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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

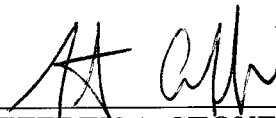
IN RE: Review of Gulf Power
Company's Ten Year Site Plan

Docket No.: Undocketed
Date: July 30, 2007

**GULF POWER COMPANY'S RESPONSES TO STAFF'S
SUPPLEMENTAL DATA REQUEST DATED JUNE 20, 2007**

GULF POWER COMPANY ("Gulf Power," "Gulf," or the "Company"), by and through its undersigned counsel, hereby submits the Company's responses to Staff's Supplemental Data Request to Gulf Power Company dated June 20, 2007 on the following pages.

Respectfully submitted this 30th day of July, 2007.



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GULF POWER COMPANY
Supplemental Data Request
2007 Ten-Year Site Plan

General

1. Provide all data requested on the attached forms. If any of the requested data is already included in Gulf's Ten-Year Site Plan, state so on the appropriate form.

ANSWER:

Please see attached forms.

Utility: Gulf Power Company
 History and Forecast of Summer Peak Demand - MW
 High Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<u>Year</u>	<u>Total</u>	<u>Wholesale</u>	<u>Retail</u>	<u>Interruptible</u>	<u>Residential Load Management</u>	<u>Residential Conservation</u>	<u>Comm/Ind Load Management</u>	<u>Comm/Ind Conservation</u>	<u>Net Firm Demand</u>
HISTORY:									
1997									
1998									
1999									
2000									
2001									
2002									
2003									
2004									
2005									
2006					NOT AVAILABLE				
FORECAST:									
2007									
2008									
2009									
2010									
2011									
2012									
2013									
2014									
2015									
2016									

Utility: Gulf Power Company
 History and Forecast of Summer Peak Demand - MW
 Low Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<u>Year</u>	<u>Total</u>	<u>Wholesale</u>	<u>Retail</u>	<u>Interruptible</u>	<u>Residential Load Management</u>	<u>Residential Conservation</u>	<u>Comm/Ind Load Management</u>	<u>Comm/Ind Conservation</u>	<u>Net Firm Demand</u>
HISTORY:									
1997									
1998									
1999									
2000									
2001									
2002									
2003									
2004									
2005									
2006									
NOT AVAILABLE									
FORECAST:									
2007									
2008									
2009									
2010									
2011									
2012									
2013									
2014									
2015									
2016									

Utility: Gulf Power Company
 History and Forecast of Winter Peak Demand - MW
 High Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<u>Year</u>	<u>Total</u>	<u>Wholesale</u>	<u>Retail</u>	<u>Interruptible</u>	<u>Residential Load Management</u>	<u>Residential Conservation</u>	<u>Comm/Ind Load Management</u>	<u>Comm/Ind Conservation</u>	<u>Net Firm Demand</u>
HISTORY:									
96-97									
97-98									
98-99									
99-00									
00-01									
01-02									
02-03									
03-04									
04-05									
05-06					NOT AVAILABLE				
FORECAST:									
06-07									
07-08									
08-09									
09-10									
10-11									
11-12									
12-13									
13-14									
14-15									
15-16									

Utility: Gulf Power Company
 History and Forecast of Winter Peak Demand - MW
 Low Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<u>Year</u>	<u>Total</u>	<u>Wholesale</u>	<u>Retail</u>	<u>Interruptible</u>	<u>Residential Load Management</u>	<u>Residential Conservation</u>	<u>Comm/Ind Load Management</u>	<u>Comm/Ind Conservation</u>	<u>Net Firm Demand</u>
HISTORY:									
96-97									
97-98									
98-99									
99-00									
00-01									
01-02									
02-03									
03-04									
04-05									
05-06									
NOT AVAILABLE									
FORECAST:									
06-07									
07-08									
08-09									
09-10									
10-11									
11-12									
12-13									
13-14									
14-15									
15-16									

Utility: Gulf Power Company
 History and Forecast of Annual Net Energy for Load - GWH
 High Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>Year</u>	<u>Total</u>	<u>Residential Conservation</u>	<u>Comm/Ind Conservation</u>	<u>Retail</u>	<u>Wholesale</u>	<u>Utility Use & Losses</u>	<u>Net Energy for Load</u>	<u>Load Factor %</u>
HISTORY:								
1997								
1998								
1999								
2000								
2001								
2002								
2003								
2004								
2005								
2006								
								NOT AVAILABLE
FORECAST:								
2007								
2008								
2009								
2010								
2011								
2012								
2013								
2014								
2015								
2016								

Utility: Gulf Power Company
 History and Forecast of Annual Net Energy for Load - GWH
 Low Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>Year</u>	<u>Total</u>	<u>Residential Conservation</u>	<u>Comm/Ind Conservation</u>	<u>Retail</u>	<u>Wholesale</u>	<u>Utility Use & Losses</u>	<u>Net Energy for Load</u>	<u>Load Factor %</u>
HISTORY:								
1997								
1998								
1999								
2000								
2001								
2002								
2003								
2004								
2005								
2006								
NOT AVAILABLE								
FORECAST:								
2007								
2008								
2009								
2010								
2011								
2012								
2013								
2014								
2015								
2016								

Utility: Gulf Power Company

**Nominal, Delivered Coal Prices
Base Case**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	<u>*Low Sulfur Coal (< 1.0%)</u>				<u>**Medium Sulfur Coal (1.0 - 2.0%)</u>				<u>***High Sulfur Coal (> 2.0%)</u>			
	<u>\$/Ton</u>	<u>c/MMBTU</u>	<u>Escalation %</u>	<u>% Spot Purchase</u>	<u>\$/Ton</u>	<u>c/MMBTU</u>	<u>Escalation %</u>	<u>% Spot Purchase</u>	<u>\$/Ton</u>	<u>c/MMBTU</u>	<u>Escalation %</u>	<u>% Spot Purchase</u>
History:												
2004	53.60	229	---	100%	39.34	164	---	0%	n/a	n/a	n/a	n/a
2005	55.54	237	3.62%	100%	40.77	170	3.63%	0%	n/a	n/a	n/a	n/a
2006	57.72	247	3.93%	100%	42.42	177	4.05%	0%	n/a	n/a	n/a	n/a
****Forecast:												
2007	59.92	256	---	16%	75.42	314	---	0%	53.82	238	---	0%
2008	58.89	252	-1.72%	20%	73.49	306	-2.57%	0%	52.43	232	-2.57%	0%
2009	58.44	250	-0.75%	20%	70.91	295	-3.51%	0%	50.42	223	-3.84%	0%
2010	58.46	250	0.04%	20%	71.29	297	0.54%	0%	49.93	221	-0.96%	0%
2011	58.57	250	0.18%	20%	72.17	301	1.24%	0%	49.73	220	-0.41%	0%
2012	59.71	255	1.94%	20%	73.91	308	2.41%	0%	50.94	225	2.43%	0%
2013	60.57	259	1.45%	20%	75.09	313	1.59%	0%	52.00	230	2.09%	0%
2014	61.73	264	1.91%	20%	76.98	321	2.52%	0%	53.12	235	2.16%	0%
2015	63.20	270	2.38%	20%	78.55	327	2.04%	0%	53.98	239	1.61%	0%
2016	64.69	276	2.36%	20%	80.59	336	2.60%	0%	55.15	244	2.17%	0%

*For the forecast years, a Colombian (0.7%S, 11700 BTU/LB) coal was chosen. History includes actuals, of which most was the same Colombian coal.

**For the forecast years, a Central Appalachia Barge (1.0%S, 12000 BTU/LB) coal was chosen. History includes actuals, of which most was Illinois Basin coal.

***For the forecast years, an Illinois Basin Barge (2.5%S, 11300 BTU/LB) coal was chosen. Since Gulf has not burned this coal, data is not available for the years 2004-2006.

****Forecast prices shown are nominal, delivered prices to Plant Crist.

Utility: Gulf Power Company

**Nominal, Delivered Coal Prices
Low Case**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	Low Sulfur Coal (< 1.0%)				Medium Sulfur Coal (1.0 - 2.0%)				High Sulfur Coal (> 2.0%)			
	<u>\$/Ton</u>	<u>c/MMBTU</u>	<u>Escalation %</u>	<u>% Spot Purchase</u>	<u>\$/Ton</u>	<u>c/MMBTU</u>	<u>Escalation %</u>	<u>% Spot Purchase</u>	<u>\$/Ton</u>	<u>c/MMBTU</u>	<u>Escalation %</u>	<u>% Spot Purchase</u>
History:												
2004												
2005												
2006												
Forecast:												
2007												
2008												
2009												
2010												
2011												
2012												
2013												
2014												
2015												
2016												

NOT FORECASTED

ASSUMPTIONS: Type of Coal, heat content, ash content

Utility: Gulf Power Company

**Nominal, Delivered Coal Prices
High Case**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year	Low Sulfur Coal (< 1.0%)				Medium Sulfur Coal (1.0 - 2.0%)				High Sulfur Coal (> 2.0%)			
	<u>\$/Ton</u>	<u>c/MMBTU</u>	<u>Escalation %</u>	<u>% Spot Purchase</u>	<u>\$/Ton</u>	<u>c/MMBTU</u>	<u>Escalation %</u>	<u>% Spot Purchase</u>	<u>\$/Ton</u>	<u>c/MMBTU</u>	<u>Escalation %</u>	<u>% Spot Purchase</u>
History:												
2004												
2005												
2006												
Forecast:												
2007												
2008												
2009												
2010												
2011												
2012												
2013												
2014												
2015												
2016												

NOT FORECASTED

ASSUMPTIONS: Type of Coal, heat content, ash content

Utility: Gulf Power Company

**Nominal, Delivered Distillate Oil and Natural Gas Prices
Base Case**

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	Distillate Oil*			Natural Gas		
	Less Than 0.7%		Escalation	c/MMBTU	\$/MCF	Escalation
	\$/BBL	c/MMBTU	%			%
History:						
2004	38.55	646	---	715	7.42	---
2005	52.22	888	35.46%	1033	10.73	44.48%
2006	58.88	957	12.75%	866	8.95	-16.17%
**Forecast:						
2007	93.03	1604	---	937	9.65	---
2008	89.44	1542	-3.86%	937	9.65	0.00%
2009	87.22	1504	-2.48%	886	9.12	-5.43%
2010	84.79	1462	-2.78%	835	8.60	-5.74%
2011	82.02	1414	-3.27%	794	8.18	-4.87%
2012	79.61	1373	-2.94%	764	7.87	-3.84%
2013	77.83	1342	-2.23%	733	7.55	-3.99%
2014	76.00	1310	-2.35%	723	7.45	-1.39%
2015	75.67	1305	-0.44%	716	7.38	-0.98%
2016	77.45	1335	2.35%	730	7.52	1.91%

*Assumptions for Distillate Oil: 0.2% Sulfur, 139,400 BTU

**Forecast prices shown are nominal, delivered prices to plant Crist.

Utility: Gulf Power Company

**Nominal, Delivered Distillate Oil and Natural Gas Prices
Low Case**

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year	<u>Distillate Oil</u>			<u>Natural Gas</u>		
	<u>Less Than 0.7%</u> <u>\$/BBL</u>	<u>Escalation</u> <u>c/MMBTU</u>	<u>%</u>	<u>c/MMBTU</u>	<u>Escalation</u> <u>\$/MCF</u>	<u>%</u>
History:						
2004						
2005						
2006						
Forecast:	NOT FORECASTED					
2007						
2008						
2009						
2010						
2011						
2012						
2013						
2014						
2015						
2016						

Assumptions for Distillate Oil: heat content, ash content, sulfur content

Utility: Gulf Power Company

**Nominal, Delivered Distillate Oil and Natural Gas Prices
High Case**

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<u>Distillate Oil</u>			<u>Natural Gas</u>		
<u>Year</u>	<u>Less Than 0.7%</u> <u>\$/BBL</u>	<u>Escalation</u> <u>c/MMBTU</u>	<u>%</u>	<u>c/MMBTU</u>	<u>\$/MCF</u>	<u>Escalation</u> <u>%</u>
History:						
2004						
2005						
2006						
Forecast:	NOT FORECASTED					
2007						
2008						
2009						
2010						
2011						
2012						
2013						
2014						
2015						
2016						

Assumptions for Distillate Oil: heat content, ash content, sulfur content

Utility: Gulf Power Company

**Nominal, Delivered Residual Oil Prices
Base Case**

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

Residual Oil (By Sulfur Content)

Year	Less Than 0.7%		Escalation	0.7 - 2.0%		Escalation	Greater Than 2.0%		Escalation
	<u>\$/BBL</u>	<u>c/MMBTU</u>	<u>%</u>	<u>\$/BBL</u>	<u>c/MMBTU</u>	<u>%</u>	<u>\$/BBL</u>	<u>c/MMBTU</u>	<u>%</u>
*History:									
2004									
2005									
2006									
Forecast:									
2007									
2008									
2009									
2010									
2011									
2012									
2013									
2014									
2015									
2016									

NOT FORECASTED**

*No historical data exists because residual oil was not used at Gulf Power Company from 2001 forward.

**Delivered prices for Residual Oil not forecasted for Gulf Power units.

Utility: Gulf Power Company
Nominal, Delivered Residual Oil Prices
Low Case

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

Residual Oil (By Sulfur Content)

Year	Less Than 0.7%			0.7 - 2.0%			Greater Than 2.0%		
	\$/BBL	c/MMBTU	Escalation %	\$/BBL	c/MMBTU	Escalation %	\$/BBL	c/MMBTU	Escalation %

History:
2004
2005
2006

NOT FORECASTED

Forecast:
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

Utility: Gulf Power Company

**Nominal, Delivered Residual Oil Prices
High Case**

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

Residual Oil (By Sulfur Content)

Year	Less Than 0.7%			0.7 - 2.0%			Greater Than 2.0%		
	<u>\$/BBL</u>	<u>c/MMBTU</u>	Escalation %	<u>\$/BBL</u>	<u>c/MMBTU</u>	Escalation %	<u>\$/BBL</u>	<u>c/MMBTU</u>	Escalation %

History:
2004
2005
2006

NOT FORECASTED

Forecast:
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

Utility: Gulf Power Company

draft

Existing Generating Unit Operating Performance

(1) Plant Name	(2) Unit No.	(3) Planned Outage Factor (POF)		(4) Forced Outage Factor (FOF)		(5) Equivalent Availability Factor (EAF)		(6) Average Net Operating Heat Rate (ANOHR)	
		Historical	Projected	Historical	Projected	Historical	Projected	Historical	Projected
Crist	1	----	----	----	----	----	----	----	----
Crist	2	----	----	----	----	----	----	----	----
Crist	3	----	----	----	----	----	----	----	----
Crist	4	3.51	5.45	0.25	4.02	95.07	90.53	10,705	10,806
Crist	5	3.35	5.07	2.11	3.85	93.64	91.08	10,681	10,670
Crist	6	13.69	6.96	3.29	4.52	76.86	88.52	10,437	10,572
Crist	7	16.70	7.23	2.31	4.38	70.02	88.38	10,552	10,551
Smith	1	3.66	5.26	0.87	3.62	93.96	91.12	10,278	10,346
Smith	2	9.49	4.30	1.96	3.66	86.63	92.04	10,360	10,234
Smith	3	2.55	4.96	0.22	4.58	92.54	90.46	7,151	7,145
Smith	A	0.01	0.00	0.08	0.01	98.76	99.99	26,060	14,066
Scholz	1	4.80	4.44	0.02	3.40	94.78	92.16	12,295	12,381
Scholz	2	2.09	5.70	0.22	2.92	96.61	91.38	12,594	12,720
Daniel	1	10.23	8.79	1.42	3.54	85.44	87.67	10,203	10,140
Daniel	2	7.34	6.90	2.29	3.70	88.76	89.40	10,062	10,056
Scherer	3	6.92	5.26	0.75	2.82	91.55	91.92	10,374	10,425

NOTES: Historical - average of past three years
 Projected - average of next ten years
 Crist 1 retired 3/31/2003. Crist 2 and 3 retired 05/1/2006.

Utility: Gulf Power Company

Loss of Load Probability, Reserve Margin, and Expected Unserved Energy
Base Case Load Forecast

(1)	(2)	(3)	(3)	(3)	(3)	(3)
Year	Annual Isolated (A)			Annual Assisted		
	Loss of Load Probability (B) (Days/Yr)	Reserve Margin % (Including Firm Purch.)	Expected Unserved Energy (MWH)	Loss of Load Probability (B) (Days/Yr)	Reserve Margin (%)	Expected Unserved Energy (MWH)
2007						19.32
2008						38.64
2009						30.69
2010						41.90
2011						41.51
2012						41.53
2013						41.90
2014						42.37
2015						42.76
2016						42.73

Note: (A) Not Available
(B) LOLP is not used by Gulf Power

Utility: Gulf Power Company

Financial Assumptions
Base Case

AFUDC Rate: 10.02 %

Capitalization Ratios:

Debt 50 %
Preferred 5 %
Equity 45 %

Rate of Return:

Debt 7.20 %
Preferred 6.90 %
Equity 13.50 %

Income Tax Rate:

State 5.5 %
Federal 35.0 %
Effective 38.575 %

Other Tax Rate:

Ad Valorem 0.76 %

Discount Rate: 8.63 %

Tax
Depreciation Rate: See adjacent table

Tax Depreciation Rates

Year	CC
1	0.0375
2	0.072188
3	0.066773
4	0.061765
5	0.057133
6	0.052848
7	0.048884
8	0.045218
9	0.044615
10	0.044615
11	0.044615
12	0.044615
13	0.044615
14	0.044615
15	0.044615
16	0.044615
17	0.044615
18	0.044615
19	0.044615
20	0.044615
21	0.022311

Utility: Gulf Power Company

Financial Escalation Assumptions

(1)	(2)	(3)	(4)	(5)
Year	General Inflation %	Plant Construction Cost %	Fixed O&M Cost %	Variable O&M Cost %
2007	1.90	2.18	1.90	1.90
2008	1.90	2.18	1.90	1.90
2009	1.90	1.90	1.90	1.90
2010	1.90	1.90	1.90	1.90
2011	1.90	1.90	1.90	1.90
2012	1.90	1.90	1.90	1.90
2013	1.90	1.90	1.90	1.90
2014	1.90	1.90	1.90	1.90
2015	1.90	1.90	1.90	1.90
2016	1.90	1.90	1.90	1.90

GULF POWER COMPANY
 Supplemental Data Request
 2007 Ten-Year Site Plan

Utility: Gulf Power Company

Nominal, Delivered Nuclear Fuel and Firm Purchases

Year	Nuclear		Firm Purchases	
	<u>c/MBTU</u>	<u>Escalation %</u>	<u>\$/MWH</u>	<u>Escalation %</u>
history:				
2004	None		142	
2005	None		81	(43.0)
2006	None		None	
forecast:				
2007	None		None	
2008	None		None	
2009	None		232	
2010	None		376	62.1
2011	None		467	24.2
2012	None		416	(10.9)
2013	None		359	(13.7)
2014	None		219	(39.0)
2015	None		None	
2016	None		100	

General

2. Provide the information requested on the four-page Renewable Energy Questionnaire that is included.

ANSWER:

Please see attached questionnaire.

**GULF POWER COMPANY'S
 RESPONSE TO THE FLORIDA PUBLIC SERVICE COMMISSION'S
 RENEWABLE ENERGY QUESTIONNAIRE
 DATED July 31, 2007**

I. Renewable Generation Resources:

1. Please provide the following information for each self-owned renewable fueled generation resource.

Project Description	Fuel Type	Capacity (kW)	Net Energy for Load (2007 kWh)	In-Service Date
Gulf Power Solar for Schools	Solar Photovoltaic	16 (4 each at 4 kW)	Unmetered energy is donated to school	Various from 2000 through 2004
Alabama Power Plant Gadsden	Switchgrass co-firing	3,000	308,222	May 2001

2. Please provide the following information for each purchased power agreement with a renewable generator.

Vendor Name	Technology description	Fuel Type	Capacity (kW)	Net Energy for Load (2007 kWh)	Contract Start Date	Contract End Date
DeKalb County contract with Georgia Power	Reciprocating Engine	Landfill Gas	3,200	5,746,641	2006	2016

3. For each year 2001 through 2006, provide the percent of net energy for load met with renewable fuels. Indicate separately the net energy for load met by self-owned renewable generation resources and by purchased power agreements. List fuel types used in total if not provided in Questions 1 & 2.

Response: <1% in total self-owned from fuel types listed in questions 1 & 2 above.

4. Please provide an estimate in terms of 2007 kWh of the MW capacity and fuel types used by customers within your territory to self-serve, with renewable resources as defined in section 366.91, Florida Statutes

Response:

Currently, Gulf Power has one residential customer with a 4.8 kW PV array installed at his residence. For 2007, this array has provided approximately 3,280 kWh. Formerly, Gulf Power had a commercial customer with a PV installation, but it has been disconnected from the grid for over a year. The Small PV Interconnection Agreement has been useful in both cases.

5. List and discuss the status of any planned renewable generation projects with expected in-service dates within the next 5 years.

Project Description	Fuel Type	Capacity (MW)	Net Energy for Load (Annual kWh)	Implementation Phase	In-Service Date
N/A	N/A	N/A	N/A	N/A	N/A

6. List and discuss the status of current negotiations for new purchased power agreements with renewable generators, and in particular, how these negotiations compare to the standard offer contract.

Response: Gulf Power is currently negotiating with a renewable energy generator who is evaluating an offer by Gulf. Several pricing options and non-price terms and conditions that are contained in Gulf's current Renewable Standard Offer Contract have been incorporated in the current negotiated offer to the renewable entity.

- 7. How does your company obtain information on renewable generators that have potential as purchased power providers for your system? How many candidates are there at present?**

Response: Gulf obtains this type information through RFPs issued by the Company and solicited and unsolicited contacts with renewable energy generators in its service area. Renewable energy developers and financiers have brought several renewable energy project ideas to Gulf Power for review over the last year. None of these developers have yet constructed any generation or requested that Gulf purchase their energy, but two of them have good potential.

- 8. How many employees are dedicated to developing renewable generation resources or negotiating renewable purchased power agreements? How do these employees fit into your company's organizational structure?**

Response: Within Gulf Power, two employees in Generation Services and one in Marketing Services are responsible for managing Renewable opportunities. These employees also carry other responsibilities and are not dedicated full time to renewables.

- 9. Please provide any available information on renewable generation resources within your company's territory that are not currently under contract by your company. Also, please describe, if any, your company's outreach program for these types of generation, either interconnected to the grid or the distribution network.**

Response: Bay County Resource Management Center, located in Panama City, Florida, is an 11 MW waste-to-energy facility.

- 10. Discuss any planned renewable generation or renewable purchased power agreements within the past 5 years that did not materialize. What was the primary reason these generation plans or purchased power contracts were not realized? What, if any, were the secondary reasons?**

Response: General conceptual plans were discussed with several potential developers and other interested parties. Gulf supplied technical information including avoided cost estimates. However, the developers' technology ideas were either not commercially viable or cost-effective enough for them to pursue further.

11. Does your company currently participate or plan to participate in the market for Renewable Energy Credits? If not, why not?

Response: Gulf Power is not currently participating in the market for Renewable Energy Credits but may do so in the future.

12. List and discuss any renewable generation research projects undertaken by your company within the past 5 years. What is the “area of emphasis” for those projects?

Response:

- Gulf Power Crist Plant test burn of biomass (wood waste) co-firing
- Southern Company Switchgrass and other wood waste co-firing tests at Plant Gadsden in Alabama
- Southern Company Switchgrass cubes co-firing test at Plant Mitchell in Albany Georgia
- Southern Company large scale stationary Fuel Cell test at Mercedes Benz production plant in Tuscaloosa Alabama – 250KW Molten Carbonate Fuel Cell (MCFC) made by Fuel Cell Energy (FCE) operated and tested for one year
- Offshore Wind feasibility study off the coast of Savannah Georgia

13. List and discuss any other activities by your company that promote renewable generation.

Response: Renewable Standard Offer Contract

II. Consumer Programs:

1. Green Pricing:

Does your company currently offer a green pricing program for residential and/or commercial customers? If so, please provide a brief description of this program, including information on participation fees and current participation level. How are the program's funds used to support renewable resources? How are consumers made aware of this program?

Response: Yes. Gulf Power Company's EarthCents Solar program (PV Rate Rider) first approved by the FPSC in December, 1999 and introduced to the public in May, 2000 is still available to the public. This program seeks to install 1 MW of solar generation if customers commit to providing \$6/month for 10,000 100-watt blocks of renewable energy. As of the end of June 2007, Gulf Power had sixty customers enrolled in the program, committed to purchase eighty 100-watt blocks. Consumers are made aware of this program through advertisements, bill inserts, our web site and our field Marketing reps.

What, if any, new renewable generation has been installed as a result of this program?

Response: No new generation has been installed due to low levels of customer participation.

What is the estimate of renewable energy provided to participants as a result of the program?

Response: If the 10,000 commitments are achieved, the plan is to install 1 MW of solar generation.

2. Please discuss any other renewable programs offered to your consumers, for example, solar rebates, low interest loans, net metering, and education programs. How are consumers made aware of these programs?

Response:

- Gulf Power's Solar for Schools program, using voluntary contributions from customers and supplemental grants, has enabled the installation of four 4 kW solar photovoltaic arrays throughout Gulf Power's service area. The three high schools and one Junior Museum on which the arrays are installed have benefited from educational materials, workshops to train teachers, and solar energy supplied through the Solar for Schools program.
- Gulf Power promotes Geothermal (ground source) heating and cooling in the residential and commercial markets. Over 2,000 of Gulf Power's residential customers have elected to install these highly efficient systems that take advantage of the earth's natural heat source and sink capability. Additionally,

over 4,000 tons of commercial geothermal heating and cooling equipment have been installed by Gulf Power customers.

- Consumers are made aware of these programs through advertisements, bill inserts, our web site and our field Marketing reps.

3. Discuss any other activities by your company designed to promote consumer adoption or awareness of renewable energy.

Response:

- Educational discussions with public groups and community leaders
- Web site
 - i. Information about and link to data on Solar for Schools program
 - ii. Information about Earth Cents Solar optional rate rider
- Bill inserts

Please provide contact information for the appropriate person to answer any follow-up questions.

Response:

- Robert McGee, Gulf Power Marketing Services Manager, 1 Energy Place, Pensacola, FL 32520, 850-444-6530.
- Homer Bell, Gulf Power Generation Services Senior Engineer, 1 Energy Place, Pensacola, FL 32520, 850-444-6035.

Planning

3. Discuss the status of Southern Company's IRP process, and how that IRP is reflected in Gulf's 2007 Ten-Year Site Plan.

ANSWER:

The Southern electric system (SES) Integrated Resource Plan (IRP) was produced in the Fall of 2006 and serves as the basis for the expansion plan that is currently reflected in Gulf's 2007 Ten-Year Site Plan. The SES retail operating companies' are currently updating loads and existing capacity resource capabilities to be used to develop the 2008 IRP. This version of the SES IRP is scheduled to be completed in the fourth quarter of 2007, and Gulf's 2008 TYSP will reflect the updated information contained in this 2008 IRP.

4. Explain the actions taken by Gulf to remedy the single-digit and negative reserve margins forecasted for every summer season except for 2009 and 2010, and for the winter seasons of 2009-2010 through 2010-2011.

ANSWER:

Although Gulf is showing negative reserve margins before it adds 487 MW of market capacity purchases to its existing resources in June 2009, and single-digit margins after the summer of 2010, the SES has more than adequate capacity reserves to meet Gulf's and the other operating companies' load requirements during these periods. As a result of its coordinated resource planning activities, the SES operating companies will continue to install the additional capacity needed maintain adequate reserve levels to meet total SES load requirements throughout the current planning period, and Gulf will purchase its allocated share of these total system reserves through the SES Intercompany Interchange Contract reserve sharing process as it finalizes its plans to add capacity in 2014.

5. Explain why Gulf plans to continue to make off-system sales given the low reserve margins forecasted for the planning horizon.

ANSWER:

Gulf has committed to make off-system capacity sales from its Scherer 3 capacity from June 2010 through December 2015. During this timeframe, Gulf's forecasted need was for gas-fired peaking capacity instead of coal-fired base load capacity.

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6. Identify and discuss any firm power purchases that Gulf has arranged to make from other generation suppliers over the planning horizon. Include purchases from other Southern Company members, and the time period covered by existing agreements.

ANSWER:

Gulf has signed purchased power agreements with two power market participants for a total of 487 MW from combustion turbine facilities. The term is from June 2009 through May 2014, and both agreements have received all regulatory approvals.

7. Identify the annual levels of capacity, at summer and winter peak, expected to be available to Gulf from other Southern Company members through the reserve sharing provisions of the Intercompany Interchange Contract.

ANSWER:

	<u>Summer(MW)</u> ⁽¹⁾		<u>Winter(MW)</u>
2007	339	2006-07	458
2008	366	2007-08	644
2009	(81)	2008-09	736
2010	26	2009-10	396
2011	108	2010-11	446
2012	245	2011-12	579
2013	315	2012-13	318
2014	282	2013-14	374
2015	358	2014-15	438
2016	226	2015-16	310

- (1) *The SES is a summer peaking system. Gulf reserve sharing MWs shown are MWs to meet summer reserve target requirement.*

8. Identify each of the firm capacity imports, for each year, reflected in Schedules 7.1 and 7.2 of Gulf's Ten Year Site Plan. Include the provider, term, capacity in MW, a description of whether the purchase is from a system or specific generating unit, and the location of the unit if a UPS.

ANSWER:

The 487 MW capacity import shown Schedules 7.1 and 7.2 of Gulf's TYSP is the total capacity from the two purchased power agreements discussed

above. The 180 MW capacity import shown on Schedule 7.1 is a proposed summer only, short-term capacity purchase from the market.

9. Provide a table containing the most recent forecast of the Southern Company system's summer and winter reserve margin for each year of the ten-year planning horizon.

ANSWER:

The SES is a summer peaking system, with established short-term and long-term minimum reserve margin standards. The SES targets and manages to these same standards each year. In the short-term, 2007 through 2009, the SES has the capacity reserves needed to meet a summer peak planning reserve margin of 13.5%. Over the longer-term, 2010 through 2016, the SES plans to meet a summer peak planning reserve margin of 15% using capacity purchases and new generating facilities. Below is a table of SES reserve margins for the Summer periods of through 2016

	<u>Summer(%)</u>
2007	>15
2008	>15
2009	>15
2010	15
2011	15
2012	15
2013	15
2014	15
2015	15
2016	15

10. For each of the generating units contained in Gulf's Ten-Year Site Plan, discuss the "drop dead" date for a decision on whether or not to construct each unit. Provide a time line for the construction of each unit, including regulatory approval, and final decision point.

ANSWER:

Currently, June 1, 2012 is the expected date for Gulf's decision to construct the proposed 2014 combined cycle (CC) shown on Schedule 8 of its TYSP. To meet a June 1, 2014 in-service date, Gulf estimates that a minimum of 36 months would be needed for permitting, engineering, procurement, and construction of the proposed June 2012 CC. The permitting, engineering and procurement phases of the project, which are conducted concurrently, require

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roughly 26 months to complete. The actual construction and testing of the CC facility is estimated to take 10 months.

11. Discuss any purchases of capacity or energy that Gulf has made from the Santa Rosa Energy Center since January 1, 2006. Does Gulf project any short-term or long-term utilization of that plant or its generating capability?

ANSWER:

Since January 1, 2006, Gulf has not purchased any energy from the facility due to Calpine's action to mothball the plant. Calpine has not indicated to Gulf when the Santa Rosa facility might resume energy production.

12. Have there been any changes to the projections for Budget or GDP growth since the 2007 Ten-Year Site Plan was compiled?

ANSWER:

The assumptions used by Gulf to produce budgets are continually monitored and are incorporated into plans during the course of its annual budgeting cycle. Projections for each budget year are usually finalized in the Fall of the preceding year.

Load Forecasting

13. Provide, on a system-wide basis, historical annual heating degree day (HDD) data for the period 1997-2006 and forecasted annual HDD data for the period 2007-2016. Describe how Gulf derives system-wide temperature if more than one weather station is used.

ANSWER:

	Heating Degree Days <u>Base 65</u>
1997	1887
1998	1212
1999	1276
2000	1547
2001	1376
2002	1669
2003	1607
2004	1518
2005	1361
2006	1213
2007	1524
2008	1519
2009	1519
2010	1519
2011	1519
2012	1519
2013	1519
2014	1519
2015	1519
2016	1519

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14. Provide, on a system-wide basis, historical annual cooling degree day (CDD) data for the period 1997-2006 and forecasted annual CDD data for the period 2007-2016. Describe how Gulf derives system-wide temperature if more than one weather station is used.

ANSWER:

	Cooling Degree Days <u>Base 65</u>
1997	2492
1998	3062
1999	2670
2000	2771
2001	2484
2002	2774
2003	2539
2004	2633
2005	2675
2006	2805
2007	2669
2008	2612
2009	2612
2010	2612
2011	2612
2012	2612
2013	2612
2014	2612
2015	2612
2016	2612

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15. With regard to the wholesale energy forecast described on page 16 of the Ten-Year Site Plan, is the power sales agreement with Florida Public Utilities included in this information?

ANSWER:

Yes.

16. The discussion on page 39 of the Ten-Year Site Plan mentions a prototype installation of solar technology. Describe the installation, as to the size, location, and in-service date. What energy has been produced by the installation since it was installed?

ANSWER:

Since the inception of the Solar for Schools project in 1996, four installations have been made on local schools and a hands-on junior museum in the Gulf Power territory. The details for each of these installations are provided below:

Facility	Location	Size	Install Date	kWh Produced
Junior Museum of Bay County	Panama City, FL	4 kW	Oct, 2000	Approximately 36,000 kWh
Meigs Middle School	Shalimar, FL	4 kW	Feb, 2003	Approximately 24,000 kWh
West Florida High School	Pensacola, FL	4kW	Jun, 2003	Approximately 22,000 kWh
Bay High School	Panama City, FL	4 kW	Apr, 2004	Approximately 18,000 kWh

17. Please discuss the assessment of the impact of demand-side programs on utility system loads. What factors are included in the assessment, and how are they evaluated?

ANSWER:

Each of Gulf's demand-side management programs is evaluated through a combination of engineering analysis and modeling, customer billing data and equipment metering. These methods are utilized to develop and to validate program savings estimates. Each program compares a baseline assumption to a program induced alternative which is used to determine the per unit weather sensitive peak demand reduction and the energy savings resulting from the program's implementation. For example, each participating customer in the Residential Geothermal Heat Pump Program achieves an average of 0.99 kW summer peak demand reduction and a 647 kWh energy reduction. The demand and energy savings are both measured at the meter.

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The per-unit demand and energy savings are multiplied by historical, current and projected program participation to measure the total effect or potential effect on Gulf's system loads.

Fuel Forecasting

18. Referring to data request no.1, for each fuel type provide the forecasts of the commodity prices and transportation prices that make up the delivered price forecast. For example, for natural gas, provide the Henry Hub price forecast and the transportation forecast. For coal, provide the minemouth or up-river dock price forecast (for foreign coal, the port form which the coal is exported) and the transportation mode and price forecast.

ANSWER:

Redacted information has been provided pursuant to a Notice of Intent to Request Confidential Classification.

Year	*Low Sulfur Coal (< 1.0%)			**Medium Sulfur Coal (1.0 - 2.0%)			***High Sulfur Coal (> 2.0%)		
	Commodity \$/Ton	Trans. \$/Ton	Trans. Mode	Commodity \$/Ton	Trans. \$/Ton	Trans. Mode	Commodity \$/Ton	Trans. \$/Ton	Trans. Mode
2007			Ship/Barge			Rail/Barge			Rail/Barge
2008			Ship/Barge			Rail/Barge			Rail/Barge
2009			Ship/Barge			Rail/Barge			Rail/Barge
2010			Ship/Barge			Rail/Barge			Rail/Barge
2011			Ship/Barge			Rail/Barge			Rail/Barge
2012			Ship/Barge			Rail/Barge			Rail/Barge
2013			Ship/Barge			Rail/Barge			Rail/Barge
2014			Ship/Barge			Rail/Barge			Rail/Barge
2015			Ship/Barge			Rail/Barge			Rail/Barge
2016			Ship/Barge			Rail/Barge			Rail/Barge

*For the forecast years, a Colombian (0.7%S, 11700 BTU/LB) coal was chosen.

**For the forecast years, a Central Appalachia Barge (1.0%S, 12000 BTU/LB) coal was chosen.

***For the forecast years, an Illinois Basin Barge (2.5%S, 11300 BTU/LB) coal was chosen.

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Year	Distillate Oil*			Natural Gas		
	Commodity \$/BBL	Trans. \$/BBL	Trans. Mode	Commodity** c/MMBTU	Trans. c/MMBTU	Trans. Mode
2007			Truck			Pipeline
2008			Truck			Pipeline
2009			Truck			Pipeline
2010			Truck			Pipeline
2011			Truck			Pipeline
2012			Truck			Pipeline
2013			Truck			Pipeline
2014			Truck			Pipeline
2015			Truck			Pipeline
2016			Truck			Pipeline

*Assumptions for Distillate Oil: 0.2% Sulfur, 139,400 BTU

**Forecast prices shown are Henry Hub prices.

Year	Residual Oil (By Sulfur Content)*								
	Less than 0.7%			0.7 - 2.0%			Greater than 2.0%		
	Commodity \$/BBL	Trans. \$/BBL	Trans. Mode	Commodity \$/BBL	Trans. \$/BBL	Trans. Mode	Commodity \$/BBL	Trans. \$/BBL	Trans. Mode
2007	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2008	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2011	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2012	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2013	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2014	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2015	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2016	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

*Delivered prices for Residual Oil not forecasted for Gulf Power units.

19. If not detailed in Gulf's Ten-Year Site Plan, describe the assumptions and drivers that are used to develop the fuel price forecast.

ANSWER:

In addition to the information included in Gulf's Ten-Year Site Plan, the following assumptions are taken into account while developing the fuel price forecast: existing and future legislation of the fuel market, economic factors, and supply and demand expectations. The economic factors considered include expected Gross Domestic Product, the impact of new technology on both fuel and energy costs, future renewable energy on the fuel market, and technology productivity improvements. The supply factors considered include the amount of potentially new and retired coal mines while the demand factors include gas and coal in both the domestic and international markets and forecasted LNG growth both within the United States and world-wide. In

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addition, demand expectations for growth within the power sector are taken into account.

20. Except as provided in the filed Ten-Year Site Plan, provide all documents that support the fuel price forecast.

ANSWER:

Documents provided pursuant to a Notice of Intent to Request Confidential Classification.

21. If not detailed in Gulf's Ten-Year Site Plan, explain how the fuel price forecast was tested for reasonableness.

ANSWER:

As illustrated in the graphical information provided in response to Request No. 20, reasonableness tests are performed by comparing the SES price forecast to forecasts provided by external consultants. In addition, a year-over-year comparison of the SES price forecast for both real and nominal dollars is performed.

22. Discuss how Gulf compares its fuel price forecasts to recognized, authoritative independent forecasts, such as those provided by EIA.

ANSWER:

Please refer to answer provided for question 21.