AUSLEY & MCMULLEN

ATTORNEYS AND COUNSELORS AT LAW

227 SOUTH CALHOUN STREET P.O. BOX 391 (ZIP 323d2) TALLAHASSEE, FLORIDA 32301 (850) 224-9115 FAX (850) 222-7560

April 22, 2008

HAND DELIVERED

Ms. Ann Cole, Director Office of Commission Clerk Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, Florida 32399-0850

> FPSC Docket No. 080184-EQ - Petition for approval of standard offer contract for Re:

small qualifying facilities and producers of renewable energy

Dear Ms. Cole:

Enclosed for filing in the above-styled docket are the original and fifteen (15) copies of Tampa Electric Company's Supplement to Petition for Approval of a Standard Offer Contract for Small Qualifying Facilities and Producers of Renewable Energy.

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning same to this writer.

Thank you for your assistance in connection with this matter.

Sincerely,
James D. Beasley
DOCUMENT NUMBER DATE

FPSC-COMMISSION CLERK

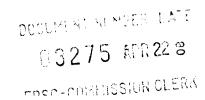
BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for approval of standard of	fer)	
contract for small qualifying facilities)	DOCKET NO. 080184-EQ
and producers of renewable energy.)	
)	FILED: April 22, 2008

SUPPLEMENT TO TAMPA ELECTRIC COMPANY'S PETITION FOR APPROVAL OF A STANDARD OFFER CONTRACT FOR SMALL QUALIFYING FACILITIES AND PRODUCERS OF RENEWABLE ENERGY

Tampa Electric Company ("Tampa Electric" or "the company"), pursuant to Sections 366.051 and 366.91, Florida Statutes, and Rules 25-17.200 through 25-17.310, Florida Administrative Code, hereby supplements the petition the company filed in the above docket on March 31, 2008. As grounds therefor, the company says:

1. Tampa Electric's March 31, 2008 petition for approval of a standard offer contract for small qualifying facilities and producers of renewable energy included a proposed Standard Offer based on the combustion turbine technology associated with a proposed next Designated Avoided Unit, a 2010 combustion turbine ("CT"). The company's March 31, 2008 petition noted that the company's then proposed Ten Year Site Plan ("TYSP") included a combined cycle generating unit but went on to state that that unit would be the subject of a request for proposals ("RFP") Tampa Electric would issue soon after the filing of that petition. Accordingly, the issuance of the RFP would eliminate the combined cycle unit as an eligible avoided unit pursuant to Rule 25-17.250(2)(a), Florida Administrative Code. Given that fact, and to avoid the administrative costs to all affected persons of considering an alternative that would not be available, Tampa Electric did not include the combined cycle based standard offer alternative in the standard offer contract proposed in the March 31, 2008 petition.



- 2. In preparing the March 31, 2008 petition, Tampa Electric did not recognize the fact that a separate natural gas combined cycle unit would be included in Tampa Electric's TYSP with an in-service date scheduled for 2017. It is in light of this omission that Tampa Electric wishes to supplement its March 31, 2008 petition in order to include the combined cycle unit scheduled for 2017 as an avoided unit alternative in addition to the CT included in that petition.
- 4. In addition to the foregoing, the finalized TYSP containing the 2017 combined cycle unit also changed the in-service date and other miscellaneous operating parameters of the combustion turbine that was the avoided unit identified in the March 31, 2008 petition. Rather than having an in-service date of 2010, the combustion turbine's in-service date is now 2012.
- 5. Attached hereto as Exhibit "A" in both standard and legislative format tariff are sheets reflecting the inclusion of the 2017 natural gas combined unit in the Table of Appendices and modifying the in-service date of the combustion turbine and other miscellaneous operational parameters from those that accompanied the March 31, 2008 petition. Attached hereto as Exhibit "B" in both standard and legislative formats is Appendix D to Tampa Electric Company's rate schedule COG-2 containing the avoided unit information relative to the 2017 natural gas combined cycle unit.
- 6. Tampa Electric is not aware of any disputed issues of material fact relative to the subject matter of this supplement to the company's March 31, 2008 petition.

WHEREFORE, Tampa Electric Company submits the foregoing as its supplement to its March 31, 2008 petition in the above docket and requests that that petition as hereby supplement be approved along with the company's revised SOC and COG-2 tariff as contained in the original petition and supplemented hereby.

DATED this 22 day of April 2008.

Respectfully submitted,

LEE'L. WILLIS

JAMES D. BEASLEY

Ausley & McMullen

Post Office Box 391

Tallahassee, Florida 32302

(850) 224-9115

ATTORNEYS FOR TAMPA ELECTRIC COMPANY

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing Supplement to Petition, filed on behalf of Tampa Electric Company, has been furnished by hand delivery(*) or U. S. Mail on this day of April 2008 to the following individuals:

Ms. Jean Hartman*
Senior Attorney
Office of General Counsel
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

ATTORNEY





RATE SCHEDULE COG-2 APPENDIX D

2017 NATURAL GAS COMBINED CYCLE UNIT

This Designated Avoided Unit is a 607 MW (winter rating) natural gas-fired combined cycle (NGCC) with a January 1, 2017, in-service date.

MINIMUM PERFORMANCE STANDARDS

In order to receive a Monthly Capacity Payment, all Contracted Capacity and Associated Energy provided by CEPs shall meet or exceed the following MPS on a monthly basis. The MPS are based on the anticipated peak and off-peak dispatchability, unit availability, and operating factor of the Designated Avoided Unit over the term of this Standard Offer Contract. The CEP's proposed generating facility ("the Facility") as defined in the Standard Offer Contract will be evaluated against the anticipated performance of an NGCC, starting with the first Monthly Period following the date selected in Paragraph 6.b.ii of the Company's Standard Offer Contract.

- 1. **Dispatch Requirements:** The CEP shall provide peaking capacity to the Company on a firm commitment, first-call, on-call, as-needed basis. In order to receive a Contracted Capacity Payment for each calendar month that the Facility is to be dispatched, the CEP must meet or exceed both the minimum Monthly Availability and Monthly Capacity Factor requirements.
- 2. **Dispatch Procedure:** Commencing on the calendar day prior to the Facility In-Service Date or the Extended Facility In-Service Date, as applicable, and continuing each calendar day thereafter during the Term, by 7:00 A.M. EPT, the CEP shall electronically transmit a schedule ("Available Schedule") of the hour-by-hour amounts of Contracted Capacity expected to be available from the Facility the next day ("Committed Capacity"). Commencing on the calendar day prior to the Facility In-Service Date or the Extended Facility In-Service Date, as applicable, and continuing each calendar day thereafter during the Term, by 3:00 P.M. EPT, the Company shall electronically transmit the hour-by-hour amounts of Contracted Capacity that the Company desires the CEP to dispatch from the Facility the next day based on the Available Schedule supplied at 7:00 A.M. EPT by the CEP ("Dispatch Schedule"). The CEP's Available Schedule and the Company's Dispatch

ISSUED BY: C. R. Black, President

DOCUMENT NUMBER-CATE
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FPSC-COMMISSION CLERK



NINETEENTH REVISED SHEET NO. 8.440 CANCELS EIGHTEENTH REVISED SHEET NO. 8.440

Schedule for Fridays will include Saturday, Sunday, and Monday schedules. The CEP's Available Schedule and the Company's Dispatch Schedule during holiday periods will be similarly adjusted. The CEP shall control and operate the Facility in accordance with the Company's Dispatch Schedule. From time to time (i.e. during emergency conditions), the Company may be required to adjust the Dispatch Schedule or ignore scheduled levels altogether, however, each Party shall make reasonable efforts to minimize departures from the Dispatch Schedule.

- 3. **Automatic Generation Control:** At the Company's discretion, the CEP will operate the Facility with Automatic Generation Control (AGC) equipment, speed governors, and voltage regulators in-service, except at such times when operational constraints of the equipment prevent AGC operation.
- 4. **Start-up Time:** Upon notification by the Company, the CEP's Facility shall provide its capacity within 45 minutes from a cold-start condition.
- 5. **Minimum Run Time:** Minimum run time for the CEP's unit shall be 4 hours.

BASIS FOR MONTHLY CAPACITY PAYMENT CALCULATION:

- 1. **Monthly Availability Factor:** The Monthly Availability Factor of the CEP's generating facility will be calculated by averaging the Hourly Availability Factors for each hour of the Monthly Period. The Hourly Availability Factor may not exceed 100% and shall be defined as the hourly Committed Capacity expressed as a percentage of Contracted Capacity to the nearest whole percentile. The CEP is required to achieve a minimum Monthly Availability Factor of 90% in order to meet the MPS and be eligible to receive a Monthly Capacity Payment. Periods of Annual Planned Maintenance will be excluded from the calculation of the Monthly Availability Factor. For purposes of calculating the Monthly Availability Factor, the CEP's Committed Capacity may not exceed its Contracted Capacity.
- 2. **Monthly Capacity Factor**: In addition to the MPS for Monthly Availability, the CEP shall provide capacity into the Company's electric grid in order to meet or exceed a Monthly Capacity Factor of 80%. The Monthly Capacity Factor for the period April 1st through October 31st shall be defined as the sum of 80% of the Monthly Average On-peak Operating Factor plus 20% of the Monthly Average Off-peak Operating Factor. The Monthly Capacity Factor for the period November 1st through March 31st shall be defined as the sum of 90% of the Monthly Average On-peak Operating Factor plus 10% of the Monthly Average Off-peak Operating Factor.



- a. **Operating Factor:** The CEP shall endeavor to provide capacity in the amount dispatched by the Company. The Company may at times request capacity in an amount that exceeds the Committed Capacity as declared by CEP the previous day.
 - However, the Operating Factor may not exceed 100% and shall be defined as the actual energy received during each hour that the CEP unit is dispatched by the Company divided by the lesser of the CEP's Committed Capacity or the capacity requested by the Company for that hour, expressed to the nearest whole percentile.
- b. **Monthly Average On-peak Operating Factor:** The monthly average of the Operating Factor for all hours the CEP unit has been dispatched during On-peak Hours will be termed the Monthly Average On-peak Operating Factor.
- c. **Monthly Average Off-peak Operating Factor:** The monthly average of the Operating Factor for all hours the CEP unit has been dispatched during Off-peak Hours will be termed the Monthly Average Off-peak Operating Factor.
- 3. Off-Peak and On-Peak Hours: Those weekday hours occurring April 1 through October 31, from 12:00 noon to 9:00 p.m. and November 1 through March 31, from 6:00 a.m. to 10:00 a.m. and from 6:00 p.m. to 10:00 p.m. All other weekday hours and weekends shall be deemed Off-peak Hours including the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. The Company shall have the right to change such On-peak Hours by providing written notice to CEP a minimum of 90 calendar days prior to such change.
- Annual Scheduled Maintenance: Each year the CEP shall prepare, coordinate, and provide by April 1st all planned maintenance with the Company. The Company will review and approve annual/major scheduled maintenance by July 1st for the balance of the current year and following calendar year. A maximum of 3 weeks (504 hours) every four years for maintenance and an additional 5 weeks (840 hours) every eighth year for major overhauls for a maximum of 8 weeks every eighth year will be allowed. Scheduled maintenance shall not be planned during December through February without prior written consent from the Company. At the option of the CEP and by written notification to the Company, scheduled outage time may be utilized during any other months to improve the CEP's Availability and Capacity Factors and such scheduled outage hours will be disregarded from the Monthly Availability Factor and Capacity Factor calculations. However, once allowable maintenance hours have been utilized, all other hours during the year will be considered in Availability and Capacity Factor calculations.



- 5. **Monthly Capacity Payment**: Starting with the CEP's Commercial In-Service Date, for months when the CEP unit has been dispatched (provided that CEP has achieved at least a 90% Monthly Availability Factor), the Monthly Capacity Payment for each Monthly Period shall be calculated according to the following:
 - a. In the event that the Monthly Capacity Factor is less than 80%, no Monthly Capacity Payment shall be paid to the CEP. That is:

b. In the event that the Monthly Capacity Factor is greater than or equal to 80% but less than 90%, the Monthly Capacity Payment shall be calculated from the following formula:

c. In the event that the Monthly Capacity Factor is greater than or equal to 90%, the Monthly Capacity Payment shall be calculated from the following formula:

Where:

MCP = Monthly Capacity Payment in dollars.

BCC = Base Capacity Credit in \$/KW-Month (as exemplified by the

Payment Schedules included in this Appendix for the minimum

contract term under Capacity Payment Options 1, 2, 3 and 4.)

CC = Contracted Capacity in KW

CF = Monthly Capacity Factor; or

During April 1 - October 31:

= 80% x Monthly Average On-peak Operating Factor + 20% x Monthly Average Off-peak Operating Factor

During November 1 - March 31:

90% x Monthly Average On-peak Operating Factor +
 10% x Monthly Average Off-peak Operating Factor

ISSUED BY: C. R. Black, President



6. **Non-Dispatch Condition:** The CEP may be entitled to a Monthly Capacity Payment (BCC x CC) even if the CEP's unit was not dispatched by the Company during a Monthly Period. In this instance however, in order to cover the Company's operating reserve criteria, the CEP unit must have achieved a minimum Monthly Availability Factor of 90% for the Monthly Period to be eligible to receive a Monthly Capacity Payment.

In the event the CEP unit is dispatched during one but not the other (On-peak vs. Off- peak) period during the month, the CEP's Monthly Average Operating Factor for the "non-dispatched" period will be set equal to the Monthly Average Operating Factor achieved during the "dispatched" period, for the purpose of calculating the Monthly Capacity Factor, as defined in Paragraph 2 above.

The CEP may be entitled to a Monthly Capacity Payment when the CEP's unit is out of service during the month for allowable scheduled maintenance in accordance with the Paragraph 4 above.

ISSUED BY: C. R. Black, President



PARAMETERS FOR AVOIDED CAPACITY COSTS

Beginning with the in-service date (1/1/2017) of the Company's Designated Avoided Unit, a 607 MW (Winter Rating) NGCC, for a 1 year deferral:

		VALUE
VAC _m =	Company's monthly value of avoided capacity, \$/kW/month, for each month of year n	10.52
K =	present value of carrying charges for one dollar of investment over L years with carrying charges computed using average annual rate base and assumed to be paid at the middle of each year and present value to the middle of the first year	1.6696
I _n =	total direct and indirect cost, in mid-year \$/kW including AFUDC but excluding CWIP, of the Designated Avoided Unit(s) with an in-service date of year n, including all identifiable and quantifiable costs relating to the construction of the Designated Avoided Unit that would have been paid had the Designated Avoided Unit(s) been constructed	1014.17
O _n =	total fixed operation and maintenance expense for the year n, in mid-year \$/kW/year, of the Designated Avoided Unit(s);	6.92
i _p =	annual escalation rate associated with the plant cost of the Designated Avoided Unit(s)	2.3%
i _o =	annual escalation rate associated with the operation and maintenance expense of the Designated Avoided Unit(s);	2.3%
r =	discount rate, defined as the Company's incremental after tax cost of capital;	7.89%



TWENTIETH REVISED SHEET NO. 8.450 CANCELS NINETEENTH REVISED SHEET NO. 8.450

L	=	expected life of the Designated Avoided Unit(s); and	25
n	=	year for which the Designated Avoided Unit is deferred starting with its original anticipated in-service date and ending with the termination of the contract for the purchase of firm capacity and energy.	2017
A _m	=	monthly early capacity payments to be made to the CEP for each month of the contract year n, in \$/kW/month, if payments start in 2008;	3.44
m	=	Earliest year in which early capacity payments to the CEP may begin;	2008*
F	=	the cumulative present value, in the year contractual payments will begin, of the avoided capital cost component of capacity payments over the term of the contract which would have been made had capacity payments commenced with the anticipated in-service date of the Designated Avoided Unit(s);	479.51*
t	=	the term, in years, of the contract for the purchase of firm capacity if early capacity payments commence in year m;	19*

^{*} Actual values will be determined based on the capacity payment start date and contract term selected by the CEP.

ISSUED BY: C. R. Black, President



2017 NATURAL GAS COMBINED CYCLE UNIT MONTHLY CAPACITY PAYMENT RATE (\$/KW-MONTH) NON-LEVELIZED PAYMENT OPTIONS

		OPTION 1		OPTION 2							
		NORMAL PAYMENT		EARLY PAYMENT							
CONTRACT YEAR		Starting 1/1/17	Starting 1/1/16	Starting 1/1/15	Starting 1/1/14	Starting 1/1/13	Starting 1/1/12	Starting 1/1/11	Starting 1/1/10	Starting 1/1/09	Starting 1/1/08
FROM	то	\$/kw-mo									
1/1/08	12/31/08			·						3.84	3.44 3.52
1/1/10	12/31/10								4.28	3.92	3.60
1/1/11	12/31/11							4.80	4.38	4.01	3.69
1/1/12	12/31/12				i		5.40	4.91	4.48	4.11	3.77
1/1/13	12/31/13					6.10	5.52	5.02	4.59	4.20	3.86
1/1/14	12/31/14				6.92	6.24	5.65	5.14	4.69	4.30	3.95
1/1/15	12/31/15			7.90	7.08	6.38	5.78	5.26	4.80	4.40	4.04
1/1/16	12/31/16		9.08	8.08	7.24	6.53	5.91	5.38	4.91	4.50	4.13
1/1/17	12/31/17	10.52	9.29	8.27	7.41	6.68	6.05	5.50	5.02	4.60	4.23
1/1/18	12/31/18	10.76	9.50	8.46	7.58	6.83	6.19	5.63	5.14	4.71	4.32
1/1/19	12/31/19	11.01	9.72	8.65	7.75	6.99	6.33	5.76	5.26	4.81	4.42
1/1/20	12/31/20	11.26	9.94	8.85	7.93	7.15	6.48	5.89	5.38	4.93	4.52
1/1/21	12/31/21	11.52	10.17	9.05	8.11	7.31	6.62	6.03	5.50	5.04	4.63
1/1/22	12/31/22	11.78	10.40	9.26	8.30	7.48	6.78	6.16	5.63	5.15	4.73
1/1/23	12/31/23	12.05	10.64	9.48	8.49	7.65	6.93	6.31	5.76	5.27	4.84
1/1/24	12/31/24	12.33	10.89	9.69	8.69	7.83	7.09	6.45	5.89	5.39	4.95
1/1/25	12/31/25	12.61	11.14	9.92	8.89	8.01	7.26	6.60	6.02	5.52	5.07
1/1/26	12/31/26	12.90	11.40	10.14	9.09	8.19	7.42	6.75	6.16	5.65	5.19

ISSUED BY: C. R. Black, President



2017 NATURAL GAS COMBINED CYCLE UNIT MONTHLY CAPACITY PAYMENT RATE (\$/KW-MONTH) LEVELIZED PAYMENT OPTIONS

		OPTION 3					OPTION 4				
		LEVELIZED NORMAL PAYMENT				LEVELIZE	ED EARLY F	PAYMENT			
	ITRACT EAR	Starting 1/1/13	Starting 1/1/16	Starting 1/1/15	Starting 1/1/14	Starting 1/1/13	Starting 1/1/12	Starting 1/1/11	Starting 1/1/10	Starting 1/1/09	Starting 1/1/08
FROM	то	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo
1/1/08	12/31/08				·		'				4.01
1/1/09	12/31/09					'	'		'	4.44	4.02
1/1/10	12/31/10					'	'		4.93	4.45	4.02
1/1/11	12/31/11		1		i '	'	'	5.48	4.93	4.45	4.03
1/1/12	12/31/12					'	6.12	5.49	4.94	4.46	4.03
1/1/13	12/31/13					6.86	6.13	5.49	4.94	4.46	4.04
1/1/14	12/31/14				7.73	6.87	6.13	5.50	4.95	4.47	4.04
1/1/15	12/31/15			8.75	7.73	6.88	6.14	5.51	4.95	4.47	4.05
1/1/16	12/31/16		9.97	8.76	7.74	6.88	6.15	5.51	4.96	4.48	4.05
1/1/17	12/31/17	11.46	9.98	8.77	7.75	6.89	6.16	5.52	4.97	4.48	4.06
1/1/18	12/31/18	11.47	9.99	8.78	7.76	6.90	6.16	5.53	4.97	4.49	4.06
1/1/19	12/31/19	11.48	10.01	8.79	7.77	6.91	6.17	5.53	4.98	4.50	4.07
1/1/20	12/31/20	11.50	10.02	8.80	7.78	6.92	6.18	5.54	4.99	4.50	4.07
1/1/21	12/31/21	11.51	10.03	8.81	7.79	6.93	6.19	5.55	4.99	4.51	4.08
1/1/22	12/31/22	11.52	10.04	8.82	7.80	6.94	6.20	5.56	5.00	4.51	4.09
1/1/23	12/31/23	11.54	10.06	8.83	7.81	6.95	6.20	5.56	5.01	4.52	4.09
1/1/24	12/31/24	11.56	10.07	8.85	7.82	6.95	6.21	5.57	5.01	4.53	4.10
1/1/25	12/31/25	11.57	10.08	8.86	7.83	6.96	6.22	5.58	5.02	4.53	4.10
1/1/26	12/31/26	11.59	10.10	8.87	7.84	6.97	6.23	5.59	5.03	4.54	4.11

ISSUED BY: C. R. Black, President



BASIS FOR MONTHLY ENERGY PAYMENT CALCULATION:

- 1. **Energy Payment Rate:** Prior to the in-service date of the avoided unit, the CEP's Energy Payment Rate shall be the Company's As-Available Energy Payment Rate (AEPR), as described in Appendix B. Starting the in-service date of the avoided unit, the basis for determining the Energy Payment Rate will be whether:
 - a. The Company has dispatched the CEP's unit on AGC; or
 - b. The Company has dispatched the CEP's unit off AGC and the CEP is operating its unit at or below the dispatched level; or
 - c. The Company has dispatched the CEP's unit off AGC but the CEP is operating its unit above the dispatched level; or
 - d. The Company has not dispatched the CEP's unit but the CEP is providing capacity and energy.

Note: For any given hour the CEP unit must be operating on AGC a minimum of 30 minutes to qualify under case (a).

The CEP's total monthly energy payment shall equal; (1) the sum of the hourly energy at the Unit Energy Payment Rate (UEPR), when the CEP's unit was dispatched by the Company, plus (2) the sum of the hourly energy at the corresponding hourly AEPR when the CEP's unit was operating at times other than when the Company dispatched the unit.

2. **Unit Energy Payment Rate**: Starting the in-service date of the avoided unit, the CEP will be paid at the UEPR for energy provided in Paragraph 1.a, Paragraph 1.b and that portion of the energy provided up to the dispatched level in Paragraph 1.c as defined above. The UEPR, which is based on the Company's Designated Avoided Unit and Heat Rate value of 7,100 Btu/kWh, will be calculated monthly by the following formula:

where:

O_v = Unit Variable Operation & Maintenance Expense in \$/MWH.

FC = Fuel Component of the Energy Payment in \$/MWH as defined by:

 $FC = \frac{7,100 \text{ Btu/kWh x FP}}{1.000}$

ISSUED BY: C. R. Black, President



where;

FP = Fuel Price in \$/MMBTU determined by:

FP = GC + TC + ACA + PPS + FRC

where;

GC = Fuel Price in \$/MMBTU determined by taking the first publication of each month of Inside FERC's Gas Market Report low price quotation under the column titled "Index" for "Florida Gas Transmission Co., "Zone 2", listings.

TC = then currently approved Florida Gas Transmission (FGT) Company tariff rate in \$/MMBTU for Interruptible Transmission Service (ITS-1).

ACA = then currently approved FGT Company tariff rate in \$/MMBTU for recovery of charges permitted by Section 154.38(d)(6) of the FERC regulations under the Natural Gas Act.

PPS = then currently approved FGT Company tariff rate in \$/MMBTU for recovery of costs associated with electrical usage used to operate FGT's electrical compressor units.

FRC = then currently approved FGT Company tariff rate in \$/MMBTU for recovery of costs associated with the natural gas used to operate FGT's pipeline system.

3. **As-Available Energy Payment Rate (AEPR)**: For energy provided and not covered under Paragraph 2 above, the AEPR will be applicable and will be based on the system avoided energy cost as defined in Appendix B.

ISSUED BY: C. R. Black, President



ISSUED BY: C. R. Black, President

TWENTIETH REVISED SHEET NO. 8.460 CANCELS NINETEENTH REVISED SHEET NO. 8.460

PARAMETERS FOR AVOIDED UNIT ENERGY AND VARIABLE OPERATION AND MAINTENANCE COSTS

Beginning on January 1, 2017, to the extent that the Designated Avoided Unit(s) would have been operated had it been installed by the Company:

O _V	=	total variable operating and maintenance expense, in \$/MWH, of the Designated Avoided Unit(s), in year n	4.48
Н	=	The average annual heat rate, in British Thermal Units (Btus) per kilowatt-hour (Btu/kWh), of the Designated Avoided Unit(s	7,100

DATE EFFECTIVE:

VALUE



RATE SCHEDULE COG-2 APPENDIX D

2017 NATURAL GAS COMBINED CYCLE UNIT

This Designated Avoided Unit is a 607 MW (winter rating) natural gas-fired combined cycle (NGCC) with a January 1, 2017, in-service date.

MINIMUM PERFORMANCE STANDARDS

In order to receive a Monthly Capacity Payment, all Contracted Capacity and Associated Energy provided by CEPs shall meet or exceed the following MPS on a monthly basis. The MPS are based on the anticipated peak and off-peak dispatchability, unit availability, and operating factor of the Designated Avoided Unit over the term of this Standard Offer Contract. The CEP's proposed generating facility ("the Facility") as defined in the Standard Offer Contract will be evaluated against the anticipated performance of an NGCC, starting with the first Monthly Period following the date selected in Paragraph 6.b.ii of the Company's Standard Offer Contract.

- 1. Dispatch Requirements: The CEP shall provide peaking capacity to the Company on a firm commitment, first-call, on-call, as-needed basis. In order to receive a Contracted Capacity Payment for each calendar month that the Facility is to be dispatched, the CEP must meet or exceed both the minimum Monthly Availability and Monthly Capacity Factor requirements.
- 2. Dispatch Procedure: Commencing on the calendar day prior to the Facility In-Service Date or the Extended Facility In-Service Date, as applicable, and continuing each calendar day thereafter during the Term, by 7:00 A.M. EPT, the CEP shall electronically transmit a schedule ("Available Schedule") of the hour-by-hour amounts of Contracted Capacity expected to be available from the Facility the next day ("Committed Capacity"). Commencing on the calendar day prior to the Facility In-Service Date or the Extended Facility In-Service Date, as applicable, and continuing each calendar day thereafter during the Term, by 3:00 P.M. EPT, the Company shall electronically transmit the hour-by-hour amounts of Contracted Capacity that the Company desires the CEP to dispatch from the Facility the next day based on the Available Schedule supplied at 7:00 A.M. EPT by the CEP ("Dispatch Schedule"). The CEP's Available Schedule and the Company's Dispatch

ISSUED BY: C. R. Black, President DODUMENT NUMBER DATE



NINETEENTH EIGHTEENTH-REVISED SHEET NO. 8.440 CANCELS EIGHTEENTH SEVENTEENTH-REVISED SHEET NO. 8.440

Schedule for Fridays will include Saturday, Sunday, and Monday schedules. The CEP's Available Schedule and the Company's Dispatch Schedule during holiday periods will be similarly adjusted. The CEP shall control and operate the Facility in accordance with the Company's Dispatch Schedule. From time to time (i.e. during emergency conditions), the Company may be required to adjust the Dispatch Schedule or ignore scheduled levels altogether, however, each Party shall make reasonable efforts to minimize departures from the Dispatch Schedule.

- 3. Automatic Generation Control: At the Company's discretion, the CEP will operate the Facility with Automatic Generation Control (AGC) equipment, speed governors, and voltage regulators in-service, except at such times when operational constraints of the equipment prevent AGC operation.
- 4. **Start-up Time:** Upon notification by the Company, the CEP's Facility shall provide its capacity within 45 minutes from a cold-start condition.
- 5. **Minimum Run Time**: Minimum run time for the CEP's unit shall be 4 hours.

BASIS FOR MONTHLY CAPACITY PAYMENT CALCULATION:

- 1. Monthly Availability Factor: The Monthly Availability Factor of the CEP's generating facility will be calculated by averaging the Hourly Availability Factors for each hour of the Monthly Period. The Hourly Availability Factor may not exceed 100% and shall be defined as the hourly Committed Capacity expressed as a percentage of Contracted Capacity to the nearest whole percentile. The CEP is required to achieve a minimum Monthly Availability Factor of 90% in order to meet the MPS and be eligible to receive a Monthly Capacity Payment. Periods of Annual Planned Maintenance will be excluded from the calculation of the Monthly Availability Factor. For purposes of calculating the Monthly Availability Factor, the CEP's Committed Capacity may not exceed its Contracted Capacity.
- 2. Monthly Capacity Factor: In addition to the MPS for Monthly Availability, the CEP shall provide capacity into the Company's electric grid in order to meet or exceed a Monthly Capacity Factor of 80%. The Monthly Capacity Factor for the period April 1st through October 31st shall be defined as the sum of 80% of the Monthly Average On-peak Operating Factor plus 20% of the Monthly Average Off-peak Operating Factor. The Monthly Capacity Factor for the period November 1st through March 31st shall be defined as the sum of 90% of the Monthly Average On-peak Operating Factor plus 10% of the Monthly Average Off-peak Operating Factor.

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- a. Operating Factor: The CEP shall endeavor to provide capacity in the amount dispatched by the Company. The Company may at times request capacity in an amount that exceeds the Committed Capacity as declared by CEP the previous day.
 - However, the Operating Factor may not exceed 100% and shall be defined as the actual energy received during each hour that the CEP unit is dispatched by the Company divided by the lesser of the CEP's Committed Capacity or the capacity requested by the Company for that hour, expressed to the nearest whole percentile.
- b. Monthly Average On-peak Operating Factor: The monthly average of the Operating Factor for all hours the CEP unit has been dispatched during On-peak Hours will be termed the Monthly Average On-peak Operating Factor.
- c. Monthly Average Off-peak Operating Factor: The monthly average of the Operating Factor for all hours the CEP unit has been dispatched during Off-peak Hours will be termed the Monthly Average Off-peak Operating Factor.
- October 31, from 12:00 noon to 9:00 p.m. and November 1 through March 31, from 6:00 a.m. to 10:00 a.m. and from 6:00 p.m. to 10:00 p.m. All other weekday hours and weekends shall be deemed Off-peak Hours including the following holidays:

 New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. The Company shall have the right to change such On-peak Hours by providing written notice to CEP a minimum of 90 calendar days prior to such change.
- 4. Annual Scheduled Maintenance: Each year the CEP shall prepare, coordinate, and provide by April 1st all planned maintenance with the Company. The Company will review and approve annual/major scheduled maintenance by July 1st for the balance of the current year and following calendar year. A maximum of 3 weeks (504 hours) every four years for maintenance and an additional 5 weeks (840 hours) every eighth year for major overhauls for a maximum of 8 weeks every eighth year will be allowed. Scheduled maintenance shall not be planned during December through February without prior written consent from the Company. At the option of the CEP and by written notification to the Company, scheduled outage time may be utilized during any other months to improve the CEP's Availability and Capacity Factors and such scheduled outage hours will be disregarded from the Monthly Availability Factor and Capacity Factor calculations. However, once allowable maintenance hours have been utilized, all other hours during the year will be considered in Availability and Capacity Factor calculations.



Where:

- 5. Monthly Capacity Payment: Starting with the CEP's Commercial In-Service Date, for months when the CEP unit has been dispatched (provided that CEP has achieved at least a 90% Monthly Availability Factor), the Monthly Capacity Payment for each Monthly Period shall be calculated according to the following:
 - a. In the event that the Monthly Capacity Factor is less than 80%, no Monthly Capacity Payment shall be paid to the CEP. That is:

MCP= \$0

b. In the event that the Monthly Capacity Factor is greater than or equal to 80% but less than 90%, the Monthly Capacity Payment shall be calculated from the following formula:

$MCP = [(BCC) \times (.02 \times (CF - 45))] \times CC$

c. In the event that the Monthly Capacity Factor is greater than or equal to 90%, the Monthly Capacity Payment shall be calculated from the following formula:

MCP= (BCC) x CC

VVIIOIO.		
MCP	=	Monthly Capacity Payment in dollars.
BCC		Base Capacity Credit in \$/KW-Month (as exemplified by the
		Payment Schedules included in this Appendix for the minimum
		contract term under Capacity Payment Options 1, 2, 3 and 4.)
CC		Contracted Capacity in KW
CF	=	Monthly Capacity Factor; or
During April	1 - Oct	
	=	80% x Monthly Average On-peak Operating Factor +
		20% x Monthly Average Off-peak Operating Factor
During Nove	mber 1 =	- March 31: 90% x Monthly Average On-peak Operating Factor + 10% x Monthly Average Off-peak Operating Factor

ISSUED BY: C. R. Black, President



6. Non-Dispatch Condition: The CEP may be entitled to a Monthly Capacity Payment (BCC x CC) even if the CEP's unit was not dispatched by the Company during a Monthly Period. In this instance however, in order to cover the Company's operating reserve criteria, the CEP unit must have achieved a minimum Monthly Availability Factor of 90% for the Monthly Period to be eligible to receive a Monthly Capacity Payment.

In the event the CEP unit is dispatched during one but not the other (On-peak vs. Off- peak) period during the month, the CEP's Monthly Average Operating Factor for the "non-dispatched" period will be set equal to the Monthly Average Operating Factor achieved during the "dispatched" period, for the purpose of calculating the Monthly Capacity Factor, as defined in Paragraph 2 above.

The CEP may be entitled to a Monthly Capacity Payment when the CEP's unit is out of service during the month for allowable scheduled maintenance in accordance with the Paragraph 4 above.

ISSUED BY: C. R. Black, President



PARAMETERS FOR AVOIDED CAPACITY COSTS

Beginning with the in-service date (1/1/2017) of the Company's Designated Avoided Unit, a 607 MW (Winter Rating) NGCC, for a 1 year deferral:

		VALUE
<u>VAC_m =</u>	Company's monthly value of avoided capacity, \$/kW/month, for each month of year n	<u>10.52</u>
<u>K</u> =	present value of carrying charges for one dollar of investment over L years with carrying charges computed using average annual rate base and assumed to be paid at the middle of each year and present value to the middle of the first year	<u>1.6696</u>
<u>lo =</u>	total direct and indirect cost, in mid-year \$/kW including AFUDC but excluding CWIP, of the Designated Avoided Unit(s) with an in-service date of year n, including all identifiable and quantifiable costs relating to the construction of the Designated Avoided Unit that would have been paid had the Designated Avoided Unit(s) been constructed	1014.17
<u>O_n =</u>	total fixed operation and maintenance expense for the year n, in mid-year \$/kW/year, of the Designated Avoided Unit(s);	<u>6.92</u>
<u>i</u> _{p=}	annual escalation rate associated with the plant cost of the Designated Avoided Unit(s)	<u>2.3%</u>
<u>io</u> =	annual escalation rate associated with the operation and maintenance expense of the Designated Avoided Unit(s);	<u>2.3%</u>
<u>r =</u>	discount rate, defined as the Company's incremental after tax cost of capital;	<u>7.89%</u>



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<u>L =</u>	expected life of the Designated Avoided Unit(s); and	<u>25</u>
<u>n =</u>	year for which the Designated Avoided Unit is deferred starting with its original anticipated in-service date and ending with the termination of the contract for the purchase of firm capacity and energy.	<u>2017</u>
<u>A</u> _m ≡	monthly early capacity payments to be made to the CEP for each month of the contract year n, in \$/kW/month, if payments start in 2008;	<u>3.44</u>
<u>m =</u>	Earliest year in which early capacity payments to the CEP may begin;	2008*
<u>F</u> =	the cumulative present value, in the year contractual payments will begin, of the avoided capital cost component of capacity payments over the term of the contract which would have been made had capacity payments commenced with the anticipated in-service date of the Designated Avoided Unit(s);	479.51*
<u>t =</u>	the term, in years, of the contract for the purchase of firm capacity if early capacity payments commence in year m;	<u>19*</u>
* Actual values selected by the	will be determined based on the capacity payment start date a	nd contract term
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2017 NATURAL GAS COMBINED CYCLE UNIT MONTHLY CAPACITY PAYMENT RATE (\$/KW-MONTH) NON-LEVELIZED PAYMENT OPTIONS

		OPTION 1					OPTION 2				
-	-	NORMAL PAYMENT		EARLY PAYMENT							
	TRACT EAR	Starting 1/1/17	Starting 1/1/16	Starting 1/1/15	<u>Starting</u> <u>1/1/14</u>	Starting 1/1/13	<u>Starting</u> <u>1/1/12</u>	<u>Starting</u> <u>1/1/11</u>	Starting 1/1/10	Starting 1/1/09	Starting 1/1/08
FROM	TO	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo
1/1/08 1/1/09 1/1/10 1/1/11 1/1/12 1/1/13 1/1/14 1/1/15 1/1/16 1/1/17 1/1/18 1/1/19 1/1/20	12/31/08 12/31/09 12/31/10 12/31/11 12/31/12 12/31/13 12/31/14 12/31/15 12/31/16 12/31/17 12/31/18 12/31/19 12/31/20	- - - - - 10.52 10.76 11.01	- - - - - - 9.08 9.29 9.50 9.72 9.94	7.90 8.08 8.27 8.46 8.65	- - - - - 6.92 7.08 7.24 7.41 7.58 7.75	- - - - 6.10 6.24 6.38 6.53 6.68 6.83 6.83 6.99	5.40 5.52 5.65 5.78 5.91 6.05 6.19 6.33	- 4.80 4.91 5.02 5.14 5.26 5.38 5.50 5.63 5.76 5.89	4.28 4.38 4.48 4.59 4.69 4.80 4.91 5.02 5.14 5.26 5.38	3.84 3.92 4.01 4.11 4.20 4.30 4.40 4.50 4.60 4.71 4.81 4.93	3.44 3.52 3.60 3.69 3.77 3.86 3.95 4.04 4.13 4.23 4.32 4.42 4.52
1/1/21	12/31/21	11.52	10.17	<u>9.05</u>	<u>8.11</u>	7.31	6.62	6.03	<u>5.50</u>	<u>5.04</u>	4.63
1/1/22 1/1/23 1/1/24	12/31/22 12/31/23	11.78 12.05	10.40 10.64	9.26 9.48	8.30 8.49	7.48 7.65	6.78 6.93	6.16 6.31	5.63 5.76	5.15 5.27	4.73 4.84
1/1/24 1/1/25 1/1/26	12/31/24 12/31/25 12/31/26	12.33 12.61 12.90	10.89 11.14 11.40	9.69 9.92 10.14	8.69 8.89 9.09	7.83 8.01 8.19	7.09 7.26 7.42	<u>6.45</u> <u>6.60</u> 6.75	5.89 6.02 6.16	<u>5.39</u> <u>5.52</u> 5.65	4.95 5.07 5.19



2017 NATURAL GAS COMBINED CYCLE UNIT MONTHLY CAPACITY PAYMENT RATE (\$/KW-MONTH) LEVELIZED PAYMENT OPTIONS

		OPTION 3				<u></u>	OPTION 4				<u> </u>
		LEVELIZED NORMAL PAYMENT		LEVELIZED EARLY PAYMENT							
	ITRACT EAR	<u>Starting</u> <u>1/1/13</u>	Starting 1/1/16	<u>Starting</u> <u>1/1/15</u>	Starting 1/1/14	<u>Starting</u> <u>1/1/13</u>	Starting 1/1/12	Starting 1/1/11	Starting 1/1/10	Starting 1/1/09	Starting 1/1/08
FROM	<u>TO</u>	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	\$/kw-mo	<u>\$/kw-mo</u>	\$/kw-mo	\$/kw-mo
-		-	-	_	-	-	-	-	-	-	-
1/1/08	12/31/08	-	- 1	-	-	-	-	-	-	-	4.01
<u>1/1/09</u>	12/31/09	-	-	-	-	-	-	-	-	4.44	<u>4.02</u>
<u>1/1/10</u>	12/31/10		-	-	-	-	-	-	<u>4.93</u>	<u>4.45</u>	<u>4.02</u>
<u>1/1/11</u>	12/31/11	-	- ,	- ·	-	-	-	<u>5.48</u>	<u>4.93</u>	4.45	4.03
1/1/12	<u>12/31/12</u>	-	-	_	-	- ,	<u>6.12</u>	<u>5.49</u>	4.94	<u>4.46</u>	<u>4.03</u>
1/1/13	12/31/13	<u>.</u>	-	_	-	<u>6.86</u>	<u>6.13</u>	<u>5.49</u>	4.94	4.46	<u>4.04</u>
<u>1/1/14</u>	12/31/14	-	-	-	<u>7.73</u>	<u>6.87</u>	<u>6.13</u>	<u>5.50</u>	<u>4.95</u>	<u>4.47</u>	<u>4.04</u>
1/1/15	12/31/15	-	-	<u>8.75</u>	<u>7.73</u>	<u>6.88</u>	<u>6.14</u>	<u>5.51</u>	<u>4.95</u>	<u>4.47</u>	<u>4.05</u>
<u>1/1/16</u>	12/31/16	~	<u>9.97</u>	<u>8.76</u>	<u>7.74</u>	<u>6.88</u>	<u>6.15</u>	<u>5.51</u>	4.96	4.48	4.05
<u>1/1/17</u>	<u>12/31/17</u>	<u>11.46</u>	<u>9.98</u>	<u>8.77</u>	<u>7.75</u>	<u>6.89</u>	<u>6.16</u>	<u>5.52</u>	<u>4.97</u> •	<u>4.48</u>	<u>4.06</u>
1/1/18	12/31/18	<u>11.47</u>	<u>9.99</u>	<u>8.78</u>	<u>7.76</u>	<u>6.90</u>	<u>6.16</u>	<u>5.53</u>	4.97	<u>4.49</u>	<u>4.06</u>
1/1/19	12/31/19	<u>11.48</u>	<u>10.01</u>	<u>8.79</u>	<u>7.77</u>	<u>6.91</u>	<u>6.17</u>	<u>5.53</u>	<u>4.98</u>	<u>4.50</u>	<u>4.07</u>
1/1/20	<u>12/31/20</u>	<u>11.50</u>	<u>10.02</u>	<u>8.80</u>	<u>7.78</u>	<u>6.92</u>	<u>6.18</u>	<u>5.54</u>	4.99	<u>4.50</u>	<u>4.07</u>
1/1/21	12/31/21	<u>11.51</u>	<u>10.03</u>	<u>8.81</u>	<u>7.79</u>	<u>6.93</u>	<u>6.19</u>	<u>5.55</u>	<u>4.99</u>	<u>4.51</u>	<u>4.08</u>
1/1/22	<u>12/31/22</u>	<u>11.52</u>	<u>10.04</u>	<u>8.82</u>	<u>7.80</u>	<u>6.94</u>	6.20	<u>5.56</u>	<u>5.00</u>	<u>4.51</u>	<u>4.09</u>
<u>1/1/23</u>	12/31/23	<u>11.54</u>	10.06	<u>8.83</u>	<u>7.81</u>	<u>6.95</u>	6.20	<u>5.56</u>	<u>5.01</u>	<u>4.52</u>	4.09
1/1/24	12/31/24	<u>11.56</u>	10.07	<u>8.85</u>	<u>7.82</u>	<u>6.95</u>	6.21	<u>5.57</u>	<u>5.01</u>	<u>4,53</u>	<u>4.10</u>
1/1/25	12/31/25	<u>11.57</u>	<u>10.08</u>	<u>8.86</u>	<u>7.83</u>	<u>6.96</u>	<u>6.22</u>	<u>5.58</u>	<u>5.02</u>	<u>4.53</u>	<u>4.10</u>
1/1/26	12/31/26	<u>11.59</u>	<u>10.10</u>	<u>8.87</u>	<u>7.84</u>	<u>6.97</u>	<u>6.23</u>	<u>5.59</u>	<u>5.03</u>	<u>4.54</u>	<u>4.11</u>
			-			.	•	-			



BASIS FOR MONTHLY ENERGY PAYMENT CALCULATION:

- 1. Energy Payment Rate: Prior to the in-service date of the avoided unit, the CEP's Energy Payment Rate shall be the Company's As-Available Energy Payment Rate (AEPR), as described in Appendix B. Starting the in-service date of the avoided unit, the basis for determining the Energy Payment Rate will be whether:
 - a. The Company has dispatched the CEP's unit on AGC; or
 - b. The Company has dispatched the CEP's unit off AGC and the CEP is operating its unit at or below the dispatched level; or
 - c. The Company has dispatched the CEP's unit off AGC but the CEP is operating its unit above the dispatched level; or
 - d. The Company has not dispatched the CEP's unit but the CEP is providing capacity and energy.

Note: For any given hour the CEP unit must be operating on AGC a minimum of 30 minutes to qualify under case (a).

The CEP's total monthly energy payment shall equal; (1) the sum of the hourly energy at the Unit Energy Payment Rate (UEPR), when the CEP's unit was dispatched by the Company, plus (2) the sum of the hourly energy at the corresponding hourly AEPR when the CEP's unit was operating at times other than when the Company dispatched the unit.

2. Unit Energy Payment Rate: Starting the in-service date of the avoided unit, the CEP will be paid at the UEPR for energy provided in Paragraph 1.a, Paragraph 1.b and that portion of the energy provided up to the dispatched level in Paragraph 1.c as defined above. The UEPR, which is based on the Company's Designated Avoided Unit and Heat Rate value of 7.100 Btu/kWh, will be calculated monthly by the following formula:

Where;

O_y = Unit Variable Operation & Maintenance Expense in \$/MWH.

FC = Fuel Component of the Energy Payment in \$/MWH as defined by:

FC = 7,100 Btu/kWh x FP

1,000

ISSUED BY: C. R. Black, President



where;			
	FP	=	Fuel Price in \$/MMBTU determined by:
	FP	=	GC + TC + ACA + PPS + FRC
where;			
	<u>GC</u>	=	Fuel Price in \$/MMBTU determined by taking the first publication of each month of Inside FERC's Gas Market Report low price quotation under the column titled "Index" for "Florida Gas Transmission Co.,
			"Zone 2", listings.
	TC	=	then currently approved Florida Gas Transmission (FGT) Company tariff rate in \$/MMBTU for Interruptible Transmission Service (ITS-1).
	ACA_	=	then currently approved FGT Company tariff rate in \$/MMBTU for recovery of charges permitted by Section 154.38(d)(6) of the FERC regulations under the Natural Gas Act.
	PPS	=	then currently approved FGT Company tariff rate in \$/MMBTU for recovery of costs associated with electrical usage used to operate FGT's electrical compressor units.
!	FRC	=	then currently approved FGT Company tariff rate in \$/MMBTU for recovery of costs associated with the natural gas used to operate FGT's pipeline system.
<u>under F</u>	Paragr	<u>aph</u>	nergy Payment Rate (AEPR): For energy provided and not covered a 2 above, the AEPR will be applicable and will be based on the system cost as defined in Appendix B.

ISSUED BY: C. R. Black, President



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VALUE

PARAMETERS FOR AVOIDED UNIT ENERGY AND VARIABLE OPERATION AND MAINTENANCE COSTS

Beginning on January 1, 2017, to the extent that the Designated Avoided Unit(s) would have been operated had it been installed by the Company:

		'	TALUL
<u>O</u> <u>v</u> .		total variable operating and maintenance expense, in \$/MWH, of the Designated Avoided Unit(s), in year n	<u>4.48</u>
<u>H</u>	=	The average annual heat rate, in British Thermal Units (Btus) per kilowatt-hour (Btu/kWh), of the Designated Avoided Unit(s	<u>7,100</u>

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EXHIBIT "B"

DOCUMENT Nº MBER-DATE
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Rate Schedule COG-2 Table of Appendices

APPENDIX	TITLE	SHEET NO.
Α	VALUE OF DEFERRAL METHODOLGY	8.328
В	METHODOLOGY TO BE USED IN THE CALCULATION OF AVOIDED ENERGY COST	8.344
C	 2012 COMBUSTION TURBINE Minimum Performance Standard Parameters for Avoided Unit Capacity Costs Exemplary Capacity Payment Schedules Parameters for Avoided Unit Energy Costs 	8.406
D	 2017 NATURAL GAS COMBINED CYCLE Minimum Performance Standard Parameters for Avoided Unit Capacity Costs Exemplary Capacity Payment Schedules Parameters for Avoided Unit Energy Costs 	8.438
E	RESERVED FOR FUTURE USE	-
F	RESERVED FOR FUTURE USE	-

ISSUED BY: C. R. Black, President

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RATE SCHEDULE COG-2 APPENDIX C

2012 COMBUSTION TURBINE

This Designated Avoided Unit is a 58 MW (winter rating) natural gas-fired combustion turbine with a May 1, 2012, in-service date.

MINIMUM PERFORMANCE STANDARDS

In order to receive a Monthly Capacity Payment, all Contracted Capacity and Associated Energy provided by CEPs shall meet or exceed the following MPS on a monthly basis. The MPS are based on the anticipated peak and off-peak dispatchability, unit availability, and operating factor of the Designated Avoided Unit over the term of this Standard Offer Contract. The CEP's proposed generating facility ("the Facility") as defined in the Standard Offer Contract will be evaluated against the anticipated performance of a combustion turbine, starting with the first Monthly Period following the date selected in Paragraph 6.b.ii of the Company's Standard Offer Contract.

- 1. **Dispatch Requirements:** The CEP shall provide peaking capacity to the Company on a firm commitment, first-call, on-call, as-needed basis. In order to receive a Contracted Capacity Payment for each calendar month that the Facility is to be dispatched, the CEP must meet or exceed both the minimum Monthly Availability and Monthly Capacity Factor requirements.
- 2. **Dispatch Procedure:** Commencing on the calendar day prior to the Facility In-Service Date or the Extended Facility In-Service Date, as applicable, and continuing each calendar day thereafter during the Term, by 7:00 A.M. EPT, the CEP shall electronically transmit a schedule ("Available Schedule") of the hour-by-hour amounts of Contracted Capacity expected to be available from the Facility the next day ("Committed Capacity"). Commencing on the calendar day prior to the Facility In-Service Date or the Extended Facility In-Service Date, as applicable, and continuing each calendar day thereafter during the Term, by 3:00 P.M. EPT, the Company shall electronically transmit the hour-by-hour amounts of Contracted Capacity that the Company desires the CEP to dispatch from the Facility the next day based on the Available Schedule supplied at 7:00 A.M. EPT by the CEP ("Dispatch Schedule"). The CEP's Available Schedule and the Company's Dispatch



PARAMETERS FOR AVOIDED CAPACITY COSTS

Beginning with the in-service date (5/1/2012) of the Company's Designated Avoided Unit, a 58 MW (Winter Rating) natural gas-fired Combustion Turbine, for a 1 year deferral:

			VALUE
VAC	C _m =	Company's monthly value of avoided capacity, \$/kW/month, for each month of year n	11.88
K	=	present value of carrying charges for one dollar of investment over L years with carrying charges computed using average annual rate base and assumed to be paid at the middle of each year and present value to the middle of the first year	1.6696
In	=	total direct and indirect cost, in mid-year \$/kW including AFUDC but excluding CWIP, of the Designated Avoided Unit(s) with an in-service date of year n, including all identifiable and quantifiable costs relating to the construction of the Designated Avoided Unit that would have been paid had the Designated Avoided Unit(s) been constructed	1,012.72
On	=	total fixed operation and maintenance expense for the year n, in mid-year \$/kW/year, of the Designated Avoided Unit(s);	23.49
i p	=	annual escalation rate associated with the plant cost of the Designated Avoided Unit(s)	2.3%
i _o	=	annual escalation rate associated with the operation and maintenance expense of the Designated Avoided Unit(s);	2.3%
r	=	discount rate, defined as the Company's incremental after tax cost of capital;	7.89%





L	=	expected life of the Designated Avoided Unit(s); and	25	
n	=	year for which the Designated Avoided Unit is deferred starting with its original anticipated in-service date and ending with the termination of the contract for the purchase of firm capacity and energy.	2012	
A _m	=	monthly early capacity payments to be made to the CEP for each month of the contract year n, in \$/kW/month, if payments start in 2008;	6.89	
m	=	Earliest year in which early capacity payments to the CEP may begin;	2008*	
F	=	the cumulative present value, in the year contractual payments will begin, of the avoided capital cost component of capacity payments over the term of the contract which would have been made had capacity payments commenced with the anticipated in-service date of the Designated Avoided Unit(s);	699.98*	
t	=	the term, in years, of the contract for the purchase of firm capacity if early capacity payments commence in year m;	14 *	

^{*} Actual values will be determined based on the capacity payment start date and contract term selected by the CEP.

ISSUED BY: C. R. Black, President



2012 COMBUSTION TURBINE MONTHLY CAPACITY PAYMENT RATE (\$/KW-MONTH)

		OPTION 1	OPTION 2 EARLY PAYMENT				OPTION 3	OPTION 4 LEVELIZED EARLY PAYMENT			
		NORMAL PAYMENT					NORMAL PAYMENT				
CONTRACT YEAR		Starting 5/1/12	Starting 5/1/11	Starting 5/1/10	Starting 5/1/09	Starting 5/1/08	Starting 5/1/12	Starting 5/1/11	Starting 5/1/10	Starting 5/1/09	Starting 5/1/08
FROM	то	\$/kw-mo.	\$/kw- mo.	\$/kw- mo.	\$/kw- mo.	\$/kw- mo.	\$/kw-mo.	\$/kw- mo.	\$/kw- mo.	\$/kw- mo.	\$/kw- mo.
5/1/08	4/31/09					6.89					7.65
5/1/09	4/31/10				7.82	7.05				8.62	7.68
5/1/10	4/31/11			8.93	8.00	7.21			9.77	8.65	7.70
5/1/11	4/31/12		10.26	9.13	8.18	7.38		11.15	9.81	8.68	7.73
5/1/12	4/31/13	11.88	10.49	9.34	8.37	7.55	12.82	11.19	9.84	8.71	7.76
5/1/13	4/31/14	12.16	10.73	9.56	8.56	7.72	12.87	11.23	9.88	8.75	7.79
5/1/14	4/31/15	12.44	10.98	9.78	8.76	7.90	12.91	11.27	9.91	8.78	7.82
5/1/15	4/31/16	12.72	11.23	10.00	8.96	8.08	12.96	11.31	9.95	8.81	7.85
5/1/16	4/31/17	13.01	11.49	10.23	9.17	8.26	13.01	11.35	9.99	8.85	7.88
5/1/17	4/31/18	13.31	11.76	10.47	9.38	8.45	13.06	11.40	10.03	8.88	7.91
5/1/18	4/31/19	13.62	12.03	10.71	9.60	8.65	13.11	11.44	10.07	8.92	7.94
5/1/19	4/31/20	13.93	12.30	10.95	9.82	8.85	13.16	11.49	10.11	8.95	7.97
5/1/20	4/31/21	14.25	12.59	11.20	10.04	9.05	13.21	11.53	10.15	8.99	8.01
6/1/21	4/31/22	14.58	12.88	11.46	10.27	9.26	13.27	11.58	10.19	9.03	8.04

BASIS FOR MONTHLY ENERGY PAYMENT CALCULATION:

- 1. **Energy Payment Rate:** Prior to the in-service date of the avoided unit, the CEP's Energy Payment Rate shall be the Company's As-Available Energy Payment Rate (AEPR), as described in Appendix B. Starting the in-service date of the avoided unit, the basis for determining the Energy Payment Rate will be whether:
 - a. The Company has dispatched the CEP's unit on AGC; or
 - b. The Company has dispatched the CEP's unit off AGC and the CEP is operating its unit at or below the dispatched level; or
 - c. The Company has dispatched the CEP's unit off AGC but the CEP is operating its unit above the dispatched level; or





d. The Company has not dispatched the CEP's unit but the CEP is providing capacity and energy.

Note: For any given hour the CEP unit must be operating on AGC a minimum of 30 minutes to qualify under case (a).

The CEP's total monthly energy payment shall equal; (1) the sum of the hourly energy at the Unit Energy Payment Rate (UEPR), when the CEP's unit was dispatched by the Company, plus (2) the sum of the hourly energy at the corresponding hourly AEPR when the CEP's unit was operating at times other than when the Company dispatched the unit.

2. **Unit Energy Payment Rate:** Starting the in-service date of the avoided unit, the CEP will be paid at the UEPR for energy provided in Paragraph 1.a, Paragraph 1.b and that portion of the energy provided up to the dispatched level in Paragraph 1.c as defined above. The UEPR, which is based on the Company's Designated Avoided Unit and Heat Rate value of 10,213 Btu/kWh, will be calculated monthly by the following formula:

UEPR =
$$FC + O_v$$

where;

 O_v = Unit Variable Operation & Maintenance Expense in \$/MWH.

FC = Fuel Component of the Energy Payment in \$/MWH as defined by:

 $FC = \frac{10,213 \text{ Btu/kWh x FP}}{1,000}$

where;

FP = Fuel Price in \$/MMBTU determined by:

FP = GC + TC + ACA + PPS + FRC

ISSUED BY: C. R. Black, President



VALUE



PARAMETERS FOR AVOIDED UNIT ENERGY AND VARIABLE OPERATION AND MAINTENANCE COSTS

Beginning on May 1, 2012, to the extent that the Designated Avoided Unit(s) would have been operated had it been installed by the Company:

O _V	=	total variable operating and maintenance expense, in \$/MWH, of the Designated Avoided Unit(s), in year n	3.99
Н	=	The average annual heat rate, in British Thermal Units (Btus) per kilowatt-hour (Btu/kWh), of the Designated Avoided Unit(s	10,213



Rate Schedule COG-2 Table of Appendices

APPENDIX	TITLE	SHEET NO.
Α	VALUE OF DEFERRAL METHODOLGY	8.328
В	METHODOLOGY TO BE USED IN THE CALCULATION OF AVOIDED ENERGY COST	8.344
С	 20102012 COMBUSTION TURBINE Minimum Performance Standard Parameters for Avoided Unit Capacity Costs Exemplary Capacity Payment Schedules Parameters for Avoided Unit Energy Costs 	8.406
D	 2017 NATURAL GAS COMBINED CYCLE Minimum Performance Standard Parameters for Avoided Unit Capacity Costs Exemplary Capacity Payment Schedules Parameters for Avoided Unit Energy Costs RESERVED FOR FUTURE USE	<u>8.438</u>
E	RESERVED FOR FUTURE USE	-
F	RESERVED FOR FUTURE USE	-

ISSUED BY: C. R. Black, President

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RATE SCHEDULE COG-2 APPENDIX C

204012 COMBUSTION TURBINE

This Designated Avoided Unit is a 4758 MW (winter rating) natural gas-fired combustion turbine with a January May 1, 201012, in-service date.

MINIMUM PERFORMANCE STANDARDS

In order to receive a Monthly Capacity Payment, all Contracted Capacity and Associated Energy provided by CEPs shall meet or exceed the following MPS on a monthly basis. The MPS are based on the anticipated peak and off-peak dispatchability, unit availability, and operating factor of the Designated Avoided Unit over the term of this Standard Offer Contract. The CEP's proposed generating facility ("the Facility") as defined in the Standard Offer Contract will be evaluated against the anticipated performance of a combustion turbine, starting with the first Monthly Period following the date selected in Paragraph 6.b.ii of the Company's Standard Offer Contract.

- 1. **Dispatch Requirements:** The CEP shall provide peaking capacity to the Company on a firm commitment, first-call, on-call, as-needed basis. In order to receive a Contracted Capacity Payment for each calendar month that the Facility is to be dispatched, the CEP must meet or exceed both the minimum Monthly Availability and Monthly Capacity Factor requirements.
- 2. **Dispatch Procedure:** Commencing on the calendar day prior to the Facility In-Service Date or the Extended Facility In-Service Date, as applicable, and continuing each calendar day thereafter during the Term, by 7:00 A.M. EPT, the CEP shall electronically transmit a schedule ("Available Schedule") of the hour-by-hour amounts of Contracted Capacity expected to be available from the Facility the next day ("Committed Capacity"). Commencing on the calendar day prior to the Facility In-Service Date or the Extended Facility In-Service Date, as applicable, and continuing each calendar day thereafter during the Term, by 3:00 P.M. EPT, the Company shall electronically transmit the hour-by-hour amounts of Contracted Capacity that the Company desires the CEP to dispatch from the Facility the next day based on the Available Schedule supplied at 7:00 A.M. EPT by the CEP ("Dispatch Schedule"). The CEP's Available Schedule and the Company's Dispatch

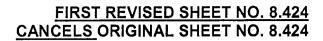




PARAMETERS FOR AVOIDED CAPACITY COSTS

Beginning with the in-service date (15/1/201012) of the Company's Designated Avoided Unit, a 4758 MW (Winter Rating) natural gas-fired Combustion Turbine, for a 1 year deferral:

			VALUE
VAC _m	=	Company's monthly value of avoided capacity, \$/kW/month, for each month of year n	8.06 <u>11.88</u>
K	=	present value of carrying charges for one dollar of investment over L years with carrying charges computed using average annual rate base and assumed to be paid at the middle of each year and present value to the middle of the first year	1.5983 <u>1.6696</u>
I _n	=	total direct and indirect cost, in mid-year \$/kW including AFUDC but excluding CWIP, of the Designated Avoided Unit(s) with an in-service date of year n, including all identifiable and quantifiable costs relating to the construction of the Designated Avoided Unit that would have been paid had the Designated Avoided Unit(s) been constructed	760.51 <u>1,012.72</u>
O _n :	=	total fixed operation and maintenance expense for the year n, in mid-year \$/kW/year, of the Designated Avoided Unit(s);	9.50 23.49
i _p :	=	annual escalation rate associated with the plant cost of the Designated Avoided Unit(s)	1.9 2.3%
i _o =	=	annual escalation rate associated with the operation and maintenance expense of the Designated Avoided Unit(s);	2.3%
r =	=	discount rate, defined as the Company's incremental after tax cost of capital;	7.88 7.89%





L	=	expected life of the Designated Avoided Unit(s); and	26 25
n	=	year for which the Designated Avoided Unit is deferred starting with its original anticipated in-service date and ending with the termination of the contract for the purchase of firm capacity and energy.	20 10 12
A _m	=	monthly early capacity payments to be made to the CEP for each month of the contract year n, in \$/kW/month, if payments start in 20078;	5.32 <u>6.89</u>
m	=	Earliest year in which early capacity payments to the CEP may begin;	2007 <u>8</u> *
F	=	the cumulative present value, in the year contractual payments will begin, of the avoided capital cost component of capacity payments over the term of the contract which would have been made had capacity payments commenced with the anticipated in-service date of the Designated Avoided Unit(s);	544.37<u>699.98</u>*
t	=	the term, in years, of the contract for the purchase of firm capacity if early capacity payments commence in year m;	13<u>14</u> *

^{*} Actual values will be determined based on the capacity payment start date and contract term selected by the CEP.



2010 COMBUSTION TURBINE MONTHLY CAPACITY PAYMENT RATE (\$/KW-MONTH)

		OPTION 1 NORMAL PAYMENT	EAI	OPTION 2	ENT	OPTION 3 LEVELIZED NORMAL PAYMENT	OPTION 4 LEVELIZED EARLY PAYMENT			
CONTRACT YEAR		Starting 1/1/10	Starting 1/1/09	Starting 1/1/08	Starting 1/1/07	Starting 1/1/10	Starting 1/1/09	Starting 1/1/08	Starting 1/1/07	
FROM	TO	\$/kw-mo.	\$/kw-mo.	\$/kw-mo.	\$/kw-mo.	\$/kw-mo.	\$/kw-mo.	\$/kw-mo.	\$/kw-mo.	
1/1/07	-12/31/07				5.32				5.81	
1/1/08	12/31/08			6.07	5.43			6.58	5.82	
1/1/09	12/31/09	,	6.96	6.19	5.53		7.50	6.59	5.83	
1/1/10	12/31/10	8.06	7.10	6.31	5.64	8.62	7.51	6.60	5.84	
1/1/11	12/31/11	8.21	7.24	6.43	5.75	8.64	7.53	6.62	5.86	
1/1/12	12/31/12	8.37	7.38	6.55	5.86	8.65	7.55	6.63	5.87	
1/1/13	12/31/13	8.53	7.52	6.68	5.97	8.67	7.56	6.65	5.88	
1/1/14	12/31/14	8.70	7.67	6.81	6.09	8.69	7.58	6.66	5.90	
1/1/15	12/31/15	8.87	7.81	6.94	6.21	8.71	7.60	6.68	5.91	
1/1/16	12/31/16	9.04	7.97	7.08	6.33	8.73	7.62	6.70	5.92	
1/1/17	12/31/17	9.22	8.12	7.21	6.45	8.75	7.64	6.71	5.94	
1/1/18	12/31/18	9.39	8.28	7.35	6.58	8.78	7.65	6.73	5.95	
1/1/19	12/31/19	9.58	8.44	7.50	6.70	8.80	7.67	6.75	5.97	

2012 COMBUSTION TURBINE MONTHLY CAPACITY PAYMENT RATE (\$/KW-MONTH)

	-		- OPTION 1	OPTION 2			-	OPTION 3	OPTION 4			
	_	_	NORMAL PAYMENT	EARLY PAYMENT				LEVELIZED NORMAL PAYMENT	LEVELIZED EARLY PAYMENT			
	CONTRACT YEAR		<u>Starting</u> <u>5/1/12</u>	Starting 5/1/11	Starting 5/1/10	Starting 5/1/09	Starting 5/1/08	Starting 5/1/12	<u>Starting</u> <u>5/1/11</u>	Starting 5/1/10	Starting 5/1/09	Starting 5/1/08
	FROM	<u>TO</u>	<u>\$/kw-mo.</u>	<u>\$/kw-</u> <u>mo.</u>	<u>\$/kw-</u> mo.	\$/kw- mo.	<u>\$/kw-</u> mo.	\$/kw-mo.	<u>\$/kw-</u> mo.	<u>\$/kw-</u> mo.	<u>\$/kw-</u> mo.	<u>\$/kw-</u> <u>mo.</u>
П	-		_	-	-	-		-	-	-	-	_
	<u>5/1/08</u>	4/31/09	ĺ <u>-</u>	_	_	_	<u>6.89</u>	_	-	_	_	<u>7.65</u>
Н	<u>5/1/09</u>	4/31/10	_	_	_	<u>7.82</u>	<u>7.05</u>	-		<u>.</u>	<u>8.62</u>	<u>7.68</u>
	<u>5/1/10</u>	<u>4/31/11</u>	_	_	<u>8.93</u>	<u>8.00</u>	<u>7.21</u>	-		<u>9.77</u>	<u>8.65</u>	<u>7.70</u>
	<u>5/1/11</u>	4/31/12	_	<u>10.26</u>	<u>9.13</u>	<u>8.18</u>	<u>7.38</u>	_	<u>11.15</u>	<u>9.81</u>	<u>8.68</u>	<u>7.73</u>
	5/1/12	4/31/13	<u>11.88</u>	<u>10.49</u>	<u>9.34</u>	8.37	<u>7.55</u>	<u>12.82</u>	<u>11.19</u>	<u>9.84</u>	<u>8.71</u>	<u>7.76</u>
	<u>5/1/13</u>	<u>4/31/14</u>	<u>12.16</u>	<u>10.73</u>	<u>9.56</u>	<u>8.56</u>	<u>7.72</u>	<u>12.87</u>	<u>11.23</u>	<u>9.88</u>	<u>8.75</u>	<u>7.79</u>
II	5/1/14	<u>4/31/15</u>	<u>12.44</u>	<u>10.98</u>	9.78	8.76	<u>7.90</u>	<u>12.91</u>	<u>11.27</u>	<u>9.91</u>	<u>8.78</u>	<u>7.82</u>
	5/1/15	4/31/16	<u>12.72</u>	<u>11.23</u>	<u>10.00</u>	<u>8.96</u>	<u>8.08</u>	<u>12.96</u>	<u>11.31</u>	<u>9.95</u>	8.81	<u>7.85</u>
	<u>5/1/16</u>	4/31/17	<u>13.01</u>	<u>11.49</u>	10.23	<u>9.17</u>	<u>8.26</u>	<u>13.01</u>	<u>11,35</u>	9.99	<u>8.85</u>	<u>7.88</u>



FIRST REVISED SHEET NO. 8.426 CANCELS ORIGINAL SHEET NO. 8.426

	5/1/17	4/31/18	<u>13.31</u>	11.76	10.47	9.38	<u>8.45</u>	<u>13.06</u>	11.40	10.03	8.88	7.91
\parallel	5/1/18	<u>4/31/19</u>	<u>13.62</u>	<u>12.03</u>	<u>10.71</u>	<u>9.60</u>	<u>8.65</u>	<u>13.11</u>	<u>11.44</u>	<u>10.07</u>	<u>8.92</u>	<u>7.94</u>
\parallel	<u>5/1/19</u>	4/31/20	<u>13.93</u>	<u>12.30</u>	<u>10.95</u>	9.82	<u>8.85</u>	<u>13,16</u>	<u>11.49</u>	<u>10.11</u>	<u>8.95</u>	<u>7.97</u>
	<u>5/1/20</u>	<u>4/31/21</u>	<u>14.25</u>	<u>12.59</u>	<u>11.20</u>	10.04	<u>9.05</u>	<u>13.21</u>	<u>11.53</u>	<u>10.15</u>	<u>8.99</u>	<u>8.01</u>
	6/1/21	4/31/22	<u>14.58</u>	12.88	<u>11,46</u>	10.27	<u>9.26</u>	<u>13.27</u>	<u>11.58</u>	<u>10.19</u>	<u>9.03</u>	<u>8.04</u>
П	~		<u>.</u>		-		w	7			_	

BASIS FOR MONTHLY ENERGY PAYMENT CALCULATION:

- 1. **Energy Payment Rate:** Prior to the in-service date of the avoided unit, the CEP's Energy Payment Rate shall be the Company's As-Available Energy Payment Rate (AEPR), as described in Appendix B. Starting the in-service date of the avoided unit, the basis for determining the Energy Payment Rate will be whether:
 - a. The Company has dispatched the CEP's unit on AGC; or
 - b. The Company has dispatched the CEP's unit off AGC and the CEP is operating its unit at or below the dispatched level; or
 - c. The Company has dispatched the CEP's unit off AGC but the CEP is operating its unit above the dispatched level; or





d. The Company has not dispatched the CEP's unit but the CEP is providing capacity and energy.

Note: For any given hour the CEP unit must be operating on AGC a minimum of 30 minutes to qualify under case (a).

The CEP's total monthly energy payment shall equal; (1) the sum of the hourly energy at the Unit Energy Payment Rate (UEPR), when the CEP's unit was dispatched by the Company, plus (2) the sum of the hourly energy at the corresponding hourly As-Available Energy Rate AEPR when the CEP's unit was operating at times other than when the Company dispatched the unit.

2. Unit Energy Payment Rate: Starting the in-service date of the avoided unit, the CEP will be paid at the UEPR for energy provided in Paragraph 1.a, Paragraph 1.b and that portion of the energy provided up to the dispatched level in Paragraph 1.c as defined above. The UEPR, which is based on the Company's Designated Avoided Unit and Heat Rate value of 9,792 10,213 Btu/kWh, will be calculated monthly by the following formula:

UEPR = FC + Ov

where:

Ov Unit Variable Operation & Maintenance Expense in \$/MWH.

FC Fuel Component of the Energy Payment in \$/MWH as defined

by:

FC 9,792 10,213 Btu/kWh x FP 1.000

where:

FP Fuel Price in \$/MMBTU determined by:

FP GC + TC + GRL+ ACA + PPS + TCR + FRC



ISSUED BY: C. R. Black, President

PARAMETERS FOR AVOIDED UNIT ENERGY AND VARIABLE OPERATION AND MAINTENANCE COSTS

Beginning on January May 1, 201012, to the extent that the Designated Avoided Unit(s) would have been operated had it been installed by the Company:

			VALUE
o _v	=	total variable operating and maintenance expense, in \$/MWH, of the Designated Avoided Unit(s), in year n	2.91 3.99
Н	=	The average annual heat rate, in British Thermal Units (Btus) per kilowatt-hour (Btu/kWh), of the Designated Avoided Unit(s	9,792 10,213

DATE EFFECTIVE: May 22, 2007