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August 30, 2016

Ms. Carlotta Stauffer, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee FL 32399-0850

Re: Docket No. 160158-EI – Petition for approval of energy purchase agreement
between Gulf Power Company and Morgan Stanley Capital Group Incorporated

Dear Ms. Stauffer:

Enclosed is Gulf Power Company's response to Commission Staff's First Data Request
(Nos. 1-32) in the above-referenced docket.

Sincerely,

Robert L. McGee, Jr
Regulatory and Pricing Manager

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Enclosures

- cc: Beggs & Lane
 - Jeffrey A. Stone, Esq.
 - Office of General Counsel
 - Kelley Corbari
 - Division of Engineering
 - Orlando Wooten
 - Division of Economics
 - Devlin Higgins
 - William McNulty
 - Division of Accounting & Finance
 - Kordell Wilson
 - Mark Cicchetti
 - Todd Brown

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1. Please identify and discuss the differences between Gulf's 2015 and 2016 energy budgets, if any.

RESPONSE:

The major differences between the 2015 and 2016 energy budgets are the underlying fuel price and load forecast assumptions. Natural gas prices and the Gulf load forecast were lower in the 2016 energy budget as compared to the 2015 energy budget.

2. Please identify any terms within the proposed agreement that are intended to ensure the adequacy and reliability of electric service will not be adversely affected by the wind farm associated with the proposed agreement.

RESPONSE:

The Energy Purchase Agreement contains a variety of provisions that are intended to ensure that adequacy and reliability of electric service will not be affected. Such provisions include: §4.1 (requiring that Seller exercise contractual rights to require others to operate Generation Facilities in accordance with Prudent Industry Practices, Legal Requirements and Operating Procedures to be developed by the parties) §5.1 (requiring provision of Seller performance security); §6.5 (providing for cover damages in the event of Seller's failure to deliver energy); §7.1 .2 (requiring Seller to utilize firm transmission for all deliveries with limited exceptions); §7.3-7.4 (allowing Buyer to curtail or cease energy deliveries under various circumstances including emergencies or other operational reasons) §12.1.13 (providing for an Event of Default in the event that Seller fails to deliver a specified percentage of energy in any given 12 month period); and §12 .1.17 (providing for an Event of Default in the event that Seller fails to comply with any material obligation under the agreement).

3. In paragraph 12 of its Petition, Gulf states that it anticipates receiving more than 6,878,000 RECs over the term of the agreement. Please explain in detail how Gulf the 6,878,000 anticipated number was determined.

RESPONSE:

The environmental attributes associated with one (1) megawatt hour of electricity generated from a renewable resource are commonly referred to as "renewable energy credits," or "RECs". The number of RECs that Gulf expects to receive is determined by the total number of MWhs that Morgan Stanley is obligated to deliver over the term of the Agreement as depicted in Appendix A to the Agreement. The number included in Gulf's petition was calculated as follows:

$$\text{MWhs Received over Contract Term} = \sum_{\text{jan}}^{\text{dec}} \{ (\text{Guaranteed MWh Receipts per Day}) \times (\text{Days per Month}) \} \times \{ \text{Years per Contract Term} \}$$

4. In paragraph 12 of its Petition, Gulf states that it will receive all environmental attributes.
- a. Please define or describe "environmental attributes."
 - b. Please provide an explanation of how the values of these items is determined, and how these interests are bought and sold.

RESPONSE:

- a. The term "environmental attributes" is a defined term in the Energy Purchase Agreement ("EPA") and, in short, refers to all environmental, social, and other non-power qualities associated with the renewable energy purchased under the EPA. The environmental attributes associated with one (1) megawatt hour of electricity generated from a renewable resource are commonly referred to as "renewable energy credits," or "RECs". The U.S. Federal Trade Commission defines Renewable Energy Credits ("RECs") as commodities representing

the property rights to the environmental, social, and other non-power qualities of renewable electricity generation. A REC, and the attributes and benefits it represents, can be "unbundled" from the underlying renewable electricity and sold separately. If the physical electricity and the associated RECs are sold to separate buyers, the electricity is no longer considered renewable ("The REC product is what conveys the attributes and benefits of the renewable electricity, not the electricity itself."). All renewable energy is based on RECs, even when the marketer purchased renewable energy directly from a utility or other provider.¹
- b. The value of a REC is determined in the open market and is based on supply and demand. In the U.S., there are currently two types of REC markets:
 1. "Voluntary" REC markets, in which RECs are ultimately sold to end-users of electricity who do not have a legal obligation to use a certain amount of renewable energy but wish to purchase renewable energy for personal or corporate reasons or goals.
 2. REC markets in jurisdictions with laws or regulations requiring utilities to meet a certain portion of their demand with renewable energy. Some states, for example, have enacted such laws, commonly called "renewable portfolio standards" ("RPS"). Some, though not all, RPS laws allow utilities

¹ FTC, The Green Guides, Statement of Basis and Purpose at 20 In. 684, available at: <http://www.ftc.gov/os/fcdreg/20121109reenguidesstatement.pdf>.

to purchase RECs to meet the requirements as an alternative to building renewable generation or actually purchasing renewable energy ("renewable energy," as used here, means the bundled product of energy and RECs). RPS laws or regulations may specify characteristics of renewable energy that must be met in order to qualify for RPS compliance. Such characteristics may include: type of renewable energy (solar, wind, biomass, etc.); geographic location of the renewable energy generator (e.g. within the state); and vintage of the renewable energy generator (e.g. commercial operation after some date certain).

In the voluntary REC market, large quantities of RECs are traded through trading platforms that match buyers and sellers at a market clearing price. One such platform is the North American Renewables Registry ("NARR"). RECs can also be sold directly to end use customers at negotiated rates. Finally, in some states without legal requirements to meet customer demand with a certain amount of renewable energy, voluntary rates are available to customers who wish to "green" their energy usage.

In jurisdictions with RPSs that allow for the trading of RECs to satisfy the laws' requirements, trading platforms are often established, either through or with the oversight of state agencies, to buy and sell RECs for compliance purposes. In some regions of the country where multiple states have RPS laws that allow for out-of-state REC trading, multi-state exchanges have been established that allow for interstate trading of RECs for compliance purposes. The value of such RECs are established by the "market" and demand is driven by the utilities' need to meet the RPS requirements. In addition, in certain states that have such an RPS, the state establishes an "alternative compliance payment," which is usually an amount of money (per megawatt-hour) that a utility can pay to comply with the RPS in lieu of procuring a REC to match such megawatt-hour. As a practical matter, an alternate compliance payment established by a state sets a price ceiling on the value of RECs that can be purchased to satisfy the RPS requirement.

5. In paragraph 12 of its Petition, Gulf asserts that, if it sells renewable attributes, the proceeds from such sales would be credited to Gulf's retail customers in the form of credits to the Fuel and Purchased Power Cost Recovery Clause. Please identify the specific A and E schedule(s) where such adjustments would be recorded.

RESPONSE:

Gulf has not made a final determination of where the proceeds from REC sales would be reflected in the A and E schedules. Gulf intends to collect and retire RECs rather than sell them. However, in the event that RECs from these facilities are sold, one approach which would appropriately credit the proceeds to Gulf's retail customers would be to include the proceeds in the "Adjustment to Fuel Cost" line item on schedules A-1, A-1a, A-2, E-1b, E-1B-1, and E-2.

6. In paragraph 12 of its Petition, Gulf states the sale of renewable attributes will be credited to Gulf's customers through the Fuel and Purchased Power Cost Recovery Clause. Please complete the table below projecting the anticipated proceeds that may result from the sale of renewable attributes and provide the requested table data electronically in MS Excel format with all formulas intact.

Year	Credit from the sale of Renewable Attributes (2016\$)	Impact on Customer Bill of 1,000 kwh (\$)
2017		
2018		
2019		
2020		
2021		
2022		
2023		
2024		
2025		
2026		
2027		
2028		
2029		
2030		
2031		
2032		
2033		
2034		
2035		
2036		
2037		

RESPONSE:

Assuming Gulf sells 6,782,477 RECs received during the period beginning January 1, 2017 through December 31, 2035 (*the contract expiration date*) at a rate of \$0.33 each year, the following amounts (2016 \$) would be credited to Gulf's customers through the Fuel and Purchased Power Cost Recovery Clause.

The assumed \$0.33 sales price is the price quoted by ICAP Services for voluntary market Wind RECs as of June 2016. See paragraph 12 of Gulf's petition in this docket.

Year	Credit from the sale of Renewable Attributes (2016\$)	Impact on Customer Bill of 1,000 kwh (\$)
2017	110,737	\$0.009
2018	104,135	\$0.009
2019	97,927	\$0.008
2020	92,247	\$0.008
2021	86,598	\$0.007
2022	81,435	\$0.007
2023	76,580	\$0.006
2024	72,138	\$0.006
2025	67,721	\$0.005
2026	63,683	\$0.005
2027	59,886	\$0.005
2028	56,413	\$0.004
2029	52,958	\$0.004
2030	49,801	\$0.004
2031	46,832	\$0.004
2032	44,116	\$0.003
2033	41,414	\$0.003
2034	38,945	\$0.003
2035	36,623	\$0.003
2036	N/A	N/A
2037	N/A	N/A

7. In paragraph 16 of its Petition, Gulf states that the Net Present Value benefit to customers under the 2016 energy budget is approximately \$21 million in 2016 dollars. Please identify what assumptions Gulf relied upon when making these calculations.

RESPONSE:

The financial assumptions presented in the table below are not inputs into Gulf's 2016 Energy Budget. However, the financial assumptions are necessary to derive the discount factor that was utilized to calculate the NPVs in the economic analyses.

	2016 Energy Budget	
Discount Rate (After Tax WACC)	6.34%	
Capital Structure\Cost Rate		
Debt	50%	5.8%
Preference Stock	5%	6%
Common Equity	45%	10.25%
Weighted Average Cost of Capital	7.25%	

8. In paragraph 16 of its Petition, Gulf states that it does not assign value for renewable energy credits or fuel diversity in its economic evaluation. Please explain why.

RESPONSE:

Gulf did not believe it was necessary to assign a value to the RECs for purposes of its economic evaluations because the renewable energy credits (RECs) are bundled with the energy purchased and are acquired under the contract at no cost. Moreover, current market values for RECs are low. In addition, while energy supplied from a mix of generation resources utilizing different fuel sources can help ensure reliable service to Gulf's customers, Gulf did not assign a fuel diversity value to the agreement because of the difficulty associated with quantify such value. However, as mentioned in paragraph 16 of Gulf's petition, Gulf's economic evaluations are conservative and omitting REC values and any value related to fuel diversity from those evaluations is consistent with Gulf's conservative approach.

9. In paragraph 16 of its Petition, Gulf states its evaluations do not assign value for capacity.
- a. Does Gulf project that approval of the agreement will defer the construction of future facilities?
 - b. If yes, please identify the future facility(ies) that may be deferred, and include the technology type, capacity (MW), and in-service date of each facility.

RESPONSE:

- a. No.
- b. N/A

10. Please explain what strategic benefits, if any, there may be for Gulf having renewable energy credits?

RESPONSE:

There are several benefits associated with Gulf Power's ownership of renewable energy credits (RECs) associated with this Energy Purchase Agreement. At least initially, Gulf intends to collect and retire the RECs by providing renewable energy to all of its customers. Gulf's ownership of RECs also has the potential to assist the Company in complying with Renewable Portfolio Standards or similar compliance obligations should they arise in the future. Finally, should the value of RECs increase significantly in the marketplace, Gulf has the flexibility to sell RECs and return the proceeds from such sales to its customers. All of the foregoing benefits of REC ownership are significant in and of themselves. The fact that Gulf is receiving RECs at no cost under the Energy Purchase Agreement further highlights the value of this agreement to Gulf's customers.

11. Please explain what strategic benefits, if any, there may be for Southern Company having renewable energy credits?

RESPONSE:

Given that the renewable energy credits (RECs) generated pursuant to the Energy Purchase Agreement belongs exclusively to Gulf Power, the Company is not aware of any benefits that inure to the Southern Company.

12. Assuming approval of the Agreement and using Gulf's 2016 energy budget, please complete the table below. Please provide the requested table data electronically in MS Excel format with all formulas intact.

Year	Annual Total Revenue Requirements w/ agreement (\$ Millions, 2016 \$)	Annual Total Revenue Requirements w/o agreement (\$ Millions, 2016 \$)	Cumulative Difference (\$ Millions, 2016 \$)	Differential in Customer Bill in 1000 kWh (\$)
2017				
2018				
2019				
2020				
2021				
2022				
2023				
2024				
2025				
2026				
2027				
2028				
2029				
2030				
2031				
2032				
2033				
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2035				
2036				
2037				

RESPONSE:

Confidential electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 1. Please see Excel file named "DR1-12 Annual Revenue Requirements_CONF.xlsx."

13. Assuming approval of the Agreement and using Gulf's 2016 energy budget, please provide the annual and cumulative values over the life of the project (in nominal and net present value) for each of the following categories:
- a. Fuel Savings;
 - b. Emissions Savings separated by type (CO₂, etc.);
 - c. Avoided Replacement Costs;
 - d. Avoided Capacity Purchases, and
 - e. Avoided O&M.

Please provide the requested data electronically in MS Excel format with all formulas intact.

RESPONSE:

Confidential electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 1 for Items a, b, c and e. Please see Excel file named "DR1-13 Annual and Cumulative Values_CONF.xlsx".

For Item 13 d, no avoided capacity purchases were identified in the evaluation of this agreement.

14. In paragraph 16 of Gulf's Petition, it states that the net present value to Gulf's customers under the 2016 energy budget evaluation total approximately \$21 M in 2016 dollars. Please provide the requested data below electronically in MS Excel format with all formulas intact.
- Please provide a sensitivity of the fuel savings based on a low fuel price forecast, base fuel price forecast, and a high fuel price forecast, all probabilistic metrics applied to such sensitivities and provide the annual and cumulative values (in nominal and net present value) for each category.
 - Please provide a sensitivity of the emissions savings with and without CO2 costs and provide the annual and cumulative values (in nominal and net present value) for each category.

RESPONSE:

- The Company has estimated the net benefit to its customers in each of three fully integrated future scenarios—one with Lower future natural gas prices, one with Moderate future natural gas prices and one with Higher natural gas prices.

The summary table provided below gives the estimated total NPV savings in each of these scenarios. The additional Excel workbooks give annual and cumulative values in nominal and net present value for each of the three scenarios. The Company does not ascribe probabilities to its scenarios.

Net Present Value of Savings (\$millions, 2016\$)	
Scenario	2016 Budget
Lower	-6
Moderate	21
Higher	50

Confidential electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 1. Please see Excel files named "DR1-14a Base_CONF.xlsx", "DR1-14a HG0_CONF.xlsx" and "DR1-14a LG0_CONF.xlsx".

- The potential costs that the project may offset in a CO2 constrained future were not analyzed. If the project was analyzed assuming a CO2 constrained future and associated CO2 emission costs, the analysis would likely show additional value to customers.

15. Assuming approval of the Agreement, please complete the table below and provide the requested table data electronically in MS Excel format with all formulas intact

Year	Avoided Natural Gas (MMBtu)	Avoided Coal (Tons)
2017		
2018		
2019		
2020		
2021		
2022		
2023		
2024		
2025		
2026		
2027		
2028		
2029		
2030		
2031		
2032		
2033		
2034		
2035		
2036		
2037		

RESPONSE:

Year	Avoided Natural Gas (MMBtu)	Avoided Coal (Tons)
2017	2,278,844	32,850
2018	2,082,077	40,852
2019	1,591,201	56,931
2020	1,745,992	44,028
2021	1,788,220	42,730
2022	1,806,271	42,197
2023	1,923,792	37,705
2024	1,930,001	37,904
2025	1,944,708	37,207
2026	1,895,927	38,462
2027	1,966,543	36,350
2028	2,034,075	31,947
2029	2,036,111	33,373
2030	1,914,565	36,439
2031	1,907,728	35,299
2032	1,870,754	37,454
2033	1,910,504	34,869
2034	2,002,227	30,416
2035	1,980,596	32,331
2036	2,092,384	25,220
2037	2,084,170	24,150

Electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 2. Please see Excel file named "DR1-15 Avoided Gas_Coal.xlsx".

16. Assuming approval of the Agreement, please complete the table below and provide the requested table data electronically in MS Excel format with all formulas intact.

Year	Avoided CO2 (Tons)	Avoided NOX and SO2 (Tons)
2017		
2018		
2019		
2020		
2021		
2022		
2023		
2024		
2025		
2026		
2027		
2028		
2029		
2030		
2031		
2032		
2033		
2034		
2035		
2036		
2037		

RESPONSE:

Year	Avoided CO2 (Tons)	Avoided NOX and SO2 (Tons)
2017	210,756	122
2018	218,111	146
2019	227,301	188
2020	205,935	148
2021	205,346	149
2022	205,146	145
2023	201,432	142
2024	202,263	143
2025	201,480	136
2026	201,586	137
2027	200,737	133
2028	194,308	118
2029	197,789	125
2030	197,907	126
2031	194,820	120
2032	197,737	127
2033	193,968	120
2034	188,836	109
2035	192,085	111
2036	181,860	93
2037	178,857	88

Electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 2. Please see Excel file named "DR1-16 Avoided CO2_NOX.xlsx".

17. Please explain how Gulf intends to report and record the purchased power from this project for fuel cost recovery purposes? Please include an explanation of:
- a. How this will be reported by line item on the A and E schedules, including A1, A2, A3, A7, A8, A9 and corresponding E schedules; and
 - b. Each change or new entry.

RESPONSE:

- a. Energy purchased under this Agreement will be reported on Schedule A-9 in line 8 "Purchased Power Agreement Energy" and on Schedule E-9 in "Other Purchases".
- b. Gulf does not anticipate any changes to its A and E schedules.

18. Please state whether any of the costs of the purchased power and/or associated project costs will be recovered through any cost recovery clause besides the Fuel and Purchased Power Cost Recovery Clause, and provide an explanation for the response.

RESPONSE:

At this time, Gulf does not anticipate that any such costs will be recovered through a mechanism other than the fuel clause. The fuel clause has been the traditional mode of recovery for expenditures under energy-only purchase power agreements.

19. Please state whether any of the costs of the purchased power and/or associated project costs will be recovered through base rates, and provide an explanation for the response.

RESPONSE:

Please see Gulf's response to Item No. 18.

20. Please explain how Gulf intends to project the cost to be recovered in the Fuel and Purchased Power Cost Recovery Clause. Please state all assumptions and inputs.

RESPONSE:

The Energy Purchase Agreement contains fixed annual pricing (Appendix B, Table B-1) and a fixed energy delivery commitment (Appendix A) for every year of the agreement. For any given year, Gulf would multiply the pricing for that year by the delivery commitment to reach an annual cost projection.

21. Please state whether Gulf included CO2 costs in its analysis of the proposed agreement?
- a. If yes, please explain the basis for the CO2 costs assumed and provide the Net Present Value savings of the proposed agreement assuming no CO2 costs.
 - b. If no, please explain.

RESPONSE:

- a. N/A
- b. No. At the present time there are no rules or regulations governing Gulf's CO2 emissions. It is certainly possible that the Agreement could provide future value in terms of CO2 compliance. However, as mentioned in paragraph 16 of Gulf's petition, Gulf's economic evaluations are conservative and Gulf's exclusion of CO2 values from those evaluations is consistent with this conservative approach.

22. Assuming approval of the Agreement, please complete the table below and provide the requested table data electronically in MS Excel format with all formulas intact.

Energy Generation by Fuel Type (%)							
	Natural Gas	Oil	Coal	Solar	Wind	Other Renewables	Other
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
2021							
2022							
2023							
2024							
2025							

RESPONSE:

In comparison to total generation, the table below shows the fuel mix percentages by year.

Energy Generation by Fuel Type (%)							
	Natural Gas	Oil	Coal	Solar	Wind	Other Renewables	Other
2013	65.5	0.0	34.0	0.0	0.0	0.5	0
2014	56.4	0.0	43.1	0.0	0.0	0.4	0
2015	65.0	0.0	34.4	0.0	0.0	0.7	0
2016	65.4	0.0	29.0	0.0	5.1	0.5	0
2017	61.1	0.0	30.6	1.5	6.5	0.3	0
2018	56.1	0.0	36.2	1.4	6.2	0.1	0
2019	52.5	0.0	39.4	1.5	6.5	0.2	0
2020	32.7	0.0	57.9	1.7	7.4	0.2	0
2021	30.0	0.0	60.8	1.7	7.4	0.2	0
2022	29.1	0.0	62.2	1.6	7.0	0.2	0
2023	16.8	0.0	73.7	1.8	7.5	0.2	0
2024	12.2	0.0	77.9	1.8	7.9	0.2	0
2025	13.4	0.0	77.3	1.7	7.5	0.2	0

Note: Totals may not add due to rounding.

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Electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 2. Please see Excel file named "DR1-22 Gulf Generation Energy Mix_ 2011-2025.xlsx".

23. Assuming the Agreement is not approved, please complete the table below and provide the requested table data electronically in MS Excel format with all formulas intact.

Energy Generation by Fuel Type (%)							
	Natural Gas	Oil	Coal	Solar	Wind	Other Renewables	Other
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
2021							
2022							
2023							
2024							
2025							

RESPONSE:

In comparison to total generation, the table below shows the fuel mix percentages by year.

Energy Generation by Fuel Type (%)							
	Natural Gas	Oil	Coal	Solar	Wind	Other Renewables	Other
2013	65.5	0.0	34.0	0.0	0.0	0.5	0
2014	56.4	0.0	43.1	0.0	0.0	0.4	0
2015	65.0	0.0	34.4	0.0	0.0	0.7	0
2016	65.4	0.0	29.0	0.0	5.1	0.5	0
2017	62.5	0.0	31.3	1.5	4.4	0.3	0
2018	57.3	0.0	37.0	1.5	4.1	0.2	0
2019	53.7	0.0	40.3	1.5	4.3	0.2	0
2020	33.6	0.0	59.5	1.8	5.0	0.2	0
2021	30.7	0.0	62.4	1.8	4.9	0.2	0
2022	29.8	0.0	63.7	1.7	4.7	0.2	0
2023	17.3	0.0	75.7	1.8	5.1	0.2	0
2024	12.5	0.0	80.1	1.9	5.3	0.2	0
2025	13.7	0.0	79.3	1.8	5.0	0.2	0

Note: Totals may not add due to rounding.

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GULF POWER COMPANY
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Electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 2. Please see Excel file named "DR1-23 Gulf Generation Energy Mix_ 2011-2025.xlsx".

The following questions are related to Fuel Forecasts:

24. Referring to page 8 of Gulf's Petition, please provide Gulf's system average annual delivered fuel price forecasts (in nominal \$/MMBtu) for natural gas and coal used to develop:
- a. Gulf's net present value analysis in the instant proceeding;
 - b. Gulf's 2016 TYSP;
 - c. Gulf's 2015 TYSP; and
 - d. Gulf's June 2016 Renewable Standard Offer Contract.

RESPONSE:

- a-d. Confidential electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 1. Please see Excel file named "DR1-24 Fuel Price Forecast_CONF.xlsx".

25. Please explain all significant differences (i.e. changes) in fuel prices forecasts in Gulf's responses to Data Request Number 24, a-d above.

RESPONSE:

Forecasts for delivered fuel prices for coal and natural gas were lower in the budgets used to prepare the analysis in the instant proceeding (Item No. 24 part a.), 2016 TYSP (Item No. 24 part b.) and Gulf's Renewable Standard Offer (Item No. 24 part d.) than prices in the budget used to prepare the 2015 Ten Year Site Plan (Item No. 24 part c.).

Lower projected transportation rates were the main factor for the lower delivered coal price forecast for 2016, while lower forecasted commodity prices for natural gas were the primary reason for a lower projection of delivered natural gas prices in 2016.

26. Please provide the methodologies Gulf used to prepare its delivered fuel price forecasts for natural gas and coal for the proposed contract term.

RESPONSE:

SES develops short-term (current year +2) and long-term (year 4 and beyond) fuel price forecasts which extend through the Company's 10-year planning horizon and longer for resource planning. The short-term forecasts are developed by SCS Fuel Services for use in the system's fuel budgeting process and marginal pricing dispatch procedures. The long-term forecasts are developed in the spring of each year for use in system planning activities. Charles River Associates (CRA) is the modeling vendor used by the system to develop the long-term forecasts. This process is a collaborative effort between CRA and members of cross-functional SES planning teams, including Gulf Power personnel, and is governed by an SES executive team.

Fuel market-driving assumptions, developed in collaboration between CRA and SES personnel, are integrated into CRA's model to develop commodity forecast prices. Transportation prices are developed by SES personnel and are combined with the CRA commodity prices to produce the total delivered prices.

The delivered price of any fuel consists of a variety of components. The main components are commodity price and transportation cost. Domestic coal commodity prices are forecast on either a mine-mouth basis or free on board (FOB) barge basis, while import coals are forecast on an FOB ship basis at the port of import. Natural gas commodity prices are forecast at the Henry Hub, Louisiana benchmark delivery point. Because mine-mouth coal prices vary by source, sulfur content, and Btu level, SES prepares commodity price forecasts for different coal classifications used on the SES. Because natural gas does not possess the same quality variations as coal, SES prepares a single commodity price forecast for natural gas at Henry Hub, and applies a basis differential between Henry Hub and the various pipelines serving SES plants.

Transportation costs, to be used in the delivered price forecast, are developed for potential sites when modeling generic unit additions in the resource planning process. Site-specific transportation costs are developed for existing units to produce delivered price forecasts for both the resource planning process and the fuel budget process. Similarly, when site specific unit additions are under consideration, site-specific transportation costs are developed for each option.

27. Referring to page 8 of Gulf's Petition, please provide Gulf's system average annual commodity fuel price forecasts (in nominal \$/MMBtu) for natural gas and coal used to develop:
- a. Gulf's net present value analysis in the instant proceeding;
 - b. Gulf's 2016 TYSP;
 - c. Gulf's 2015 TYSP; and
 - d. Gulf's June 2016 Renewable Standard Offer Contract.

RESPONSE:

- a-d. Confidential electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 1. Please see Excel file named "DR1-24 Fuel Price Forecast_CONF.xlsx".

28. Explain all significant differences (i.e. changes) in fuel price forecasts in Gulf's responses to 27 A-D above.

RESPONSE:

The long term fuel prices, starting in 2020, for Gulf's Response to Item No. 27 parts a, b, and d, are the same and based on the Company's Budget Year 2016 analysis. The short term, first 5 years, are different due to updates of when analyses were completed. The Company uses current analysis month NYMEX prices for the first 3 years and then interpolates years 4 and 5.

Fuel prices for Gulf's net present value analysis in the instant proceeding (Item No. 27 part a.) were based on September 2015 NYMEX short term pricing; Gulf's 2016 TYSP and Gulf's June 2016 Renewable Standard Offer Contract (Item No. 27 parts b. and d., respectively) were both based on November 2015 NYMEX short term pricing.

Fuel prices for Gulf's 2015 TYSP (Item No. 27 part c.) were based on Budget Year 2015 analysis with December 2014 NYMEX short term pricing.

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29. Referring to page 8 of Gulf's Petition, please provide the most recent fuel price forecasts received from recognized independent consulting firms for domestic and imported coals and natural gas, and any other sources Southern Energy Services uses to compare such fuel price forecasts to its own fuel price forecasts through the term of the contract.

RESPONSE:

Electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 2. Please see Excel file named "DR1-29 Fuel Price Comparisons.xlsx".

Confidential electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 1. Please see Excel file named "DR1-29 Fuel Price Comparisons_CONF.xlsx".

30. In paragraph 16 of Gulf's Petition, Gulf states that it assumed "moderate" natural gas prices. Please discuss Gulf's view of the variability in its natural gas price forecasts both in the short term and the long term, and quantify such variability where possible in terms of confidence intervals or other such probabilistic measures commonly used by SES.

RESPONSE:

The Company recognizes that future natural gas prices are uncertain and therefore considers multiple scenarios of future gas prices. Each scenario produces an equilibrium natural gas price forecast. The span of the forecasts across the scenarios is the Company's method of recognizing variability in natural gas prices. The Company does not perform statistical analysis of its fuel price forecasts. As stated in Gulf's response to Item No. 28, the Company uses current month NYMEX pricing for the short term and fundamental modeling results for the long term.

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31. Please provide Gulf's high and low price sensitivities for natural gas and coal for the term of the contract and all probabilistic metrics applied to such sensitivities.

RESPONSE:

Confidential electronic attachments are located on the enclosed DVD labeled Docket No. 160158-EI Staff's First Data Request (Nos. 1-32) Disk 1. Please see Excel file named "DR1-31 High and Low Fuel Forecasts_CONF.xlsx".

32. Please provide Gulf's methodology for determining high and low price sensitivities for natural gas and coal.

RESPONSE:

The Company focuses on a number of key supply and demand drivers that it uses to distinguish between the high and low natural gas price forecasts. Drivers include natural gas resource supply, production costs, well productivity, LNG exports, and Mexican exports.

The Company only has one view of coal assumptions by basin. High and low coal forecasts are a result of modeling output based on input supply assumptions and demand for coal that results from overall U.S. generation based on natural gas price and consumption among other things.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: **Petition for approval of energy purchase**)
agreement between Gulf Power Company)
and Morgan Stanley Capital Group,)
Incorporated)

Docket No.: **160158-EI**

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing was furnished by overnight mail this 30th day of August, 2016 to the following:

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