
Cooling Tower Fan #2 Expansion Joint	630-636-200-008	D20		
Cooling Tower Fan #3	820-821-300-003	D20		
Cooling Water Pump #1	540-546-100-001	D20		VFD
Cooling Water Pump #1 Expansion Joint #1	630-636-200-001	D20		
Cooling Water Pump #2	540-546-100-002	D20		VFD
Cooling Water Pump #2 Expansion Joint #1	630-636-200-003	D20		
Cooling Water Pump #3	540-546-100-003	D20		VFD

<b>Equipment Description</b>	ESI Equipment #	P&ID	Company	Misc. Notes
Cooling Water Pump #3 Expansion Joint #1	630-636-200-005	D20		
Deaerator #1	530-531-200-001	D18		
Deaerator #2	530-531-200-002	D19		
Deaerator Sample Cooler	510-518-100-004	D32		
Electric Heater	340-341-500-001	D21		
Emergency Oil Pump	820-823-100-003	D35		
Exhaust Fan #1	160-161-300-001	D40		
Exhaust Fan #2	160-161-300-002	D40		
Exhaust Fan #3	160-161-300-003	D40		
Exhaust Fan #4	160-161-300-004	D40		
Extraction Vapor Fan	820-823-700-001	D35		
FAB Fan #1 Expansion Joint	610-616-200-001	D07	EPI	
FAB Fan #2 Expansion Joint	610-616-200-005	D08	EPI	
FGR Fan #1	610-244-100-001	D11	EPI	
FGR Fan #1 Damper	610-615-700-001	D11	EPI	
FGR Fan #1 Damper Actuator	610-615-701-001	D11	EPI	
FGR Fan #1 Damper Expansion Joint	610-616-200-016	D11	EPI	
FGR Fan #1 Expansion Joint	610-616-200-002	D07	EPI	
FGR Fan #2	610-244-100-002	D12	EPI	
FGR Fan #2 Damper	610-615-700-002	D12	EPI	
FGR Fan #2 Damper Actuator	610-615-701-002	D12	EPI	
FGR Fan #2 Damper Expansion Joint	610-616-200-022	D12	EPI	
FGR Fan #2 Expansion Joint	610-616-200-006	D08	EPI	
Fluidizing Air Booster Fan #1	310-313-100-001	D07	EPI	
Fluidizing Air Booster Fan #1 Damper	310-313-500-001	D07	EPI	
Fluidizing Air Booster Fan #1 Damper	310-313-501-001	D07	EPI	
Actuator				

<b>Equipment Description</b>	ESI Equipment #	P&ID	Company	Misc. Notes
Fluidizing Air Booster Fan #2	310-313-100-002	D08	EPI	
Fluidizing Air Booster Fan #2 Damper	310-313-500-002	D08	EPI	
Fluidizing Air Booster Fan #2 Damper	310-313-501-002	D08	EPI	
Actuator				
Fuel Oil Pump #1	520-523-400-001	D41		
Fuel Oil Pump #2	520-523-400-002	D41		
Fuel Oil Stainer	620-623-400-001	D41		
Fuel Oil Storage Tank	520-523-100-001	D41		
Generator	810-813-100-001	D36		
Heater	820-823-201-001	D35		
Hotwell Pump #1	540-542-100-001	D34		VFD
Hotwell Pump #2	540-542-100-002	D34		VFD
Hotwell Pump Expansion Joint #1	630-636-200-016	D34		
Hotwell Pump Expansion Joint #2	630-636-200-017	D34		
Hotwell Pump Expansion Joint #3	630-636-200-018	D34		
Hotwell Pump Expansion Joint #4	630-636-200-019	D34		
Hotwell Sump Pump	540-542-100-001	D34		
Hydrazine Chemical Pump Skid	510-515-100-001	D22		3 motors
ID Fan #1	310-311-100-001	D11	EPI	
ID Fan #1 Damper #1	310-311-500-001	D11	EPI	
ID Fan #1 Damper #1 & 2 Actuator	310-311-501-001	D11	EPI	
ID Fan #1 Damper #1 Expansion Joint	610-616-200-013	D11	EPI	
ID Fan #1 Damper #2	310-311-500-002	D11	EPI	
ID Fan #1 Damper #2 Expansion Joint	610-616-200-014	D11	EPI	
ID Fan #1 Damper Expansion Joint	610-616-200-012	D11	EPI	
ID Fan #2	310-311-100-002	D12	EPI	
ID Fan #2 Damper #1	310-311-500-003	D12	EPI	

<b>Equipment Description</b>	ESI Equipment #	P&ID	Company	Misc. Notes
ID Fan #2 Damper #1 & 2 Actuator	310-311-501-002	D12	EPI	
ID Fan #2 Damper #1 Expansion Joint	610-616-200-019	D12	EPI	
ID Fan #2 Damper #2	310-311-500-004	D12	EPI	
ID Fan #2 Damper #2 Expansion Joint	610-616-200-020	D12	EPI	
ID Fan #2 Damper Expansion Joint	610-616-200-018	D12	EPI	
Injector	340-341-600-005	D21		
Injector	340-341-600-001	D21		
Injector	340-341-600-008	D21		
Injector	340-341-600-007	D21		
Injector	340-341-600-006	D21		
Injector	340-341-600-004	D21		
Injector	340-341-600-002	D21		
Injector	340-341-600-003	D21		
Interstage Storage Tank	520-521-900-001	D26		
Lube / Control Oil Tank	820-823-400-001	D35		
Lube Oil Filter #1	820-823-600-001	D35		
Lube Oil Filter #2	820-823-600-002	D35		
Lube Oil Purifier System	820-823-200-001	D35		
Main Oil Pump	820-823-100-001	D35		
Mist Separator	820-823-800-001	D35		
Mixed Bed System Emergency Safety Shower	170-176-200-003	D32		
Mixed Bed Unit #1	510-513-100-001	D27		
Mixed Bed Unit #2	510-513-100-002	D27		
Multi-media Filter #1	510-511-100-001	D23		
Multi-media Filter #2	510-511-100-002	D23		
Multi-media Filter #3	510-511-100-003	D23		

<b>Equipment Description</b>	ESI Equipment #	P&ID	Company	Misc. Notes
Neutralization Pump #1	520-521-801-001	D30		
Neutralization Pump #2	520-521-801-002	D30		
Neutralization Tank	520-521-800-001	D30		
Oil Cooler #1	820-823-500-001	D35		
Oil Cooler #2	820-823-500-002	D35		
PFA Fan #1 Expansion Joint	610-616-200-003	D07		
PFA Fan #2 Expansion Joint	610-616-200-007	D08		
PH Adjustment Pump	520-522-500-001	D26		
Phosphate Chemical Pump Skid	510-515-200-001	D22		3 motors
Primary Fluidizing Air Fan #1	310-312-100-001	D07	EPI	
Primary Fluidizing Air Fan #1 Damper	310-312-500-001	D07	EPI	
Primary Fluidizing Air Fan #1 Damper	310-312-501-001	D07	EPI	
Actuator				
Primary Fluidizing Air Fan #1 SCAH	250-253-100-001	D07	EPI	
Primary Fluidizing Air Fan #1 Silencer	310-312-600-001	D07	EPI	
Primary Fluidizing Air Fan #2	310-312-100-002	D08	EPI	
Primary Fluidizing Air Fan #2 Damper	310-312-500-002	D08	EPI	
Primary Fluidizing Air Fan #2 Damper	310-312-501-002	D08	EPI	
Actuator				
Primary Fluidizing Air Fan #2 SCAH	250-253-100-002	D08	EPI	
Primary Fluidizing Air Fan #2 Silencer	310-312-600-002	D08	EPI	
Primary Superheater #1	210-211-200-001	D15	EPI	
Primary Superheater #2	210-211-200-002	D16	EPI	
Process Lift Pump #1	530-532-400-001	D33		
Process Lift Pump #2	530-532-400-002	D33		
RO Feed Pump #1	510-511-400-001	D26		
RO Feed Pump #1 Filter	510-511-401-001	D26		
RO Feed Pump #2	510-511-400-002	D26		

<b>Equipment Description</b>	ESI Equipment #	P&ID	Company	Misc. Notes
RO Feed Pump #2 Filter	510-511-401-002	D26		
RO Forwarding Pump #1	510-511-400-003	D26		
RO Forwarding Pump #2	510-511-400-004	D26		
RO System	510-511-300-001	D26		
Sample Cooler Emergency Safety Shower	170-176-200-001	D32		
Sand Bucket Elevator #1	430-434-100-001	D14		
Sand Bucket Elevator #2	430-434-100-002	D14		
Sand Drag Chain #1	430-436-100-002	D14		
Sand Drag Chain #2	430-436-100-003	D14		
Sand Drag Chain #3	430-436-100-004	D14		
Sand Drag Chain #4	430-436-100-005	D14		
Sand Silo #1	410-411-310-001	D14		
Sand Silo #1 Bin Vent Filter	410-414-300-004	D14		
Sand Silo #1 Screw Conveyor	420-423-100-003	D14		VFD
Sand Silo #1 Vent Filter Fan	410-414-301-001	D14		
Sand Silo #2	410-411-310-002	D14		
Sand Silo #2 Bin Vent Filter	410-414-300-005	D14		
Sand Silo #2 Screw Conveyor	420-423-100-004	D14		VFD
Sand Silo #2 Vent Filter Fan	410-414-301-002	D14		
Secondary Superheater #1	210-211-200-004	D15		
Secondary Superheater #2	210-211-200-003	D16		
Stack #1	610-614-100-001	D11		
Stack #1 Expansion Joint	610-616-200-015	D11	EPI	
Stack #2	610-614-100-002	D12	EPI	
Stack #2 Expansion Joint	610-616-200-021	D12	EPI	
Burner #1 Boiler #1	240-241-200-002	D06	EPI	
Start-up Burner #1 Boiler #2	240-241-200-004	D06	EPI	Not shown on P&ID

<b>Equipment Description</b>	ESI Equipment #	P&ID	Company	Misc. Notes
Burner #2 Boiler #1	240-241-200-003	D06	EPI	
Start-up Burner #2 Boiler #2	240-241-200-005	D06	EPI	Not shown on P&ID
Steam Turbine	810-811-300-001	D36		
Sulphuric Acid Chemical Pump Skid	510-515-300-002	D22		2 motors
Supply Fan #1	160-161-200-001	D40		
Supply Fan #2	160-161-200-002	D40		
Supply Fan #3	160-161-200-003	D40		
Supply Fan #4	160-161-200-004	D40		
Supply Fan #5	160-161-200-005	D40		
Supply Fan #6	160-161-200-006	D40		
Supply Fan #7	160-161-200-007	D40		
Supply Fan #8	160-161-200-008	D40		
Surface Condenser	820-822-100-001	D34		
Surface Condenser Expansion Joint #1	630-636-200-011	D34		
Surface Condenser Expansion Joint #2	630-636-200-012	D34		
Surface Condenser Expansion Joint #3	630-636-200-013	D34		
Surface Condenser Expansion Joint #4	630-636-200-014	D34		
Surface Condenser Expansion Joint #5	630-636-200-015	D34		
TDF Reclaimer	430-433-300-004	D05		
Treated Water Storage Tank	520-521-300-001	D28		
Treated Water Transfer Pump #1	540-544-100-001	D28		
Treated Water Transfer Pump #2	540-544-100-002	D28		
Urea Circulation Module	340-341-301-001	D21	EPI	
Urea Circulation Pump #1	340-341-300-001	D21	EPI	
Urea Circulation Pump #2	340-341-300-002	D21	EPI	
Urea Metering Pump #1	340-341-300-003	D21	EPI	
Urea Metering Pump #2	340-341-300-004	D21	EPI	

<b>Equipment Description</b>	ESI Equipment #	P&ID	Company	Misc. Notes
Urea Metering Pump #3	340-341-300-005	D21	EPI	
Urea Metering Pump #4	340-341-300-006	D21	EPI	
Urea Storage Tank	340-341-200-001	D21	EPI	
Urea Storage Tank Inlet Expansion Joint	630-636-200-009	D21	EPI	
Urea Storage Tank Outlet Expansion Joint	630-636-200-010	D21	EPI	
Urea Tank / Acid / Bleach Emergency Safety	170-176-200-004	D32	EPI	
Shower				
Vacuum Pump #1	820-822-201-001	D34		
Vacuum Pump #2	820-822-201-001	D34		
Vibrating Feeder #1	320-321-300-001	D14		2 motors
Vibrating Feeder #2	320-321-300-002	D14		2 motors
Water Booster Pump #1	540-543-100-001	D21		
Water Booster Pump #2	540-543-100-002	D21		
Water Booster Pump #3	540-543-100-003	D21		
Water Booster Pump #4	540-543-100-004	D21		
Water Softener #1	510-512-100-001	D24		
Water Softener #2	510-512-100-002	D24		

### ECM 2 Equipment List for Heating Plants for K&L Areas

<b>Equipment Description</b>	Equipment #	P&ID	Company	Misc. Notes
Area 'K' Air Accumulator	530-533-400-002	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Air Heater	250-252-200-001	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Amine to Steam Line Chemical	510-515-300-001	D23		
Pump #2				
Area 'K' Air Compressor	530-533-100-001	D05	Existing Air Compressor	
Area 'K' Air Receiver	530-533-400-001	D05	Existing Air Compressor	
Area 'K' BFW Pump #1	540-541-100-001	D11	Hurst Boiler & Welding Co., Inc.	
Area 'K' BFW Pump #2	540-541-100-002	D11	Hurst Boiler & Welding Co., Inc.	
Area 'K' BFW Sample Cooler	510-518-100-003	D19	Process Power & Equipment	
			Sales, Inc.	
Area 'K' Biofuel Metering Bin	440-443-200-001	D03	Hurst Boiler & Welding Co., Inc.	
Area 'K' Blowdown Seperator Tank	530-532-100-001	D21	Hurst Boiler & Welding Co., Inc.	
Area 'K' Blowdown Sump Pump #1	540-549-300-001	D21		
Area 'K' Blowdown Sump Pump #2	540-549-300-002	D21		
Area 'K' Brine Tank	510-512-100-003	D19		
Area 'K' Building Exhaust Fan	160-161-300-001	D26		
Area 'K' Building Supply Fan	160-161-200-001	D26		
Area 'K' CBD Sample Cooler	510-518-100-002	D19	Process Power & Equipment	
			Sales, Inc.	
Area 'K' DCS of PLC System (BFW)	720-725-100-002			
Area 'K' DCS or PLC System (Boiler)	720-725-100-001		Hurst Boiler & Welding Co., Inc.	
Area 'K' Deaerator	530-531-100-001	D11	Hurst Boiler & Welding Co., Inc.	
Area 'K' Duplex Water Softener A	510-512-100-001	D19		
Area 'K' Duplex Water Softener B	510-512-100-002	D19		
Area 'K' Electric Heater #1	160-162-500-001	D26		
Area 'K' Electric Heater #2	160-162-500-002	D26		

<b>Equipment Description</b>	Equipment #	P&ID	Company	Misc. Notes
Area 'K' Electric Heater #3	160-162-500-003	D26		
Area 'K' Feeder Magnet	430-438-400-001	D03		
Area 'K' Fly Ash Multiclone	320-321-100-001	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Fly Ash Reinjection Fan	610-244-100-001	D07	Hurst Boiler & Welding Co., Inc.	
Area 'K' Fly Ash Rotary Air Valve #1	320-321-200-001	D07	Hurst Boiler & Welding Co., Inc.	
Area 'K' Fly Ash Rotary Air Valve #2	320-321-200-002	D07	Hurst Boiler & Welding Co., Inc.	
Area 'K' Fuel Oil Back-Up Burner	240-241-200-001	D15	Hurst Boiler & Welding Co., Inc.	
Area 'K' Fuel Oil Pump	240-243-100-002	D15	Hurst Boiler & Welding Co., Inc.	
Area 'K' Fuel Oil Pump #1 (ON HOLD)	HOLD	D13		
Area 'K' Fuel Oil Pump #2 (ON HOLD)	HOLD	D13		
Area 'K' Fuel Oil Storage Tank	520-523-100-001	D13		
Area 'K' Fuel Sizing Screen	440-441-100-001	D03	Hurst Boiler & Welding Co., Inc.	
Area 'K' Hybrid Boiler	210-213-100-001	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Hydrazine to DA Chemical Pump	510-515-100-001	D23		
#1				
Area 'K' ID Fan	310-311-200-001	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Inclined Drag Chain Conveyor	430-436-100-001	D03	Hurst Boiler & Welding Co., Inc.	
Area 'K' MCC/PLC Room A.C.	160-162-300-001	D26		
Area 'K' Metering Bin Screw Conveyor #1	430-432-100-001	D03	Hurst Boiler & Welding Co., Inc.	
Area 'K' Metering Bin Screw Conveyor #2	430-432-100-002	D03	Hurst Boiler & Welding Co., Inc.	
Area 'K' Non Return Valve	220-221-100-001	D09	Hurst Boiler & Welding Co., Inc.	
Area 'K' Oil Burner Fan	310-313-100-001	D15	Hurst Boiler & Welding Co., Inc.	
Area 'K' Overfire Air Fan	310-314-100-001	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Phosphate to BFW Chemical	510-515-200-001	D23		
Pump #3				
Area 'K' Pit Sump Pump	540-549-300-005	D03		

<b>Equipment Description</b>	Equipment #	P&ID	Company	Misc. Notes
Area 'K' Reciprocating Floor Hydraulic	430-438-700-001	D03	Hurst Boiler & Welding Co., Inc.	
System				
Area 'K' Reciprocating Grate Stoker'	230-231-300-001	D07	Hurst Boiler & Welding Co., Inc.	
Area 'K' Reclaim Vibratory Feeder	430-432-200-001	D03	Hurst Boiler & Welding Co., Inc.	
Area 'K' Safety Eyewash & Shower	170-176-200-001	D19		
Area 'K' Sootblower #1	220-223-100-001	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Sootblower #2	220-223-100-002	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Sootblower #3	220-223-100-003	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Sootblower #4	220-223-100-004	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Sootblower #5	220-223-100-005	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Stack	610-614-100-002	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Stainless Steel Lab Sink	170-179-300-001	D19		
Area 'K' Steam Sample Cooler	510-518-100-001	D19	Process Power & Equipment	
			Sales, Inc.	
Area 'K' Truck Reclaimer Reciprocating	430-433-200-001	D03	Hurst Boiler & Welding Co., Inc.	
Floor				
Area 'K' Truck Unloading Hydraulic	430-431-100-001	D03	Hurst Boiler & Welding Co., Inc.	
System				
Area 'K' Underfire Air Fan	310-312-100-001	D05	Hurst Boiler & Welding Co., Inc.	
Area 'K' Vacuum Breaker	220-221-200-001	D11D	Hurst Boiler & Welding Co., Inc.	
Area 'L' Air Accumulator	530-533-400-003	D06	Hurst Boiler & Welding Co., Inc.	
Area 'L' Air Compressor	530-533-100-001	D25		
Area 'L' Air Heater	250-252-200-002	D06	Hurst Boiler & Welding Co., Inc.	
Area 'L' Air Receiver	530-533-400-001	D25		
Area 'L' Amine to Steam Line Chemical	510-515-300-002	D24		
Pump #2				
Area 'L' Ash Removal Drag Chain	460-464-600-002	D08	Hurst Boiler & Welding Co., Inc.	
Conveyor				
Area 'L' Ash Roll-Off Dumpster	460-461-400-002	D08		

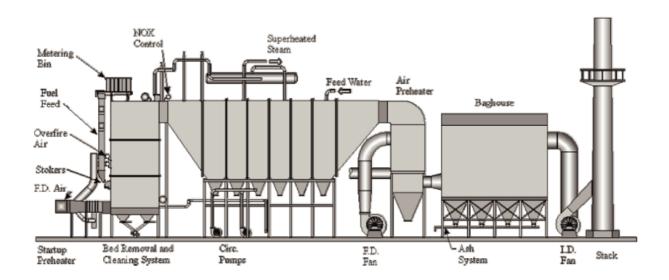
 ${\it Use or disclosure of data \ contained \ on \ this \ sheet \ is \ subject \ to \ the \ restriction \ on \ the \ first \ page \ of \ this \ proposal}}$ 

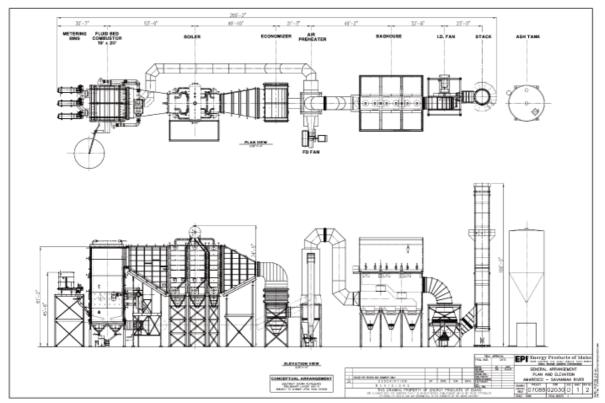
Equipment Description	Equipment #	P&ID	Company	Misc. Notes
Area 'L' BFW Pump #1	540-541-100-003	D12	Hurst Boiler & Welding Co., Inc.	
Area 'L' BFW Pump #2	540-541-100-004	D12	Hurst Boiler & Welding Co., Inc.	
Area 'L' BFW Sample Cooler	510-518-100-006	D20	Process Power & Equipment	
			Sales, Inc.	
Area 'L' Biofuel Metering Bin	440-443-200-002	D04	Hurst Boiler & Welding Co., Inc.	
Area 'L' Blowdown Seperator Tank	530-532-100-002	D22	Hurst Boiler & Welding Co., Inc.	
Area 'L' Blowdown Sump Pump #1	540-549-300-003	D22		
Area 'L' Blowdown Sump Pump #2	540-549-300-004	D22		
Area 'L' Brine Tank	510-512-100-006	D19		
Area 'L' Building Exhaust Fan	160-161-300-002	D27		
Area 'L' Building Supply Fan	160-161-200-002	D27		
Area 'L' CBD Sample Cooler	510-518-100-005	D20	Process Power & Equipment	
			Sales, Inc.	
Area 'L' Coalescing Prefilter	530-533-700-001	D25		
Area 'L' DCS of PLC System (BFW)	720-725-100-004			
Area 'L' DCS or PLC System (Boiler)	720-725-100-003		Hurst Boiler & Welding Co., Inc.	
Area 'L' Deaerator	530-531-100-002	D12	Hurst Boiler & Welding Co., Inc.	
Area 'L' Duplex Water Softener A	510-512-100-004	D20		
Area 'L' Duplex Water Softener B	510-512-100-005	D19		
Area 'L' Electric Heater #1	160-162-500-004	D27		
Area 'L' Electric Heater #2	160-162-500-005	D27		
Area 'L' Electric Heater #3	160-162-500-006	D27		
Area 'L' Feeder Magnet	430-438-400-002	D04		
Area 'L' Fly Ash Multiclone	320-321-100-003	D06	Hurst Boiler & Welding Co., Inc.	
Area 'L' Fly Ash Reinjection Fan	610-244-100-002	D08	Hurst Boiler & Welding Co., Inc.	
Area 'L' Fly Ash Rotary Air Valve #1	320-321-200-004	D08	Hurst Boiler & Welding Co., Inc.	
Area 'L' Fly Ash Rotary Air Valve #2	320-321-200-005	D08	Hurst Boiler & Welding Co., Inc.	

Area 'L' Fuel Oil Back-Up Burner 240-241-200-002 D16 Hurst Boiler & Welding Co., Inc. Area 'L' Fuel Oil Pump 240-243-100-001 D16 Hurst Boiler & Welding Co., Inc. Area 'L' Fuel Oil Pump #1 (ON HOLD) HOLD D14 Area 'L' Fuel Oil Pump #2 (ON HOLD) HOLD D14 Area 'L' Fuel Oil Storage Tank 520-523-100-001 D14 Area 'L' Fuel Sizing Screen 440-441-100-002 D04 Hurst Boiler & Welding Co., Inc. Area 'L' Hybrid Boiler 210-213-100-002 D06 Hurst Boiler & Welding Co., Inc. Area 'L' Hydrazine to DA Chemical Pump 510-515-100-002 D24 #1 Area 'L' ID an 310-311-200-002 D06 Hurst Boiler & Welding Co., Inc. Area 'L' Inclined Drag Chain Conveyor 430-436-100-002 D04 Hurst Boiler & Welding Co., Inc. Area 'L' MCC/PLC Room A.C. 160-162-300-002 D27 Area 'L' Metering Bin Screw Conveyor #1 430-432-100-003 D04 Hurst Boiler & Welding Co., Inc. Area 'L' Metering Bin Screw Conveyor #2 430-432-100-003 D04 Hurst Boiler & Welding Co., Inc. Area 'L' Non Return Valve 220-221-100-002 D-0 Hurst Boiler & Welding Co., Inc. Area 'L' Non Return Valve 220-221-100-002 D-0 Hurst Boiler & Welding Co., Inc. Area 'L' Overfire Air Fan 310-313-100-002 D16 Hurst Boiler & Welding Co., Inc. Area 'L' Overfire Air Fan 310-313-100-002 D06 Hurst Boiler & Welding Co., Inc. Area 'L' Particulate Afterfilter 530-533-700-002 D25 Area 'L' Particulate Afterfilter 530-533-700-002 D24
Area 'L' Fuel Oil Pump #1 (ON HOLD)       HOLD       D14         Area 'L' Fuel Oil Pump #2 (ON HOLD)       HOLD       D14         Area 'L' Fuel Oil Storage Tank       520-523-100-001       D14         Area 'L' Fuel Sizing Screen       440-441-100-002       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Hybrid Boiler       210-213-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Hydrazine to DA Chemical Pump       510-515-100-002       D24         #1       Area 'L' Inclined Drag Chain Conveyor       430-436-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Inclined Drag Chain Conveyor       430-436-100-002       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' MCC/PLC Room A.C.       160-162-300-002       D27         Area 'L' Metering Bin Screw Conveyor #1       430-432-100-003       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Metering Bin Screw Conveyor #2       430-432-100-004       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Mor Return Valve       220-221-100-002       D-0       Hurst Boiler & Welding Co., Inc.         Area 'L' Oil Burner Fan       310-313-100-002       D16       Hurst Boiler & Welding Co., Inc.         Area 'L' Overfire Air Fan       310-314-100-002       D06       Hurst Boiler & Welding Co.
Area 'L' Fuel Oil Pump #2 (ON HOLD)       HOLD       D14         Area 'L' Fuel Oil Storage Tank       520-523-100-001       D14         Area 'L' Fuel Sizing Screen       440-441-100-002       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Hybrid Boiler       210-213-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Hydrazine to DA Chemical Pump       510-515-100-002       D24         #1       Tolan Screen Conveyor       430-4311-200-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Inclined Drag Chain Conveyor       430-436-100-002       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' MCC/PLC Room A.C.       160-162-300-002       D27         Area 'L' Metering Bin Screw Conveyor #1       430-432-100-003       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Metering Bin Screw Conveyor #2       430-432-100-004       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Non Return Valve       220-221-100-002       D-0       Hurst Boiler & Welding Co., Inc.         Area 'L' Oil Burner Fan       310-313-100-002       D16       Hurst Boiler & Welding Co., Inc.         Area 'L' Overfire Air Fan       310-314-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Particulate Afterfilter       530-533-700-002       D25<
Area 'L' Fuel Oil Storage Tank       520-523-100-001       D14         Area 'L' Fuel Sizing Screen       440-441-100-002       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Hybrid Boiler       210-213-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Hydrazine to DA Chemical Pump       510-515-100-002       D24         #1       To Dane 'L' Inclined Drag Chain Conveyor       430-436-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Inclined Drag Chain Conveyor       430-436-100-002       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' McC/PLC Room A.C.       160-162-300-002       D27         Area 'L' Metering Bin Screw Conveyor #1       430-432-100-003       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Metering Bin Screw Conveyor #2       430-432-100-004       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Non Return Valve       220-221-100-002       D-0       Hurst Boiler & Welding Co., Inc.         Area 'L' Oil Burner Fan       310-313-100-002       D16       Hurst Boiler & Welding Co., Inc.         Area 'L' Overfire Air Fan       310-314-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Particulate Afterfilter       530-533-700-002       D25         Area 'L' Phosphate to BFW Chemical       510-515
Area 'L' Fuel Sizing Screen       440-441-100-002       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Hybrid Boiler       210-213-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Hydrazine to DA Chemical Pump       510-515-100-002       D24         #1       Hurst Boiler & Welding Co., Inc.         Area 'L' ID an       310-311-200-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Inclined Drag Chain Conveyor       430-436-100-002       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' MCC/PLC Room A.C.       160-162-300-002       D27         Area 'L' Metering Bin Screw Conveyor #1       430-432-100-003       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Metering Bin Screw Conveyor #2       430-432-100-004       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Non Return Valve       220-221-100-002       D-0       Hurst Boiler & Welding Co., Inc.         Area 'L' Oil Burner Fan       310-313-100-002       D16       Hurst Boiler & Welding Co., Inc.         Area 'L' Overfire Air Fan       310-314-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Particulate Afterfilter       530-533-700-002       D25         Area 'L' Phosphate to BFW Chemical       510-515-200-002       D24
Area 'L' Hybrid Boiler 210-213-100-002 D06 Hurst Boiler & Welding Co., Inc.  Area 'L' Hydrazine to DA Chemical Pump 510-515-100-002 D24  #1  Area 'L' ID an 310-311-200-002 D06 Hurst Boiler & Welding Co., Inc.  Area 'L' Inclined Drag Chain Conveyor 430-436-100-002 D04 Hurst Boiler & Welding Co., Inc.  Area 'L' MCC/PLC Room A.C. 160-162-300-002 D27  Area 'L' Metering Bin Screw Conveyor #1 430-432-100-003 D04 Hurst Boiler & Welding Co., Inc.  Area 'L' Metering Bin Screw Conveyor #2 430-432-100-004 D04 Hurst Boiler & Welding Co., Inc.  Area 'L' Non Return Valve 220-221-100-002 D-0 Hurst Boiler & Welding Co., Inc.  Area 'L' Oil Burner Fan 310-313-100-002 D16 Hurst Boiler & Welding Co., Inc.  Area 'L' Overfire Air Fan 310-314-100-002 D06 Hurst Boiler & Welding Co., Inc.  Area 'L' Particulate Afterfilter 530-533-700-002 D25  Area 'L' Phosphate to BFW Chemical 510-515-200-002 D24
Area 'L' Hydrazine to DA Chemical Pump  #1  Area 'L' ID an  Area 'L' Inclined Drag Chain Conveyor  #30-436-100-002  Area 'L' MCC/PLC Room A.C.  Area 'L' Metering Bin Screw Conveyor #1  Area 'L' Metering Bin Screw Conveyor #2  Area 'L' Non Return Valve  Area 'L' Oil Burner Fan  310-313-100-002  Area 'L' Overfire Air Fan  310-313-100-002  Area 'L' Particulate Afterfilter  530-533-700-002  Area 'L' Phosphate to BFW Chemical  510-515-200-002  D06  Hurst Boiler & Welding Co., Inc.  Area 'L' Overfire Air Fan  310-313-100-002  D16  Hurst Boiler & Welding Co., Inc.  Hurst Boiler & Welding Co., Inc.  D06  D07  D07  D07  D07  D08  D09  D09  D09  D09  D09  D09  D09
#1  Area 'L' ID an  Area 'L' Inclined Drag Chain Conveyor  430-436-100-002  D04  Hurst Boiler & Welding Co., Inc.  Area 'L' MCC/PLC Room A.C.  Area 'L' Metering Bin Screw Conveyor #1  430-432-100-003  D04  Hurst Boiler & Welding Co., Inc.  Area 'L' Metering Bin Screw Conveyor #1  430-432-100-003  D04  Hurst Boiler & Welding Co., Inc.  Area 'L' Metering Bin Screw Conveyor #2  430-432-100-004  D04  Hurst Boiler & Welding Co., Inc.  Area 'L' Non Return Valve  220-221-100-002  D-0  Hurst Boiler & Welding Co., Inc.  Area 'L' Oil Burner Fan  310-313-100-002  D16  Hurst Boiler & Welding Co., Inc.  Area 'L' Overfire Air Fan  310-314-100-002  D06  Hurst Boiler & Welding Co., Inc.  Area 'L' Particulate Afterfilter  530-533-700-002  D25  Area 'L' Phosphate to BFW Chemical  510-515-200-002  D24
Area 'L' ID an       310-311-200-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Inclined Drag Chain Conveyor       430-436-100-002       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' MCC/PLC Room A.C.       160-162-300-002       D27         Area 'L' Metering Bin Screw Conveyor #1       430-432-100-003       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Metering Bin Screw Conveyor #2       430-432-100-004       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Non Return Valve       220-221-100-002       D-0       Hurst Boiler & Welding Co., Inc.         Area 'L' Oil Burner Fan       310-313-100-002       D16       Hurst Boiler & Welding Co., Inc.         Area 'L' Overfire Air Fan       310-314-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Particulate Afterfilter       530-533-700-002       D25         Area 'L' Phosphate to BFW Chemical       510-515-200-002       D24
Area 'L' Inclined Drag Chain Conveyor       430-436-100-002       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' MCC/PLC Room A.C.       160-162-300-002       D27         Area 'L' Metering Bin Screw Conveyor #1       430-432-100-003       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Metering Bin Screw Conveyor #2       430-432-100-004       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Non Return Valve       220-221-100-002       D-0       Hurst Boiler & Welding Co., Inc.         Area 'L' Oil Burner Fan       310-313-100-002       D16       Hurst Boiler & Welding Co., Inc.         Area 'L' Overfire Air Fan       310-314-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Particulate Afterfilter       530-533-700-002       D25         Area 'L' Phosphate to BFW Chemical       510-515-200-002       D24
Area 'L' MCC/PLC Room A.C.       160-162-300-002       D27         Area 'L' Metering Bin Screw Conveyor #1       430-432-100-003       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Metering Bin Screw Conveyor #2       430-432-100-004       D04       Hurst Boiler & Welding Co., Inc.         Area 'L' Non Return Valve       220-221-100-002       D-0       Hurst Boiler & Welding Co., Inc.         Area 'L' Oil Burner Fan       310-313-100-002       D16       Hurst Boiler & Welding Co., Inc.         Area 'L' Overfire Air Fan       310-314-100-002       D06       Hurst Boiler & Welding Co., Inc.         Area 'L' Particulate Afterfilter       530-533-700-002       D25         Area 'L' Phosphate to BFW Chemical       510-515-200-002       D24
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Area 'L' Phosphate to BFW Chemical 510-515-200-002 D24
D 1/2
Pump #3
Area 'L' Pit Sump Pump 540-549-300-006 D04
Area 'L' Reciprocating Floor Hydraulic 430-438-70-002 D04 Hurst Boiler & Welding Co., Inc.
System
Area 'L' Reciprocating Grate Stoker' 230-231-300-002 D08 Hurst Boiler & Welding Co., Inc.
Area 'L' Reclaim Vibratory Feeder 430-432-200-001 D04 Hurst Boiler & Welding Co., Inc.
Area 'L' Refrigerant Air Dryer 530-533-500-001 D25

<b>Equipment Description</b>	Equipment #	P&ID	Company	Misc. Notes
Area 'L' Safety Eyewash & Shower	170-176-200-002	D20		
Area 'L' Sootblower #1	220-223-100-006	D06	Hurst Boiler & Welding Co., Inc.	
Area 'L' Sootblower #2	220-223-100-007	D06	Hurst Boiler & Welding Co., Inc.	
Area 'L' Sootblower #3	220-223-100-008	D06	Hurst Boiler & Welding Co., Inc.	
Area 'L' Sootblower #4	220-223-100-009	D05	Hurst Boiler & Welding Co., Inc.	
Area 'L' Sootblower #5	220-223-100-010	D05	Hurst Boiler & Welding Co., Inc.	
Area 'L' Stack	610-614-100-001	D06	Hurst Boiler & Welding Co., Inc.	
Area 'L' Stainless Steel Lab Sink	170-179-300-002	D20		
Area 'L' Steam Sample Cooler	510-518-100-004	D20	Process Power & Equipment	
			Sales, Inc.	
Area 'L' Truck Reclaimer Reciprocating	430-433-200-002	D04	Hurst Boiler & Welding Co., Inc.	
Floor				
Area 'L' Truck Unloading Hydraulic	430-431-100-002	D04	Hurst Boiler & Welding Co., Inc.	
System				
Area 'L' Underfire Air Fan	310-312-100-002	D06	Hurst Boiler & Welding Co., Inc.	
Area 'L' Vacuum Breaker	220-221-200-002	D12	Hurst Boiler & Welding Co., Inc.	

## Typical EPI Energy System





A.V.P. sports N20027U,27688N,000300T2 slegs. 3/27/2568-2;41:39-PM

Station		Description		
No	Fuel, % Btu (LHV)	% moisture	wood/325	TDF/325
1	ruci, 70 Btu (Eii v)	wood	100.0%	70.0%
		TDF	0.0%	30.0%
		DGS	0.0%	0.0%
	Fuel, TPY			
		wood	184,769	128,575
		TDF	0	13,246
		DGS	0	0
	B.D. Blend Analysis	Carlan 0/	50.00	56.00
		Carbon, %: Hydrogen, %:	50.80 6.00	56.08 6.47
		Sulfur, %:	0.08	0.47
		Oxygen, %:	41.43	35.29
		Nitrogen, %:	0.37	0.44
		Chlorine, %:	0.00	0.00
		Ash/Other, %:	1.32	1.38
		As Fired Moisture, %:	50.00	45.43
		As Fired HHV BTU/lb:	4,300	5,338
		As Fired LHV BTU/lb:	3,509	4,545
		Flowrate lb/hr:	42,185	32,379
		H MBtu/hr, LHV:	148.02	147.15
		Ash + Lime Flow, lb/hr: Limestone lb/hr:	397	413
		Limestone 10/nr:	105	165
2	FD Fan			
_	10 1 411	Ambient Air lb/hr:	175,100	183,000
		Total Air Flow lb/hr:	175,100	183,000
		Temp oF:	80	80
		ACFM:	40,200	42,000
		dPress in WC:	52	52
		Theor Power Hp:	450	470
		Excess Air:	35%	44%
2	D. J			
3	Bed	Surface area, ft2:	873	873
		Heat trans., MBtu/hr:	29	30
		Bed Dia, ft:	0.00	0
		Bed Width, ft:	20.00	20.00
		Bed Length, ft:	19.10	19.10
		Temp F:	1,514	1,546
4	Vapor Space			
		Temp F:	1,760	1,790
		Surface area, ft2:	650	650
		Heat trans., MBtu/hr:	12	12
		Velocity fps:	9.3	9.2
		Flowrate lb/hr:	217,000	215,100
		ACFM:	213,100	210,400
			.,	,
5	Boiler			
		Gas Flow lb/hr:	217,000	215,100
		ACFM:	213,100	210,400
		Gas H MBtu/hr:	112.08	109.81
		Boiler duty, M Btu/hr:	73.89	73.07
		Steam Temp F:	825	825
		Steam Press (psia): Steam Flow lb/hr:	850 120,000	850 120,000
		Ash lb/hr:	100	100
		7101110/111.	100	100
		Consummables		
		Limestone — lb/hr	105	165
		Ammonia-as aqueous, lb/hr	71	317
		Hydrated Lime — lb/hr	0	0
	Air Preheater/ SCAH		107	,
		Gas In Temp, F:	437	441
		Gas out Temp, F: Air Out Temp, F	325	325
		Air Out Temp, F APH Duty., MBtu/hr:	269 7.00	262 7.00
		SCAH Duty, M Btu/hr:	7.00	7.00
		Serin Bury, in Burill.	V	O .
7	Economizer			

			Gasoln Temp, F:	485	<b>6</b> 85
			H2O in Temp, F:	370	370
				487	482
			H2O Out Temp, F Heat Trans., MBtu/hr:	15.75	14.99
			Ash lb/hr:	0	0
10	Baghouse				
			flow, lb/hr	217,017	215,106
			ACFM	75,247	73,455
			Temp, F;	325	325
			moisture, wt%:	15.97%	12.68%
			H, MM Btu/hr	15.59	14.91
			Ash lb/hr:	294	306
11	ID Fan				
			ACFM:	75,247	73,455
			Temp, F:	325	325
			SP, in H2O:	19	19
			ВНР	341	333
12	Stack				
			Gas Temp F:	334	334
			Gas Flow lb/hr:	217,017	215,106
			ACFM:	76,134	74,321
			Enthalpy MBtu/hr:	16.17	15.46
			Vol (dry)%O2:	5.5%	6.5%
			Wt% H2O:	16.0%	12.7%
		Overall balance			
		T ( 1		101.4	170.6
		Total energy Input, MBtu/hr HHV:		181.4	172.8
		Boiler Duty, MBtu/hr:		128.5	128.5
		Efficiency, %:		70.8	74.3

Rev 2 increase T out back to 325 F

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**Preliminary For information only** 

## **EPI Energy Products of Idaho**

			40	006 Industrial Ave. C	Coeur d' Alene, Idaho	83814	
	PROJ. MGR.	DATE	Idaho Energy Limited Partnership				
			PRO	CESS FLOW DIAG	RAM (Customary U.	S. Units)	
ORIGNTR	BY	DATE		Aı	meresco		
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Fluidized Bed Combustors Page 1 of 3

# Fluidized Bed Combustion



Fluidized bed combustion systems use a heated bed of sand-like material suspended (fluidized) within a rising column of air to burn many types and classes of fuel. This technique results in a vast improvement in combustion efficiency of high moisture content fuels, and is adaptable to a variety of "waste type fuels. The scrubbing action of the bed material on the fuel particle enhances the combustion process by stripping away the carbon dioxide and char layers that normally form around the fuel particle. This allows oxygen to reach the combustible material much more readily and increases the rate and efficiency of the combustion process.



#### **Bed Recycle System**

The key to EPI's dominance of the difficult waste fuel combustion market is our patented bed recycle system. EPI is the only company that offers uniform bed drawdown, integrated air cooling and automatic cleaning and reinjection of the bed material. This innovative feature enables EPI systems to operate on fuels with significant quantities of 4-inch minus noncombustible tramp material (contaminants such as rocks, metal. etc.). In grate style systems, tramp materials and ash slag can cause significant problems requiring a shutdown to correct. In other fluidized bed systems, tramp materials can build to the point that fluidization is no longer possible allowing clinkers to form. In these systems, a shutdown is usually also required to clean out the accumulation.

#### Complete and Efficient Combustion.



The turbulence in the combustor vapor space combined with the tumultuous scouring effect and thermal inertia of the bed material provide for complete, controlled and uniform combustion. These factors are key to maximizing the thermal efficiency, minimizing char, and controlling emissions. The high efficiency of a fluid bed combustor makes it particularly well suited to problem fuels with low BTU value and high moisture characteristics. EPI's systems have consistently achieved high combustion efficiencies. In typical units, the carbon burnout percentages within the combustor are well in excess of 99 percent.

#### Waste Fuel Diversity

EPI systems have operated on fuels as diverse as agricultural waste, municipal solid waste, wood wastes, industrial and municipal sludges, plastic, tires and coal. Fluidized bed systems are also capable of efficiently combusting fuels of varying consistency. EPI units have demonstrated the ability to handle a variety of wastes within a single combustor. EPI's San Joaquin Valley Energy Project units have logged operating time over 68 varieties of agricultural and urban wood waste. EPI's patented bed cleaning system, which removes large non-combustible material from the bottom of the bed, allows EPI units to burn otherwise problematic fuels with a minimal amount of processing.

Fluidized Bed Combustors Page 2 of 3

#### Low Emissions

Emissions from a fluidized bed unit are inherently lower than conventional technologies for the following reasons:

- Tow combustion temperatures and low excess air within the bed reduces the formation of certain emissions such as NOx.
- High combustion efficiency results in flue gases that contain low amounts of CO.
- Emissions such as SOx and NOx may be abated within the fluidized bed system by injecting limestone into the bed and ammonia into the vapor space.

These features of fluidized bed combustion, combined with EPI's vast experience with a variety of fuels have allowed EPI units to comply with some of the most stringent air quality regulations in the country, including six operating plants in California. EPI units have consistently been accepted as the Best Available Control Technology "BACT" by environmental regulatory agencies.

#### **Favorable Ash Properties**

The high combustion efficiency of a fluid bed results in a reduced amount of inorganic material as fine ash. The remaining larger material consists mainly of non-combustibles, such as rocks, and wire brought in with the fuel, and coarse sand-like neutral particles. Low combustion temperatures in the fluidized bed minimize the formation of toxic materials that might go into the ash. Ash samples from EPI systems have consistently tested nontoxic, and in many instances the ash is being sold as input for other products such as cement.

#### **Operating Flexibility**

EPI's fluidized bed systems have demonstrated the ability to operate under a wide range of load conditions. The thermal "flywheel" effect of the bed material allows swings in moisture and heating content of the fuel to be absorbed by the system without negative impact. Conversely, the low fuel inventory present in the unit makes it very responsive to varying loads. The fluidized bed also maintains efficiency during system turn-down. The operating flexibility demonstrated by existing EPI units has proven quite valuable for some of EPI's customers allowing them to take advantage of utility incentive programs for generation that follows electric demand.

#### **Low Operating Costs**

The lack of moving parts in a fluid bed reduces maintenance costs and down time. EPI units have achieved operating availabilities above 98% and have kept operating costs relatively low given the difficult fuels they are burning.

#### **Environmentally Sound Energy Production from Waste**

Fluidized bed combustion is an environmentally favorable, proven technology for disposal of solid wastes and generation of energy. The combination of EPI's vast experience in developing solutions for a wide variety of applications, with the favorable characteristics of

Fluidized Bed Combustors Page 3 of 3

fluidized bed combustion make EPI the leader in providing environmentally sound waste disposal solutions.

# **Energy Products of Idaho**

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Email: epi2@energyproducts.com

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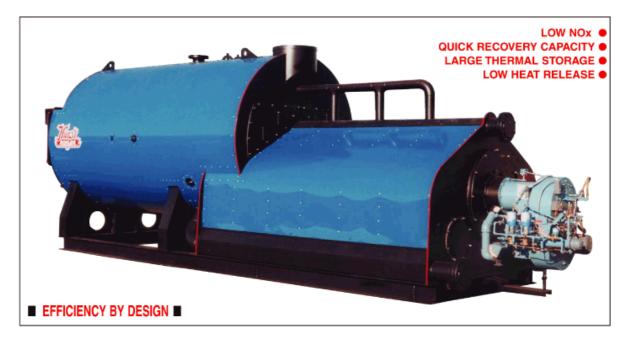


# TWO PASS HYBRID PACKAGED BOILERS

■ HURST "PERFORMANCE" BOILERS ■

HD SERIES

Fire Tube / Water Tube Hybrid Design



Fires on any liquid or gaseous fuel. Sizes from 100 to 2500 horsepower with pressures to 450 PSI.

The Only Boiler with the Recovery of a Watertube and the Thermal Reserve of a Firetube...

This model features an external furnace, which opens a whole new range for packaged boilers. Inherently low heat release enhances firing performance to reach outputs and emissions requirements not possible with other shell type boilers.

Designed, constructed and stamped in accordance with the requirements of the ASME Boiler Codes.





Inspected and registered with the National Board of Boiler & Pressure Vessel Inspectors.



- Efficient 2-Pass Design
- Flexibility- Gas, Oil, Heavy Oil and Combination Gas/Oil
- ASME Code Constructed & Stamped for 15 PSI Steam/30 Water
- Registered with the National Board of Boiler Inspectors
- Competitively Priced, Easily maintained, Designed for Efficiency
- Large Furnace Volume for Ultimate Combustion Efficiency
- Unified Refractory Base Floor
- Steel Skids / Lifting Eyes
- Easy Access to fireside Surfaces
- Low Heat Release 5 Sq. Ft./HP.
- Ample Waterside Cleanout Openings
- Fully Automatic Operations
- U.L. Listed, Forced Draft Burners
- Hybrid (Water/Fire Tube) Design
- U.L. Listed Controls & Trim





#### STANDARD FEATURES

Durability - Built in accordance with the ASME Code, the wet back design has proven to give much longer useful life cycles than dry back boilers.

Quality - Each unit is tested and inspected and registered with the National Board of Boiler and Pressure Vessel Inspectors.

**Design** - Hurst Boiler utilizes state of the art computer design techniques in every boiler. This accounts for accurate calculations of construction materials and optimum utilization of the boiler's performance criteria.

Combustion - Hurst uses name brand burner components with proven reliability. Every unit is boiler/burner compatible and tested at the factory prior to shipment.

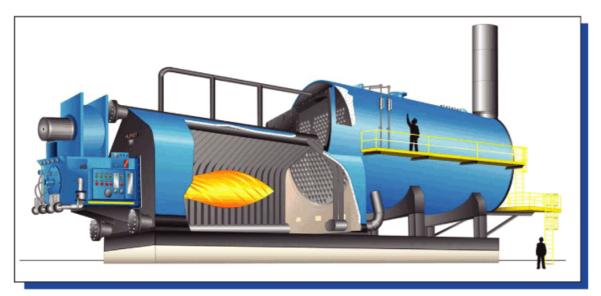
## **Standard Steam Trim**

- · Operating & limit pressure control
- Modulating pressure control (when appl.)
- Water column with gauge glass probe type combination low water cut-off & pump control (not shown)
- Probe type auxiliary low water cut-off with manual reset

- Water column drain valve
- Safety relief valve(s) per ASME Code
- Steam Gauge

# Standard Water Trim

- Operating & limit temperature control
- Modulating temperature control (when appl.)
- Low water cut-off control with manual reset
- Combination pressure, temperature gauge
- Hot water return baffle for shock resistance
- Safety relief valve(s) per ASME Code
- · Stack thermometer



The Hurst HD Hybrid Series combines the benefits of a watertube furnace along with a multi-pass firetube boiler vessel. The resulting efficiency of the Hybrid design is higher than conventional packaged boilers. This efficiency is achieved by superior utilization of the fuel's radiant heat within the water-cooled furnace as well as the Hybrid's balanced multi-pass firetube vessel resulting in low stack temperatures.



The HD Series will efficiently burn any liquid or gaseous fuel and is available from 100 to 2500 horsepower with pressures of 160-PSI hot water or 450-PSI steam.



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#### Solid Fuel Fired Steam Boilers



Hurst Hybrid Series involves years of engineering and construction of the wood, coal, and solid waste fired fuel systems.

The Hybrid design combines the benefits of a watertube furnace along with a multipass firetube boiler vessel. The resulting efficiency of the Hybrid design is higher than conventional solid fuel boilers. This efficiency is achieved by superior utilization of the fuels radiant heat within the water cooled furnace as well as the Hybrid's balanced multi-pass firetube vessel resulting in low stack temperatures. The Hybrid is adaptable to dry wood, wet wood, coal and an array of other waste fuels. Furthermore, the watertube furnace allows for efficient firing of auxiliary fuels (gas, fuel oil, and waste oil).



#### FEEDWATER DEAERATORS

#### WHY DEAERATE?

The use of deaerators has long been used in power plants and water tube type boilers, primarily because they remove undissolved oxygen and raise the temperature of the feedwater. These advantages are important today for firetube boilers as well, due to higher capital investments.

Operating costs can be reduced by recovering flash steam when returned by high temperature condensate. This feature also raises the feedwater temperature, thus requiring less boiler fuel to convert the feedwater to useable steam.

Boiler tubes, condensate lines, and process piping have a much longer useful life by eliminating the pitting action of untreated water. This advantage alone justifies the cost of an "OXY-MISER" deaerator.



hurstboiler.com



P. O. Drawer 529 21971 Highway 319 N. Coolidge, Georgia 31738 1-877-994-8778 (Toll Free) Represented by:

(229) 346-3545 (Tel.) (229) 346-3874 (Fax.) e-mail: info@hursthoiler.com

e-mail: info@hurstboiler.com Revised 07/03

# Hurst Boiler & Welding Co., Inc.

Post Office Box 529 Coolidge, Georgia 31738

Phone: 229-346-3545 Fax: 229-346-3874

PROPOSAL NUMBER: 121807-300/150 300 HORSEPOWER / 150 PSIG DESIGN WOOD WASTE FIRED STEAM BOILER (10,350 POUNDS OF STEAM PER HOUR)

**FOR** 

ESI, INC. OF TENNESSEE 1250 ROBERTS BOULEVARD KENNESAW, GEORGIA 30144

ATTENTION: MR. JIM PITMAN, P.E. JOB SITE: SAVANNAH RIVER

## GENERAL SPECIFICATIONS

## 300 HORSEPOWER BOILER / 150 PSIG DESIGN

Scope of Equipment: 300 Horsepower / 150 psig 1. Design Wet Wood Fired

Boiler to include:

- Deaerator

- Oil back-up burner - Combustion air pre-heater - Stack, 100' free standing

- Recprocating floor, 6 section - Cross-over conveyor with screen

 $1^{1}\slash{2}"\ x\ 2^{1}\slash{2}"\ x\ 5/8"$  or less in size and 50% by weight or less in 2. Fuel Requirements:

moisture content.

3. Approximate Fuel Usage at Maximum Firing Rate: 3200 lbs. per hour based on 50% moisture content.

300 Boiler horsepower (10,350 lbs. of steam per hour from and at 2120 Boiler Rating: 4.

Boiler Pressure: 150 psig design. 5.

Maximum recommended operating pressure is 135 psig

Boiler Design: High Pressure Hybrid 6.

(Fire Tube/Water Tube Design) Built in accordance with the

ASME Code

## 1.1 ENGINEERING SERVICES

Hurst Boiler & Welding Co., Inc. will supply all required design and specifications for the proposed equipment.

Engineering will include:

- 1. Boiler room/storage layout drawings for locating new equipment.
- 2. Foundation details for proposed waste fired boiler based on 2000 PSF soil conditions.
- 3. Assistance in completing and filing of boiler's environmental emission permit.
- 4. All required installation prints and specifications required to install the proposed equipment.
- 5. Two (2) sets of operating and maintenance manuals.

#### 1.2 SYSTEM START-UP

When installation is complete, Hurst Boiler & Welding Co., Inc. will start the equipment and train personnel on the proper maintenance and operation of the system to include:

- 1. Check out of all system components to assure proper rotation, alignment, sequencing, function, etc.
- 2. Start-up of the system to test operation of controls, conveyors and other related equipment.
- 3. Adjustment of controls to provide efficient operation of all boiler functions
- 4. Start-up of the equipment with mill personnel to familiarize them with proper operation and maintenance procedure.
- 5. Hurst Boiler & Welding Co., Inc.'s personnel will be on site until all equipment is started-up and operating to the satisfaction of the Purchaser. Start-up services are a part of this proposal, and no additional charges will be billed to the purchaser for these services.
- 6. Hurst Boiler & Welding Co., Inc. start-up personnel will be on site for a minimum of ten days.

#### 2.1 WOOD FUEL GASIFIER

Substochiometric wood fuel gasifier to include:

- 1. Metering bin / retort type underfed stoker complete with AC-type variable speed controller
- 2. Cast-iron grates with angle and tee bars
- 3. Substochiometric combustion air system to include:
  - Dual belt driven blowers with VFD, TEFC motor and OSHA belt guard
  - Zoned undergrate plenum.
- 4. Gasification chamber casing to include:
  - Furnace front of 1/2" steel plate
  - Furnace sides and rear of 1/4" steel plate reinforced with angle and channel irons
- 5. Chamber lining of:
  - 9" refractory wall, and radiant arch with a service temperature of: 3000F
  - 2" "M" block, service temperature of: 1900F
  - 2" mineral wool, service temperature: 1200F
- 6. Two air cooled observation ports with heat shields and tinted site glasses
- 7. Two cast iron overfire access doors with heat shield and lockable handles
- 8. Undergrate access doors
- 9. Skids and support assembly.

## 2.2 WOOD GAS BURNER

For the combustion of fuel gas Hurst Boiler & Welding Co., Inc. will furnish:

- 1. Combustion air system to include:
  - Belt driven blower with VFD, TEFC motor and OSHA belt guard
  - Prefabricated combustion air duct work for interconnection of blower to zoned air port plenum.
- 2. Combustion chamber casing complete with the following:
  - Casing of 1/4" steel plate with inlet and outlet flanges
  - Angle and channel iron reinforcement
- 3. Chamber lining of:
  - 9" refractory wall, and radiant arch with a service temperature: 3000F
  - 2" "M" block, service temperature: 1900F
  - 2" mineral, wool, service temperature: 1200F.

In addition, one #2 oil fired burner, rated same as boiler, will be provided.

#### 2.3 PRESSURE VESSEL

Hurst Hybrid boiler with extended waterwall radiant section designed for efficient heat recovery from solid fuel combustion. Unit built in strict accordance with the ASME Code and stamped, and rated at no less than 6.5 square feet of heating surface per boiler horsepower.

- 1. The generator (firetube) section includes:
  - Front and rear smoke boxes complete with twin hinged air tight doors. Doors internally insulated and incorporate abrasion resistant shield on the interior of the doors.
  - Steam, water inspection and blowdown openings.
  - · Lugs for connecting support structure.
- 2. The radiant (watertube) section includes:
  - 1/2" front plate and rear plate.
  - Support assembly for attaching to combustion chamber casing.
  - Blowdown openings on each lower drum.
  - Flanged inspection openings on the end of each drum.
- 3. Both the generator and radiant sections of the Hybrid boiler are insulated with 2" of high density fiberglass and clad with 22 gauge "Paint-Grip" zinc coated steel jacket material and galvanized screws for attachment and joining
- 4. Pressure vessel manufactured by Hurst Boiler & Welding Co., Inc. and guaranteed to be free from defects in materials and workmanship for a period of one year.

 $\begin{array}{c} 7 \text{ of } 21 \\ \textbf{ESI, INCORPORATED.} \end{array}$ 

#### 2.4 BOILER TRIM AND LIMIT CONTROLS

- 1. Relief valves per ASME Code
- 2. Boiler bottom blowdown valves
  - Two (2) in generator section, quick-opening
  - Two (2) in radiant section, quick-opening
  - One (1) slow opening
- 3. Surface blowdown valves consisting of one (1) needle and one (1) check
- 4. Main steam valving to include: angle non-return, pp spool and gate per ASME.
- 5. Steam line necessary for the installation of the steam flow transmitter, approximately 20'
- 6. Chemical feed valves consisting of one (1) gate and two (2) check valves
- 7. Steam pressure gauge with pigtail and gauge cock.
- 8. Boiler feedwater valving to include: globe valve, two (2) check valves and stop valve.
- 9. Low water limits:
  - Primary: Probe type with tricocks, gauge glass and pump controller
  - Secondary: Probe type. (Probe type high water cut-off)
- 10. Pressure limits include:
  - Opening limit
  - High pressure limit
  - · Low pressure limit
  - 4-20 milliamp pressure transmitter for fuel feed /combination air modulation.

- 11. Blowdown separator built in accordance with the ASME Code to include:
  - Blowdown inlet (screwed)
  - Drain (flanged)
  - Vent (flanged)
  - Exhaust stack (flanged) to vent above building roof line.
- 12. Access platforms, ladders and one set of stairs will be provided to access:
  - Rear smoke box
  - Water column
  - Feedwater valve train
  - Main steam valving
  - Induced draft fan
- 13. Soot blowers, fixed zone, air with necessary piping, header and valving.
- 14. Necessary pipe and fittings for the installation of the above trim.
- 15. Steam flow meter with totalizer and transmitter.

#### 2.5 POLLUTION CONTROL AND INDUCED DRAFT EQUIPMENT

# HURST BOILER & WELDING CO., INC. GUARANTEES THIS PLANT NOT TO EXCEED THE EMISSION RATE OF .3#/ MILLION BTU INPUT OR MEET STATE EPA STANDARDS, WHICHEVER IS GREATER.

Pollution control and induced draft system provided for each boiler consisting of:

- 1. Flanged breeching, prefabricated of angle iron reinforced 3/16" steel plate for routing flue gas from boiler to multi-clone
- 2. Combustion air preheater, vertical configuration, oversized to include
  - · Collection hopper with flanged inlet, outlet and access door
  - Rotary airlock ash discharge valve with drive
- 3. Dry mechanical multiple cyclone flyash arrestor with 9" diameter clones to include:
  - Collection hopper with flanged inlet, outlet and access door
  - Rotary airlock ash discharge valve with drive
- 4. Flyash conveyor to transfer flyash to boiler room exterior
- 5. Flanged transition of angle iron reinforced 3/16" steel plate for routing flue gas from multicyclone to induced draft fan
- 6. Centrifugal type induced draft fan designed for combustion air service complete with:
  - Pillow block roller bearings (located outside hot gas stream)
  - Heavy duty shaft with heat slinger
  - Variable frequency drive
  - TEFC motor, belt drive and OSHA belt guard
- 7. Ground mounted induced draft fan and 100' self-supporting stack with EPA stack test ports.

## **2.6 DEAERATING BOILER FEEDWATER SYSTEM**

Deaerating boiler feedwater system, 22mpph to include:

- 1. 12' support structure
- 2. Factory insulation and jacketing
- 3. Boiler feedwater pumps, two each for proposed boiler to include:
  - Electric motors
  - Variable frequency drive
  - · Suction manifold
  - Pump suction piping, isolation valving and strainers
  - Pump discharge manifold with isolation valving and pressure gauges
- 4. Water gauge glass set, pressure gauge and thermometer
- 5. Over flow trap
- 6. McDonnell Miller high and low water switches
- 7. ASME safety relief valves
- 8. Vent and vacuum breaker
- 9. Steam pressure reducing valve, Fisher pneumatic globe valve
- 10. Freshwater make-up valve, Fisher pneumatic globe valve
- 11. Tank drain valve

# 2.7 WOOD FUEL RECEIVING AND SYSTEM

Hurst Boiler & Welding Co., Inc. will provide one fuel storage facility to include:

- 1. Six section reciprocating floor to include:
  - Hydraulic cylinders
  - Hoses and fittings
- 2. Concrete imbediment for mounting hydraulic cylinders
- 3. Hydraulic power unit with reservoir and valve block
- 4. Vibrating cross-over conveyor with fuel screening section
- 5. Incline chain conveyor
  - WD110 chain
  - UHMW ware plate
  - Shafts, sprockets, bearings and drive

## 2.8 ELECTRICAL CONTROL SYSTEM

An integrated control system housed in a free standing, pre wired panel for automatic operation will be provided for each boiler to include:

- 1. Control Panel
  - NEMA 12 control enclosure
  - Enclosure prefabricated of 10 gauge plate
  - Primed and painted interior and exterior.
- 2. Main disconnect
- 3. Control voltage transformer
- 4. Cooling as required, air to air exchanger
- 5. Allen Bradley MicroLogix / 1756 System processor
- 6. Power supply Rack Communication modules
- 7. Input and output modules
- 8. Allen Bradley RS View runtime package to represent system required parameters and variables running on a desktop computer. Operator interface is through this interface.
- 9. Allen Bradley PowerFlex 70 and 700 480v variable frequency drives
- 10. Input line reactors
- 11. DeviceNet communication to processor
- 12. Variable frequency drives will be provided for:
  - Metering bin drive
  - Underfire combustion air fan
  - Overfire combustion air fan
  - Induced draft fan
- 13. Local motor disconnects are provided at each motor

- 14. Control enclosure is completely wired, shop tested and Includes terminal strip terminations, ready for connection to field devices
- 15. Control system incorporates equipment mounted, 4-20 milliamp transmitters for controlling/monitoring:
  - Steam flow
  - Steam pressure
  - Boiler water level
  - Furnace temperature
- 16. Limits and Alarms:

•	Primary boiler low water	Limit/Alarm	Automatic Reset
•	Secondary boiler low water	Limit/Alarm	Manual Reset
•	High water cut-off	Limit/Alarm	Automatic Reset
•	Low boiler steam pressure	Alarm	Automatic Reset
•	High boiler steam pressure	Limit/Alarm	Automatic Reset
•	Low draft (Furnace)	Limit/Alarm	Automatic Reset
•	High temperature (Furnace)	Limit/Alarm	Automatic Reset

17. A separate feedwater pump panel will be provided for the proposed feedwater pumps to include motor controls

# 3.1 INSTALLATION SERVICES

To be installed by others than Hurst Boiler

SAVANNAH RIVER PROJECT CONDENSING / EXTRACTION TURBINE GENERATOR SET ADVANCED POWER PRODUCTS PROJECT 10167 Rev 2 March 26, 2008

#### 1. Turbine general description

The machine is an extraction-condensing multistage steam turbine, model **TMCE 25000A** manufactured by TGM Turbines. The machine is provided with a horizontally split casing. The top portion has a built-in block with **independent steam control valves**, directly actuated by **independent hydraulic servo-motors**, which provides excellent speed stability and part load performance.

There are two emergency trip valves, one installed at upper casing steam block and the other is supplied loose to be installed in the client's extraction steam line. Both are hydraulically actuated.

The rotor consists of 01 control wheel and several stages which designed to meet the stated performance. Wheels and shaft are made of a single and integral forged steel piece. The shaft rests on tilting pads type radial and axial bearings.

The rotor assembly includes a balance piston, which compensates the axial forces acting on the rotor by using the steam exhaust pressure to reduce the axial thrust. Labyrinth seals provide the sealing.

The turbine is provided with thermal insulation and lagging in steel plates.

A sound enclosure can be provided over the turbine and gear to the reduce noise level below 85 dba.

The turbine and speed reducer is furnished on a common baseplate.

The complete lube oil system including the AC auxiliary oil pump, DC emergency oil pump, dual oil coolers, dual oil filters, and oil reservoir are provided on a separate skid, The main oil pump is shaft driven off the low speed side of the gear.

#### 2. Turbine Technical Information

#### **Operating Conditions**

Turbine model				
Load point	1	2	3	
Power at generator output	18,700	17,000	8,180	KW
Inlet pressure	850	850	850	Psia
Inlet temperature	825	825	825	° F
Throttle flow	240,000	240,000	240,000	Lb/h
Extraction pressure	385	385	385	Psig
Extraction flow	80,000	100,000	195,000	Lb/h
Exhaust pressure	3.3	2.7	1.5	"HgA
Exhaust flow	160,000	140,000	45,000	Lb/h
Turbine speed	6000	6000	6000	Rpm
Generator speed	1800	1800	1800	Rpm
Tolerance	1	_	_	%

#### Rotation direction - turbine: Counter Clockwise

- 1) Rotation direction seen from turbine to generator
- 2) Gearbox efficiency (approx.): 98,5% Generator efficiency 97,6% (approx. WEG)

The above guaranteed performance is given with a tolerance of 1%, with all control valves completely open, all blades free from scaling and cooling equipment with all cooling surfaces free from deposits, in accordance with the rules of TGM procedure IT-AT-004\_r1 of 07/01/2005 based on ASME PTC 6.

#### **Turbine Materials**

Steam chest ASTM A 217 WC1
Turbine Casing ASTM A 217 WC1
Exhaust casing ASTM A 516 Gr.60

Rotor (integral) SAE 4340
Nozzles AISI 420
Blades AISI 420
Internal parts of valves SAE 4340

Bearing lining Babbitt (white metal)
Steam piping / Oil piping ASTM A 106 / AISI 304 (\*)

# (\*) Oil piping will be supplied in SS for pressure and return lines

# Design parameters

Based on IEC standard, publishing 45: Inlet steam pressure: 880 psig Inlet steam temperature: 839,4 °F

#### Steam connections (turbine flanges)

	Inlet	Extraction	Outlet
DN (in)	10	10	95 X 38
PN (psi)	900	600	30
Norma	ANSI B 16.5	ANSI B 16.5	_
Direction	Right - Downwards (*)	Up or Down	Up or Down

<sup>(\*)</sup> Seen from the turbine to the generator

#### Turbine protection system

The TGM trip valve for the TM turbine is provided with a special device that allows for testing the valve during the turbine operation in compliance with the API 612 standard. The trip valve will actuate whenever one or more conditions below occur:

- Overspeed (mechanical / electronic)
- 3-way solenoid valve (electric)
- Manual trip
- Excessive radial bearings vibration
- Excessive axial displacement
- High bearing metal temperature

#### Turbine governing system

By electronic Governor Woodward 505E, NEMA D, which operates via current- to- pressure converter on the steam control valve servo-motors. The system includes:

Woodward 505 E governor

Woodward CPC (2)

Servo-motors by TGM

Magnetic pick-ups (3)

#### Noise Level

Approximate noise level for turbine and gearbox is 96db (A)  $\pm$  2, for measurements at 1 meter of distance, not taking into account environmental conditions, based on ISO 3740 and VDI 2159 standards. Sound enclosure for turbine and gearbox is proposed as an option (See commercial offer)

## **Vibration Limits**

As per ISO 10816 Standard, part 3 - group 1 - zone A/B, level below 2.3 mm/s for rigid support or 3.5 mm/s for flexible support

## 3. Gearbox, Turning Gear and Couplings

## Gearbox

Type Parallel shafts, horizontally split casing

Input power 19240 kW
Input/Output speed 6000/1800 rpm
Gearing type Double-helical

Teeth Case hardened and grounded

Bearing Babbitt
Casing Cast iron
Service Factor (AGMA) 1.3

**Turning Gear** 

Type Electric
Power 15 kW (approx.)
Engage / disengage Manual / automatic

Couplings

High Speed

Type Disk
Speed 6000 rpm
Lubrication Not required
Protection SAE 1020 plate

Low Speed

Type Rigid
Speed 1800 rpm
Lubrication Not required
Protection SAE 1020 plate

#### 4. Hydraulic System

## Main oil pump

Worm Type 10 kgf/cm<sup>2</sup> Oil pressure

Driven by Low speed gearbox shaft

ISO VG 68 Oil specification

## Auxiliary oil pump

Worm Type 10 kgf/cm<sup>2</sup> Oil pressure Electric motor Driven by Current type A/C 60 Hz Frequency Speed 1760 rpm Configuration В3 IP 55

#### **Emergency oil pump**

Protection

Type Gear 1,5 kgf/cm<sup>2</sup> Oil pressure • Driven by Electric motor Current type DC 1800 rpm Speed

## Oil cooler duplex (Standard TGM)

Cooling water temperature inlet (max.) 86 °F (\*) 95 °F Cooling water temperature outlet • Oil inlet temperature 140 °F 113 °F Oil outlet temperature Pressure drop 4 psig Cooling water pressure 100 psig

#### To be confirmed by the customer (\*)

# Materials

Tubes AISI 304

Tubes sheets • ASTM A 285 Gr. C Water chamber ASTM A 285 Gr. C Casing ASTM A 285 Gr. C

# $Hydraulic\ system-continuation$

# $Oil\ filter\ (lubrication\ and\ control)-Turbine$

Type Duplex
 Strainer mesh 25 μm
 Pressure drop 0,2 kgf/cm <sup>2</sup>
 Strainer material Stainless steel

#### Oil tank

Oil type ISO VG 68

Material Structural steel (carbon steel)

**OBS.:** Oil tank and lube oil system to be supplied separate from the turbine and gearbox baseplate.

Lube oil system to be mounted together with oil tank. Oil coolers will be positioned under the oil tank.



#### 5. Instrumentation

All variables, according to the list of instruments below, will be indicated through a local panel to be installed beside the turbine.

Panel and indicators to be provided by APP. Instruments listed under column "LC = LOCAL" to be provided by TGM.

Measurement points	QT	LC	PA	AL	TR
Governing system					
Woodward governor 505 E	1		X		
CPC	2	X			
Magnetic Pick-ups	3	X			
Steam System					
Inlet steam pressure	1	PIT	PI		
Wheel chamber pressure	1	PIT	PI		
Extraction pressure	1	PIT	PI		
Exhaust pressure	1/1	PIT/PS	PI	Н	HH
Inlet steam temperature	1	TE	TI		
Extraction temperature	1	TE	TI		
Exhaust steam temperature	1	TE	TI		
Lubrication system					
Pressure after oil pumps	1	PIT	PI		
Oil pressure at gearbox inlet	1	PI			
Lubrication oil pressure	1/1	PIT/PS	PI		LL
Differential pressure in the oil filter	1	DPS		Н	
Oil temperature before the oil cooler	1	TI			
Oil temperature after the oil cooler	1	TE	TI	Н	
Turbine bearing metal temperature (RTD Pt 100)	4	TE	TI	H	HH
Gearbox bearing metal temperature (RTD Pt 100)	4	TE	TI	Н	HH
Control System					
Impulse oil pressure	1/1	PIT/PS	PI	L	
Control oil pressure	1	PIT	PI		
Others					
Manual trip	1	HV	HS		
Turbine trip indicator	1	ZS	ZI	X	
Turbine speed	1	SE	SI		HH
Auxiliary oil pump motor (on-off)	1		HS		
Oil tank low level	1	LE	LI	L	
Electronic overspeed system	1	SE	SI	Н	HH
Radial vibration probes – turbine	4	VE	VI	Н	НН
Radial vibration probes – gearbox	8	VE	VI	Н	НН
Radial vibration probes — generator	4	VE	VI	Н	HH
Keyphasor	1	ZE	ZI	Н	НН
Axial displacement – turbine (probes by TGM)	2	ZE	ZI	Н	HH

#### Remark:

1) Pressure/temperature transmitters, electric motors and magnetic pick-ups will be UL listed. CPC, RTD's, cables, cable trays, conduits, junction boxes and further instruments/accessories will be supplied as per TGM standard.

## **Instrumentation (Continuation)**

## Legend

AL: Alarm

PS: Pressure switch

DPS: Differential pressure switch

TR: Trip

HS: Manual Key

LC: Local

LI: Level indicator

LT: Level transmitter

PA: Panel

PI: Pressure indicator

PIT: Pressure transmitter

L: Low signal

LL: Very low signal

SI: Rotation indicator

SE: Rotation sensor

TE: Temperature sensor

TI: Temperature indicator

VI: Vibration indicator

VE: Vibration sensor

VT: Vibration transmitter

ZE: Displacement sensor

ZI: Displacement indicator

ZS: Limit switch

H: High signal

HH: Very high signal

HV: Hand Valve

## **Instruments Voltage**

Function	Voltage	Frequency	Observation
Safety	125 Vdc		
Auxiliary for control panel	220 Vac	60 Hz	
Instrumentation	24 Vdc		
Direct current	24 Vdc		
Auxiliary pump	220/380/440 Vac	60 Hz	
Emergency pump	125 Vdc		

**OBS.:** All voltages indicated above are generic. The customer shall confirm them all later on.

## 6. Switchgear & Controls

# Medium Voltage Switchgear

- Section #1 Generator Section
- 1 Vacuum Breaker Element, 1200A 15kV 500mVA
- Vacuum Breaker Compartment,1200A 5kV 1
- Vacuum Breaker MOC/TOC Switch 1
- 1
- Generator Voltage Transformer Drawout Tray Generator Control Transformer Drawout Tray 1
- Section, indoor vertical section 1
- Section, main copper buswork
- 2 Voltage Transformers
- Control Power Transformer, 3kVA
- **Current Transformers** 3

## Section #2 - Bus VTs

- 1 Bus Voltage Transformer Drawout Tray
- Section, indoor vertical section 1
- Section, main copper buswork 1
- 2 Voltage Transformers
- 1 Set, space heaters and cabinet lamps
- 1 Set, breaker standard accessories
- Sets, control wire, wiretags, terminal blocks, fuses 1

## Surge Cabinet

- Vertical housing NEMA 4 Stainless Steel Lightning Arrestors 1
- 3
- 3 Surge Capacitors
- Space Heater 1
- 1 Cabinet Lamp
- 1 PT drawout tray
- CPT drawout tray 1
- voltage transformers 3
- 1 control transformer

## Neutral Grounding Resistor

- NGR, 400A 10 Second, NEMA 4 Stainless Steel enclosure 1
- 3 Differential Current Transformers

# Turbine / Generator Control Panel

Turonic	7 Generator Control Failer
	NEMA 4 Stainless Steel vertical section w/vortex air cooler &
1	temperature controller
1	Woodward 505 Governor
1	Woodward SPM-D11/LSXR Synchronizer
1	Woodward Protech 203 Electronic Trip
1	Basler DECS-200
1	GE SR-489 Multilin Generator Protection Relay
1	Lot, Test Blocks
1	Synchroscope
1	Lockout Relay
16	Auxiliary Relays
1	Lot, Control Switches
1	Lot, Relay Surge Suppressors
1	Space Heater
1	Thermostat
1	Interior Light
1	Interior Light Switch
1	Switch — Generator Circuit Breaker Trip/Close
1	Switch — Governor Speed Lower/N/Raise
1	Switch — AVR Voltage Lower/N/Raise
2	24VDC Power supply-20A (redundant)
1	Lot, Wire, Terminal blocks, fuses, fuseblocks
1	Lot, commissioning spare parts
1	Lot of Nameplates & Engraving
1	Lot of Pilot Lights & Pushbuttons
1	Lot of Meters (KW/Kvar/V/A, Frequency etc)
1	Lot, miscellaneous controls, etc
	PLC Control Material
1	ControlLogix Processor, 64 MB CompactFlash (1756-L61))
1	Backup Battery, (1756-BA1)
1	ControlLogix Chassis, 17 slot (1756-A17)
1	Controllogix Power supply, 75 Watts (1756-PA75/C)
1	Prosoft Modbus Interface Card (MV156-MCM)
1	Ethernet Interface Card (1756-ENBT)
1	16-Channel Analog Input, single ended (1756-IF16)
3	6-Channel RTD Input (1756-IR61)
1	16-Input Card, AC (1756-IA16)
	1 / /

- 2 16-channel input Card, DC (1756-IB16)
- 16-Relay Output Card, Isolated (1756-OW161)
- 8 Removable Terminal Block, 36 point (1756-TBCH)
- 4 Removable Terminal Block, 20 point (1756-TBNH)
- 4 Extended Housing Terminal Block (1756-TBE)
- DH-485 Interface Module (1761-NET-AIC)
- PanelView+ 1000 w/Ethernet (2711P-T10C4A2) 1
- RSViewME Software for HMI (9701-VWSTMENE) 1
- Miscellaneous Communications Cables for HMI & PLC 1
- Industrial Network Switch (Hirschmann RS2-4TX/1FX)

### **Bently Nevada**

- 19" Rack, 14 slots (P/N 3500/05-01-00-00-00)
- Rack Interface Module (P/N 3500/20-01-02-00) 1
- Rack Power Supply, 120VAC & 24VDC (P/N 3500/15-01- 04-00) 1
- Keyphasor Module (P/N 3500/25-01-01-00) 1
- Proximity/Seismic Monitor Module (P/N 3500/42-01-00) 5
- 4-Channel Relay Module (P/N 3500/32-01-00) 2
- Communication Gateway, Modbus RS-485 (P/N 3500/92-02-01) 1
- 3-Channel Overspeed Protection System (P/N 3500/53-03-00)

## **DC Emergency Oil Pump**

Starter for emergency oil pump

Batteries a charger for DDC emergency oil pump

### 7. GENERATOR

# GENERATOR 23125 kVA/13800 V/1800 rpm

Three phase synchronous generator, industrial type, with BRUSHLESS excitation system, electronic voltage regulator, with welded steel frame, 1040/45 steel shaft, class "F" insulation (155°C), sleeve bearings, CW and CCW rotation; manufactured according to ABNT and IEC standards, having the following characteristics:

Quantity : 01

: SSW 1000 Model : 1000 Frame Output : 23125 kVA Poles/ Nominal speed : 04 / 1800 rpm Over Speed : 20% : 13800 V Voltage Frequency : 60 HZ Power factor : 0,80 Protection degree : IP-54

Cooling system : Totally enclosed - 2 X 65% water-air cooled

(CACW)

Mounting : B3 (Horizontal) Environment : 40°C and 1000 m

Duty : S1 Insulation class : F Temperature rise : 80°C

Bearing type : Sleeve Bearing

### **ACCESSORIES INCLUDES:**

- -(06) Winding temperature detector (02 per phase): PT-100
- -(02) Bearing temperature detector (01 per bearing): PT-100
- - Space heaters, 220 V, 600 Watts;
- - Oil Flow Sight-Viewer
- - Water Flow Viewer
- - Water Flow detector in the water inlet (heat exchanger)
- - Water leakage detector
- - Water temperature detector inlet and outlet: PT-100
- - Air temperature detector inlet and outlet: PT-100
- - Grounding Brush
- - Neutral connection box
- - Air water cooling system, two heat exchangers for each generator.
- - Water leakage detector
- - Bently Nevada Probes (DE  $\pm$  NDE bearings). Installed by WEG but supplied by steam turbine manufacturer.

# GENERAL INFORMATION:

## APPLICABLE STANDARDS:

The machines are designed, manufactured and tested according to standards ABNT, NEMA, IEEE, IEC and DIN, where applicable. Specifically we can mention:

NBR 5110 — Cooling methods.

NBR 5052 — Synchronous machines.

NBR 5117 — Synchronous machines.

ISO 1940 — Balancing quality.

VDE 0530 — Turning electrical machines.

NEMA MG-1 Part 32 and 33 — Synchronous Generators.

### **GENERAL CONSTRUCTION:**

An alternating-current generator consists essentially of a magnetic circuit, dc field winding, ac armature winding and mechanical structure, which includes cooling and lubrication. The magnetic circuit and field windings are arranged in certain way that, as the machine spins, the magnetic flow linking the armature windings

changes cyclically, and for this reason induces alternate voltage in armature winding.

There are many possible geometrical arrangements for these elements, and each one with its own advantages. Usually the salient pole construction is used for low speed rotors such as the ones used in diesel an hydroelectric power stations, and the cylindrical rotor machine for steam-turbine driven generators. WEG's standard for high-speed application is the cylindrical rotor type because of the lower centrifugal forces created, and also because it lessens/eliminates some harmonics and high frequency interference with other equipments.

### **FUNCTIONS:**

The mechanical and electrical characteristics as well as the performance of an electric generator are a consequence of the magnetic circuit design. Because output results from the interaction between current-carrying armature conductors, the air-gap flux and it is proportional to their product, when designing the magnetic circuit WEG design provides the correct space for the windings and the right path for the magnetic flux.

### DESIGNING THE MAGNECTIC CIRCUIT:

The right design of the pole pitch and the number of poles assures always the best path for the circuit. As the number of poles decreases, the restrictions in space available in the rotor result in most of the magnetic circuit dimensions being a smaller proportion of the pole pitch. The armature slot width is determined principally by the insulation thickness required for the machine voltage and is commonly such that the resulting total copper width per slot is 40 to 60% of the slot width.

### MATERALS AND LOSSES:

To reduce Foucault currents caused by variations of the air gap flux density, and also to reduce losses in the rotor pole faces, WEG selected the cylindrical type rotor instead of the high stressed salient pole machines. Always when this type of pole is used we notice the air gap is relatively large and the losses decrease to acceptable values. Most salient-pole machines on the other hand, have smaller air gaps relative to the armature slot widths.

To improve the good characteristics of the cylindrical-pole configuration, our design also use laminated poles. We can use one-piece laminations or segmental laminations, depending on the machine size and the available widths of the electrical sheet of steel. Mostly WEG uses 3.5% silicon electrical sheet steel in 0.014 to 0.025 in thickness. This sheets are stamped at WEG, because quality and grain orientation. The correct finishing includes polishing and painting

of each individual sheet. During testing, when submitted to high flux densities the advantages of this construction come to view in the general efficiency.

### PERFORMANCE:

The field current required for a particular load condition is determined by the magnetic circuit in conjunction with its armature and field windings. This is calculated during design by evaluating the flux densities and the corresponding ampere-turns in all parts of the magnetic circuit. After the machine is built, the magnetic characteristics are shown in the performance report.

### FRAME:

WEG's electric generator's frames are built entirely using steel sheets and MIG welded profiles. It's well known by its strength and mechanical resistance. It can be manufactured in many different arrangements, and the most usual ones are B3 (with terminal boxes placed sideways) or D5 whose characteristics include pedestal bearings and terminal box located at the bottom of the generator, inside air outlet.

### CLASSES OF INSULATION:

To assure long electrical/overall life, the temperature of operation should never surpass the insulation class temperature of the materials used in the generator construction.

As result, the table below shows standard temperatures for the most common classes used for this size of generators:

Insulation Class	Temperature Class	Temperature rise °C
F	155°C	105°C max (or 80°C)

### ARMATURE WINDING INSULATION:

As standard armature voltages can vary from 220 up to 18,000 V, it is necessary to ensure the appropriate amounts of turn-turn and turn-ground insulation used to withstand different situations, such as steady state or transients. In low voltage systems the turn-turn insulation may be applied directly to the conductor as a film. In higher voltages it is necessary special methods to prevent corona effects.

Despite of this recommendation, WEG assures all equipment here manufactured use the same treatment, which consists in Vacuum and Pressure Impregnation.

### IMPREGNATION WITH VARNISH:

After winded both stator and rotor are submitted to deep vacuum varnish impregnation (VPI), which fills completely all existing remaining gaps. We use polyester varnish, and it assures an insulation class F (or superior) with temperature class of 155°C (337°F).

#### **COOLING SYSTEM:**

Heat generated by internal losses must be exhausted to keep the internal temperature stable and under standard values. Usually heat is transferred directly to air and this air can either be cooled in a closed circuit by an outside water or air-cooling system (indirectly cooling system) or can be exhausted (directly cooled system). In the first case, a closed circuit, there is no possibility of debris formation on the coils, as it may occur in the second case.

WEG manufactures generators for both applications with a protection degree of IP-23 (open) or IP-54/55/65 (closed).

Stators are frequently cooled by blowing air over the coil ends and through radial channels in the armature core. The channels are normally in the range of 6 up to 8mm wide, with spacing between each other of about 50mm, but they may be omitted entirely on machines with short core lengths.

## MECHANICAL COMPARISON BETWEEN SALIENT POLE AND PLAIN POLE ROTORS:

The field configuration, salient pole and plain pole rotors distinguish two fundamental variations in the mechanical construction. In most but the smallest modern alternators and in some ac brush less exciters, the field is the rotating element, and the armature is the stationary element (stator). Salient pole construction, where the field windings are on pole pieces attached to a rotor body, is used on slower speed machines, 1200 rpm and lower, because of it's relatively lower cost. Plain pole construction, where the field windings are inserted in axial slots in a cylindrical rotor body, is used on essentially all 2 poles and on the larger 4 pole machines, because it minimizes the problems of fitting salient poles to the rotor body, which in such high-speed machines become non-practical and too risky. The fundamentals of stator core and winding construction for these two types of design are the same, but as far as the mechanical behaviour and life expectancy is concerned the plain pole cylindrical rotor is superior.

BEARINGS:	
-----------	--

Smaller AC generators can be furnished with ball anti-friction bearings when the load and speed are not critical and operate very well as long as a preventative maintenance program is followed.

However, the majority of the AC generators are supplied with oil-lubricated babbitted bearings. For horizontal shafts these are self-contained ring-oiled bearings when design conditions permit.

At higher shaft peripheral speeds and higher bearing loadings ring-oiling is supplemented with forced circulation of external cooled oil. The rings may be replaced by an external source, such as the same lubricating system used by the turbine, or WEG can supply a self-sustained lubrication system.

Lead base babbitted bearings are commonly used for journal bearings, although tin-base babbitt may be employed in heavy-duty applications.

All bearings have an electrical connection to the ground to isolate electrical currents.

### **SPACE HEATERS:**

To avoid water condensing inside generator, this equipment is built with an electrical resistance that can be powered from any typical 240 VAC outlet. This way it can be stored for a long time, as long as the heater is on.

#### BALANCING:

The standard mechanical balancing adopted by WEG is stated by ISO 1940, which defines the possible grades, N (Normal), R (reduced) or S (special). Our Quality Control does not allow any rotor to continue in the manufacturing process chain if it reached a degree above R 2,5 (Reduced).

For this reason we can assure a long reliable life, and low bearing wear, as well as no vibration is transmitted to other related machines.

### **COATING:**

All generators have its internal and external surface treated with steel debris blasting until it reaches the cleanness degree Sa 2.1/2.

First coating is applied using polyamide epoxy 35 – 40 microns thick.

Finishing consists into two polyamide epoxy coatings, each one 70-80 microns thick, with standard colour Medium Blue RAL 5007.

The coating process is designed to allow the machine to be installed in regular-aggressive acid atmosphere with good resistance to alkaloids and humidity, typical for Sugar — Alcohol distilleries, Paper, Wood or related industrial processes, etc...

## **QUALITY INSPECTION:**

All Manufactured generators are factory thoroughly tested. There is a standard testing procedure, and it is completed with no exceptions.

Special tests can be performed with or without witness/inspection, but it should be agreed between buyer and seller before the PO is placed so it can be scheduled in advance. Any changes after that may affect final price, delivery time, and the chronology established when the unit is being manufactured. Such chronology is very important due to the available time in the testing lab, as all products are tested, and some of them have a specific deadline to be followed.

## ELECTRONIC/MICROPROCESSED VOLTAGE REGULATOR:

The main purpose of the voltage regulator is to keep a steady output voltage at any load condition. It may include functions such as allowing synchronization with other generators and/or power utilities, allowing power factor correction, and allowing reactive power compensation throughout the capability curve.

WEG uses an electronic and high-speed micro processed voltage regulator in order to assure such flexible operation.

## 8. Summary of Supply

- TGM extraction/condensing steam turbine model TMCE 25000A for generator drive
- Gearbox, parallel shafts, single stage, double helical type with tuning gear, s.f.= 1.3
- High/Low speed couplings with coupling guards
- Complete oil unit for turbine, gearbox and generator including mechanical oil pump, auxiliary lube oil pump, emergency oil pump, twin oil filters, twin oil coolers, oil reservoir, and oil vapor extractor. Provided on skid.
- Common baseplate for turbine and gearbox
- CPC (2) + Magnetic Pick-Ups (3)
- Probes for vibration and axial displacement of the TG set (19) factory mounted and wired to junction box
- Junction boxes and wiring to JB (not UL listed but meet NEMA standards)
- UL listed instruments / motors where possible
- Turbine / generator control panel including:
- Woodward 505 E governor
- Woodward Protech 203 overspeed protection
- Bently Nevada 3500 vibration system
- Allen Bradley ControlLogix with HMI
- Basler DEC 200
- GE SR-489 Multilin Generator Protection Relay
- Auto Synchronization
- Transmitters with mounting rack
- RTD's factory mounted and wired to junction box
- Painting according to TGM export plan
- Manual steam drain valves
- Visual indicators for returning lube oil from bearings
- Weg TEWAC generator mounted on separate sole plate
- Medium voltage switchgear including:
- Circuit breaker panel
- Neutral grounding resistor panel
- Surge protection panel
- Starter, batteries and charger for DC emergency oil pump
- Export packing for Brazilian equipment
- Customs and port handling charges
- Freight and insurance to job site
- Shop tests to manufacturer's standards. Third party inspections not included. (\*)
- Steam sealing system Field piping by others
- Installation, start up, and training supervision (See conditions)
- Acoustic hood for turbine and gearbox (option) (supplied loose)
- Spare parts for 2 year operation (option)

<sup>(\*)</sup> In case of external inspection, hired by the customer, TGM will evaluate impacts of demands to its standard Inspections & Tests Plan. Relevant impacts such as costs and delivery time will be charged to the customer.

## 8. Limits of supply

APP will limit its supply, as shown below:

### Steam

- Inlet flange of the turbine emergency trip valve
- Inlet flange of the gland steam sealing system
- Exhaust flange of the turbine
- Outlet flange of the turbine extraction
- Inlet and outlet flanges of the extraction trip valve

## Cooling water

- Inlet flange of the oil cooler
- Outlet flange of the oil cooler
- Inlet & outlet flange of generator water cooling section

## Electricity

- Junction boxes terminals
- Control panel terminals
- Switchgear panel terminals

## **Drains**

Outlet flange of the drain valves

## Air

Inlet connections of the instruments/devices

## OIL

Supply & return connections of lube oil skid

Supply & return connections on turbine / gear basplate

Supply & return connections of generator bearings

### 9. Exclusions of Supply

- Steam, condensate and cooling water lines and accessories/instrumentation (valves, supports, joints, insulation, condensate separator devices, etc...) out of the limits of supply;
- Civil works and foundation calculations;
- Overhead crane;
- Steam condenser and accessories/appurtenances;
- Cooling water tower and water circulating pumps
- Gland steam condenser, piping and accessories
- Fire protection systems;
- Electrical and mechanical interconnection out of the limits of supply;
- Utilities such as electric energy, water, compressed air, welding materials and others;
- Flushing oil and first lube oil filling;
- Stairways, scaffold, platforms and similar;
- Safety and control valves out of the limits of supply
- Anchor bolts set and leveler
- Explosion proof instruments / accessories
- Wiring between local junction boxes and control panel
- Wiring between generator and switchgear panels
- No-load running test
- Performance test
- Heat stability test
- High speed balancing
- Any special design, accessory and documentation (submittals) out of standard scope of supply
- Any other equipment not listed in this proposal

### **IEC Recommendations**

# 45.19 Limiting values for steam pressure and temperature

## Pressure variations

Average steam pressure at turbine throttle during a 12 months period shall not exceed the nominal pressure

Maintaining the average value, the steam pressure shall not exceed 5% of nominal pressure; however instantaneous peak values up to 20% are allowed provided that the total duration of peak loads shall not exceed 12 hours in a period of 12 months of operation.

## Temperature variation

Temperature shall never exceed 8°C above the normal operating temperature. Under exceptional circumstances the steam temperature can exceed 14°C above the operating temperature, provided that these conditions do not exceed 400 hours in a period of 12 months of operation.

## Steam line

In order to assure a good performance of the turbine and prevent damages the steam conditions shall remain within the limits stated above and the steam shall be free of condensate.

Condensate in the steam line may produce thermal shocks with severe consequences and serious damages, for instance shaft distortion.

# Specifications for lube oil in steam turbines

Mineral refined oil complying with the characteristics indicated by the DIN 51515 shall be used for the regulation and lube system and must have de following characteristics:

Denomination	Requirement	Test according to
Type of lube oil	TD 68	
Viscosity class — ISO	ISO VG 68	DIN 51519
Nº (coordination)	25	
Cinematic viscosity	65,5 mm <sup>2</sup> /s (cSt)	DIN 51550 together with,
at 40°C	8,7 mm <sup>2</sup> /s (cSt)	DIN 51561 or DIN 51562
at 100°C		
Dynamic viscosity — average at 40°C	65,5 x 10-3 Pas	
Viscosity index not less than	95	
Density at 15°C not more than	0,9 Kg/l	DIN 51757
Ignition point as per Cleveland not less then	200°C	DIN 51376

Denomination	Requirement	Test according to
Pourpoint = or <	-6°C	DIN 51597
Neutralization index not to exceed	(+) 0,1 mg KOH/g oil	DIN 51558 part I
Saponification index not to exceed	(+) 0,15mgKOH/g oil	DIN 51559
Ashes (oxide) not to exceed	(+) 0,01% w/w	
Water	g/100g	DIN 51582
Solid foreign matter below detectable levels	g/100g	DIN 59592
Water separation capacity (max)	300 s	DIN 51589 part I
Water separation capacity at 50°C (Max)	5 min	DIN 51381
Corrosion effect on copper — corrosion degree (Max)	2100 A3	DIN 51759 (3h up to 100°C)
Corrosion protection (steel)	0A (corrosion free)	DIN 51585
Neutralization index increase after 1000 h	2,0 mg KOH/g oil	DIN 51587
Capacity of specific load (gearbox)	Normal test FZG	DIN 51354 (A/8, 3/90)
	6-7 degree	ASTM D 1947-68
		IP166/65

These values are valid only for mineral oil.

## Recommended quality for cooling water

The materials selection for steam condenser and heat exchanger is directly related to the type of cooling water used (aggressiveness). It becomes clear that water aggressiveness in continuous operation should not increase in relation to the value originally specified, because it may reduce significantly the average lifetime of the equipment.

Besides, deposits on the tubes decrease the heat exchange efficiency and speed up internal corrosions.

In order to assure safe operation, some basic requirements have to be followed, as indicated below:

## Open circuit cooling

The total amount of salt shall not exceed 100 mg/l. Water shall have adequate chemical composition because treatments are not applicable.

In case of particles in suspension, filtering must be applied. Seaweed can be eliminated by clorification. To avoid separation of carbonates, it's necessary to keep the balance of the calcium/carbonic acid rate.

### Closed circuit cooling

The following figures shall be kept:

<sup>(+)</sup> When active substances are used the above values are higher.

 PH
 7

 Carbonic acid
 3 g/l

 Carbonate hardness
 6°dH

 Carbonate hardness for polymorph phosphates
 12°dH

 Non-carbonate hardness
 80°dH

 Clorets
 400 mg/l

 Sulfates
 500 mg/l

 Total salt
 3000 mg/l

 Total alkalinity
 15 mg/l

 Silic acid
 200 mg/l

 Particles in suspension
 10 mg/l

Note: Water flow shall be periodically inspected. The water chambers must be always clean.

# APPENDIX D

SRS Engineering Standards Manual

Attachment 1 National Codes and Standards for Engineering/Design Tasks Matrix Date: 9/13/07 ENGINEERING STANDARDS BOARD Manual: WSRC-TM-95-1 Page 1 of 7 Revision 17

Approved by: Ken Stevens, Signature on File

Chairman, Engineering Standards Board

APPLICATION	COMPONENT	GENERAL SERVICE See Note	PRODUCTION SUPPORT	SAFETY SIGNIFICANT	SAFETY CLASS
ENVIRONMENTAL QUALIFICATIONS		None			IEEE-323
SEISMIC QUALIFICATIONS	EQUIPMENT, COMPONENTS	IBC		Applicable national codes listed in SRS Engineering seismic qualification is req	Standard 01061 (if
CHEMICAL & TOXICOLOGICAL HAZARDS		OSHA, AICHE Safety Standard	dards, API Safety Star	ndards, ACGIH Requirement	s, NEPA*
		N/A			
	PRESSURE VESSELS, all services as defined in the ASME BPV Code	ASME VIII-2004 Div. 1 or	Div. 2 *	Yes	
	POWER BOILERS	ASME I-2004*		Yes	
	TRANSPORTATION PACKAGING	49 CFR		N/A	
	HEATING BOILERS	ASME IV-2004*		N/A	
PROCESS EQUIPMENT VESSELS & TANKS	FIBER-REINFORCED PLASTIC PRESSURE VESSELS	ASME X-2004* API-12P		N/A	
	STORAGE TANKS	API-620, ANSI/ASME B96 Alloy)*	5.1 (Aluminum	N/A	
	WATER STORAGE TANKS	AWWA D-100*		N/A	
	PROCESS TANKS FOR FLAMMABLE LIQUIDS	API-620, API-650, UL-142 (above ground), NF	FPA 30, NFPA 326	API-650 and NFPA-30	
	PETROLEUM STORAGE TANKS	API-650* UL-58 and UL-1316 (under	ground)	API-650	
	CHEMICAL PROCESS PUMPS	ANSI/ASME B73, 1M & 21 API-674, API-675, ASME I		Standards*	
PROCESS EQUIPMENT PUMPS	POTABLE & SANITARY WATER PUMPS	AWWA E101*		This standard has been w	vithdrawn
	FUEL OIL SERVICES PUMPS	API-610*		No, N/A	
	OTHER PROCESS SERVICE PUMPS	Hydraulic Institute Standard	ls, API, ASME *	No	

<sup>\*</sup> Codes and standards listed in the lower classifications are also requirements for the higher classifications. Where requirements in the lower classifications conflict with requirements in the higher classifications, the more restrictive requirement governs.

APPLICATION	COMPONENT	GENERAL SERVICE See Note	PRODUCTION SAFETY SUPPORT SIGNIFICANT SAFETY CLASS
	POWER SYSTEMS (PIPING & VALVES)	ASME B31.1-2001*	Yes
	PROCESS SYSTEMS (PIPING & VALVES)	ASME B31.3-2002 and B31.3 is for process Clarification in the application of these 15060 (WSRC-TM-95-1)	No – using B31.1 since it is applicable to power plants codes and standards is provided in SRS Engineering Standard No
PIPING & VALVES	BUILDING SERVICES (PIPING & VALVES)	ASME B31.3-2002 or B31.9-2004*	No
	WATER DISTRIBUTION SERVICES (PIPING & VALVES)	AWWA C Series*	No — using International Plumbing Code
	REFRIGERATION PIPING	ASME B31.3-2002 or B31.5-2001	N/A
	OTHER BASIC CODES & STANDARDS (PIPING & VALVES)	AWWA* API, ASME I-2004 ASME B31.5-2001	No No and Yes as applicable N/A
PLUMBING	PLUMBING SYSTEMS in infra-structure facilities	International Plumbing Coe (IPC) *	Yes
PROCESS EQUIPMENT GENERAL	MOISTURE SEPARATORS OIL LUBRICATORS	ANSI/B93.114M (restricted use of nonmetallic bowls)*	N/A, see comment
GLOVE BOXES		NFPA 801, NFPA 45, NFPA 69, AGS- AGS-G003-1998, ANSI/ASTM C852	G001-1998* <b>N/A</b>
STRUCTURAL	GENERAL DESIGN	Applicable national codes and standards	s are listed in SRS Engineering Standard 01060. No — IBC
CIVIL	GENERAL DESIGN	Applicable national codes and standards	s are listed in SRS Engineering Standard 01060. No – IBC
	SURVEYING	FGDC-STD-007.4 (Federal Geographic	Data Committee) No
	GENERAL DESIGN	OSHA, NFPA 101, 220 & 221, NRCA*	Yes – International Building Code & International Fire Code
ARCHITECTURAL	PHYSICALLY HANDICAPPED	UFAS*	No, except on administration building
	BUILDING CODE	International Building Code (IBC)*	Yes

<sup>\*</sup> Codes and standards listed in the lower classifications are also requirements for the higher classifications. Where requirements in the lower classifications conflict with requirements in the higher classifications, the more restrictive requirement governs.

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GENERAL SERVICE PRODUCTION SAFETY APPLICATION COMPONENT See Note SUPPORT SIGNIFICANT SAFETY CLASS MECHANICAL ASE NOG-1 CRANES HANDLING **EQUIPMENT** CMAA 70, CMAA 74, CMAA III-5, 11, 12 and 17; ASME B30.2, B30.11\* No OTHER HANDLING **EQUIPMENT** ANSI N14.6 GENERAL FIRE PROTECTION NFPA Fire Codes and Standards, Building Code (IBC), Uniform Fire Code, 29-CFR-1910 For exceptions to these codes and standards refer to Standard 01120, Attachment 1\* Yes AUTOMATIC SPRINKLER NFPA 13, 15, 25, 72, Building Code (IBC)\* SYSTEMS WATER MIST SYSTEMS NFPA 72, 750, Building Code (IBC)\* Yes STANDPIPE SYSTEMS NFPA 14, Building Code (IBC)\* FOAM SYSTEMS NFPA 11, 11A, 16, 18, Building Code (IBC)\* FIRE PUMPS NFPA 20, 25, 30, 70-2005, 72, Building Code (IBC)\* Yes WATER SUPPLIES NFPA 13, 20, 22, 24 291, 1142, Building Code (IBC)\* 1142 does not apply WATER DISTRIBUTION AND NFPA 24, 25, 1141, 1963, Building Code (IBC)\* Yes FIRE HOSE LIQUID RUN-OFF CONTROL NFPA 30, 70-2005, 801, Building Code (IBC)\* 801 does not apply. Additional, 850 GASEOUS FIRE SUPPRESSION NFPA 12, 2001, Building Code (IBC)\* SYSTEMS FIRE PROTECTION CHEMICAL FIRE NFPA 17, 17A, 72, 96, Building Code (IBC)\* 96 does not apply SYSTEMS SUPPRESSION FIRE ALARM & DETECTION NFPA 70-2005, 72, 90A, 101, 170, 801, UL 268A, Building Code No to UL 268A, 801 does (IBC)\* not apply LIFE SAFETY NFPA 70-2005, 101, 110, 111, Building Code (IBC)\* FIRE EXTINGUISERS 29-CFR-1910.57, NFPA 10, 30, 51B, 95, Building Code (IBC)\* Yes CONSTRUCTION SITES 29-CFR-1926 SubPart F, NFPA 1, 241, Building Code (IBC)\* Yes PERMANENT STRUCTURES NFPA 220, Building Code (IBC)\* Yes TEMPORARY BUILDINGS Building Code (IBC)\* FIRE EXPOSURE PROTECTION NFPA 1, 80a, 1144, Building Code (IBC)\* 1142 does not apply VENTILATION SYSTEMS NFPA 90A, 90B, 91, 92A, 204M, 601, UL 586, UL 900, Building No to UL 586 & UL 900 Code (IBC)\* FIRE RATED CONSTRUCTION NFPA 80A, 90A, 101, 220, 221, Building Code (IBC)\* Building Code (IBC) (Area Separation) Building Code (IBC) (Occupation Separation) Yes NFPA 80 STRUCTURAL DESIGN NFPA 220, Building Code (IBC)\* Yes CABLE INSTALLATIONS NFPA 13, 70-2005, 70B, 70E-2004, 262, Building Code (IBC)\* Yes COOLING TOWERS NFPA 214, Building Code (IBC)\* Yes

<sup>\*</sup> Codes and standards listed in the lower classifications are also requirements for the higher classifications. Where requirements in the lower classifications conflict with requirements in the higher classifications, the more restrictive requirement governs.

Attachment 1 National Codes and Standards for Engineering/Design Tasks Matrix Date: 9/13/07 ENGINEERING STANDARDS BOARD Manual: WSRC-TM-95-1

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GENERAL SERVICE PRODUCTION SAFETY APPLICATION COMPONENT See Note SUPPORT SIGNIFICANT SAFETY CLASS ELECTRONIC COMPUTER/DATA NFPA 75\* Yes PROCESSING SYSTEMS ELECTRICAL TRANSFORMERS NFPA 70-2005, Building Code (IBC)\* **EXPLOSIVES** NFPA 68,69, 70-2005, 495, 498, 780, Building ATF 5400 Code (IBC) 27-CFR, Parts 55 & 181 49-CFR, Parts 100 to Title 18 USC 40\* N/A GLOVEBOXES, HOT CELLS, NFPA 45, 69, 90A, 91, 801 Building Code HOODS AND CANYONS HAZARDOUS MATERIALS NFPA 30, 30B, 55, 58, 59A, 704, 801, Building 30B, 58, 59A & 801 does not apply Code (IBC)\* FIRE PROTECTION LABORATORIES NFPA 45, 801, Building Code (IBC)\* N/A SYSTEMS LASERS NFPA 70-2005, 79, 115, 21-CFR 1040, ANSI N/A Z136.1-2000\* PRYOPHORIC MATERIALS & NFPA 68, 69, 480, 481, 482, 651, 801, Building N/A COMBUSTIBLE METALS Code (IBC)\* Record Storage NFPA 232\* Yes ABANDONED, SHUTDOWN, or Abandoned Facilities & Facilities undergoing N/A DEACTIVATED BUILDINGS D&D NFPA 801 FIRE SYSTEM TESTING Per NFPA installation codes and standards Per NFPA installation codes and standards except as revised in the S/RIDs NFPA 25 & 72 unless permitted by AB documents to allow S/RIDs modified test frequencies NFPA 37, 70-2005, 70E-2004, 101, 110, 111, IEEE-577\* IEEE-308, 336, 338 708 & 496 IEEE-379, 384, 603 ANSI/IEEE-C2, NEMA-C84.1, NEMA ICS ASHRAE-90 SYSTEM DESIGN IES Lighting Handbook ELECTRICAL SYSTEMS IEEE Series C37, C57, C62 IEEE-141, 242, 739, 399, 446, 450, 484, 485, NFPA Only IEEE-1015 UL-508, 96 & 96A\* GROUNDING & LIGHTNING ANSI/IEEE-C2, NFPA 70-2005, 780 NFPA Only PROTECTION IEEE-80, IEEE-142, IEEE-1050, IEEE-1100\*

<sup>\*</sup> Codes and standards listed in the lower classifications are also requirements for the higher classifications. Where requirements in the lower classifications conflict with requirements in the higher classifications, the more restrictive requirement governs.

National Codes and Standards for Engineering/Design Tasks Matrix

Date: 9/13/07 ENGINEERING STANDARDS BOARD Manual: WSRC-TM-95-1 Page 5 of 7 Revision 17

APPLICATION	COMPONENT AIR FLOW & CONTROL	GENERAL SERVICE See Note S 29 CFR 1910 Subparts G & H*	PRODUCTION SUPPORT	SAFETY SIGNIFICANT	SAFETY CLASS
		NFPA 90A, 90B & 91		As required by IFC & International	Mechanical Code
	AIR HEATERS	Industry Standards* NFPA As required by IFC & I	International Mechan	ical Code	ASME AG-1
	AIR HANDLING UNITS (HVAC only)	ARI 430* As required by IFC &	k International Mecha	nical Code	ASME AG-1
	FILTER HOUSINGS (NATS only)	ASME N509* As required by IF	FC & International M	echanical Code	ASME AG-1
HVAC EQUIPMENT and	DAMPERS	SMACNA Standards, ASME N509, N NFPA 801 (NATS only)* As rec	NFPA 90A, UL 555 & 5 quired by IFC & Inter		ASME AG-1
NUCLEAR AIR TREATMENT SYSTEMS	DUCTWORK FANS		red by IFC & Internat & International Mech	ional Mechanical Code anical Code	
(NATS) EQUIPMENT (Installed in Nuclear Facilities)	FILTERS	ASHRAE (HVAC only), ASME N50 The use of ASME AG-1 is required for that fall within the requirements of En 15888	or all HEPA filters	ASME AG-1 As required by IFC & International Mechanical Code	
	ADSORBERS (NATS only)	ASME N509*	N/A		ASME AG-1
	DUCT INSULATION	ASHRAE Fundamentals Handbook, C As required by	Chapter 26, "insulation of the state of the		
	REFRIGERATION UNITS	ARI 450*	N/A		ASME AG-1
	(HVAC only) COILS	ARI 410*	N/A		ASME AG-1

<sup>\*</sup> Codes and standards listed in the lower classifications are also requirements for the higher classifications. Where requirements in the lower classifications conflict with requirements in the higher classifications, the more restrictive requirement governs.

National Codes and Standards for Engineering/Design Tasks Matrix

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APPLICATION	COMP	ONENT	GENERAL SERVICE See Note	PRODUCTION SUPPORT	SAFETY SIGNIFICANT	SAFETY CLASS
	COATINGS NDE		SSPC for above ground steel * NACE for concrete & underground steel		No to NACE	
			ASME V-2004, ASNT, ASME B31.1-200 B&PV Code-2004, * API, AWS, AWWA, ASTM Volume 03.0	AMSE V, ASME B31.1 and AWS		
MATERIALS	GASKETS, PACKAGING, etc.		ANSI B16.5, B1620, B16.21, DIN 3535 Part 4 ASTM D149, D792, D1708, D2000, F36, F37B, F38, F104, F146, F152, F433 ASME Section VIII-2004 Div. 1 for "m" and "y" data *		Yes	
				ind y data ·		
	CORROSION	EVALUATION	ASTM A262, A763, G28, NACE *		No	
	INSULATION For materials specification & testing — ASTM 04.06 For selection & application – None		STM Volume	Yes		
	STRUCTURAL HVAC	MATERIAL Steel Aluminum Sheet Steel Stainless Steel MATERIAL	AWS D1.1, (Alternate ASME Section IX- AWS D1.2, (Alternate ASME Section IX- AWS D1.3, (Alternate ASME Section IX- AWS D1.6, (Alternate ASME Section IX-	2004) * 2004) * 2004) *	Yes Yes Yes Yes	
MATERIALS WELDING & JOINING	PIPING	METALLIC Power Process  Refrigeration Bldg Services Fire Protection	ASME B31.1-2001 * ASME B31.3-2002, (also see Standard 150 ASME B31.5-2001 or B31.3-2002 * ASME B31.9-2004 or B31.3-2002 * NFPA, ASME B31.1-2001 *	,	Yes No – B31.1 N/A No– B31.1 Yes	
	Non-Metallic Copper-Solder		ASME B31.3-2002 (also see Standard 15060) * Yes Copper Tube Handbook * No			
	PRESSURE VESSELS  TANKS		ASME Section VIII-2004, ASME Section I-2004 *		Yes	
			API, ASME *		Yes	
	WELDING SAFETY		ANSI Z49.1-2005 *		Yes	

<sup>\*</sup> Codes and standards listed in the lower classifications are also requirements for the higher classifications. Where requirements in the lower classifications conflict with requirements in the higher classifications, the more restrictive requirement governs.

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Attachment 1 National Codes and Standards for Engineering/Design Tasks Matrix Date: 9/13/07 ENGINEERING STANDARDS BOARD Page 7 of 7 Revision 17

APPLICATION	_	COMPONENT	GENERAL SERVICE See Note	PRODUCTION SUPPORT	SAFETY SIGNIFICANT	SAFETY CLASS
		PATHWAYS AND SPACES	ANSI/TIA/EIA — 569-B, NFPA 70-2005 (NEC), NI For exceptions/deviations Section 3.3	FPA 76, ANSI/IEEE C	-2 (NESC)	N/A tions Std 16055,
TELECOMMUNICATION SYSTEMS	s	COMMERCIAL BUILDING WIRING	ANSI/TIA/EIA-568-B.1 tf ANSI/TIA/EIA-526-7 and ANSI/TIA/EIA-758-A, N (NESC) For exceptions/deviations Section 3.3	1 526-14A * FPA 70-2005 (NEC), A	ANSI/IEEE C-2	N/A tions Std 16055,
	GROUNDING AND BONDING REQUIREMENTS		ANSI-J-STD-607-A * NFPA 70-20005 (NEC), AN For exceptions/deviations to Std 16055, Section 3.3			//A ns
		GENERAL DESIGN	ISA-S5.1, S5.3 ANSI N323 *	ISA	Applicable standards are listed in WSRC Eng. Std 01703	IEEE-323, 336, 338 IEEE-379, 384
INSTRUMENTATION		SETPOINTS & SCALING	None		ISA-S	67.04 *
& CONTROLS		MONITORING	HPS-N13.1, ANSI-N42.13 70-2005 *		ANS 8.3 (Nuclear criticality only)	ANSI-N320
		PROCED AND CARLE PROTECT		NFPA		
		PROGRAMMABLE DIGITAL			Applicable	
		EQUIPMENT GENERAL DESIGN			standards are listed	
		GENERAL DESIGN			in WSRC Eng. Std 01703	
HUMAN FACTORS ENGINEERING		GENERAL DESIGN	IEEE-1023, IEEE-845, N	UREG-0700 *	N/A	
EXPLOSIVES SAFETY		GENERAL DESIGN	DOE Manual 440.1-1A, 1 NFPA 69 & 495	/9/2006 *	N/A	

Note: There are a number of codes and standards listed in the matrix with a specific revision date (e.g. NFPA 70-2005). When a Design Authority or Design Agency wants to use a later revision (successor) of a code or standard that is listed by a specific date, they must first perform an engineering evaluation per WSRC-TM-95-1, Responsibilities and Requirements.

<sup>\*</sup> Codes and standards listed in the lower classifications are also requirements for the higher classifications. Where requirements in the lower classifications conflict with requirements in the higher classifications, the more restrictive requirement governs.

# APPENDIX E

# **Project Schedule**

Note: Appendix E to be provided upon contract award.

# APPENDIX F

A total of 141 pages were omitted and filed separately with the Securities and Exchange Commission pursuant to a request for confidential treatment.
False 2

# APPENDIX G

A total of 46 pages were omitted and filed separately with the Securities and Exchange Commission pursuant to a request for confidential treatment.
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May 14, 2010

## BY ELECTRONIC SUBMISSION

U.S. Securities and Exchange Commission Division of Corporate Finance 100 F Street, N.E. Washington, DC 20549

Attn: Hagen Ganem

Re: Ameresco, Inc.

Registration Statement on Form S-1

Filed March 31, 2010 File No. 333-165821

Ladies and Gentlemen:

Submitted herewith for filing on behalf of Ameresco, Inc. (the "Company") is Amendment No. 2 ("Amendment No. 2") to the Registration Statement referenced above (the "Registration Statement"). The Company is filing Amendment No. 2 solely for the purpose of filing Exhibits 10.5 and 10.16 to the Registration Statement.

Please contact the undersigned (617-526-6421) or Patrick Rondeau (617-526-6670) with any questions or comments you may have regarding this filing.

Very truly yours,

/s/ Jason L. Kropp

Jason L. Kropp

Wilmer Cutler Pickering Hale and Dorr 1lp, 60 State Street, Boston, Massachusetts 02109

Beijing Berlin Boston Brussels Frankfurt London Los Angeles New York Oxford Palo Alto Waltham Washington