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May 23, 2013

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

Re: Docket No. 130092-EI – Petition of Gulf Power Company to include the Plant Daniel Bromine and ACI Project, the Plant Crist Transmission Upgrades Project, and the Plant Smith Transmission Upgrades Project in the Company's program, and approve the costs associated with those compliance strategies for recovery through the ECRC

Dear Ms. Cole:

Enclosed are the original and five copies of Gulf Power Company's response to Staff's First Data Request in Docket 130092-EI.

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  
Charles Murphy

DOCUMENT NUMBER - DATE

02878 MAY 24 2013

FPSC-COMMISSION CLERK

1. On pages 3 and 4 the witness testifies that the MATS rule allows for one and two year extensions under limited circumstances.
  - a. Has Gulf requested an extension for compliance with the MATS rule?
  - b. If yes, what is the current status of that request?
  - c. If no, why has Gulf not pursued an extension?

Response:

- a. Gulf has not yet requested an extension for compliance with the MATS rule. However, Gulf is collecting information and tracking the permitting and construction schedules for both the Plant Crist and the Plant Smith MATS transmission projects. When the construction and permitting schedules are further established, Gulf will pursue the necessary MATS extension requests.
- b. See the response to 1(a).
- c. See the response to 1(a).

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FPSC-COMMISSION CLERK

2. On page 5 the witness testifies that Plant Crist is designated as a "must run" facility.
- Given the "must run" designation of Plant Crist, what does Gulf currently do when Plant Crist is down for planned or unplanned outages?
  - What would happen if Plant Crist were required to shut down prior to the proposed transmission projects being completed?
  - What would happen if Plant Crist were required to shut down in 2017 and the proposed transmission projects are not constructed?

Response:

- Plant Crist is designated as a "must run" facility which means that a minimum number of units must run during certain system conditions in order to continue to reliably serve Gulf's customers. The four Plant Crist units each provide generation to the grid independently from each other. Air emissions from the four independent units at Plant Crist pass through a single common scrubber. Currently, when the scrubber has a planned or unplanned outage, the applicable environmental air emissions regulations allow Gulf to bypass the scrubber and continue operating the unit(s). Emissions during scrubber bypass events will not meet the new MATS rule limitations which become effective in 2015. Since Plant Crist will be unable to meet the new MATS emission limits during a scrubber outage it will result in all four coal-fired units being taken offline during a scrubber outage.

Gulf does not schedule planned outages for all four units at the same time. The only time all four units (Crist Units 4 through 7) have been offline at the same time, since retirement of Crist Units 1 through 3, was immediately after Hurricane Ivan in 2004 when there were no load requirements due to impacts of the hurricane. Shutting down all of the Plant Crist units prior to completing the necessary proposed transmission upgrades, regardless of when this occurred, would result in multiple transmission thermal overloads and inadequate voltage levels around the Pensacola area during such outage events thus significantly impacting Gulf's ability to serve its customers.

- See the response to 2(a).
- Shutting down Plant Crist in 2017 prior to completing the necessary proposed transmission upgrades would result in multiple transmission thermal overloads and inadequate voltage levels around the Pensacola area thus significantly impacting Gulf's ability to serve its customers.

3. On page 6 the witness testifies that, with the scrubber bypassed, Plant Crist would be unavailable. Would Gulf be able to use emission allowances to continue operation of Plant Crist while the scrubber is bypassed?

Response:

No. The MATS rule does not allow the use of allowances as a method of complying with the rule.

4. On page 10 the witness testifies that Plant Smith is designated as a "must run" facility.
- a. Given the "must run" designation, what does Gulf currently do when Plant Smith is down for planned or unplanned outages?
  - b. What would happen if Plant Smith were required to shut down prior to the proposed transmission projects being completed?
  - c. What would happen if Plant Smith were required to shut down in 2017, and the proposed transmission projects are not constructed?

Response:

- a. Plant Smith includes two coal-fired electric generating units, Unit 1 and Unit 2, along with a natural gas-fired combined cycle unit and an oil-fired combustion turbine. The two coal-fired units, Smith Unit 1 and Unit 2, are subject to the MATS rule. Plant Smith is designated as a "must run" facility which means that a minimum number of units, including the coal-fired units, must run during certain system conditions in order to continue to reliably serve Gulf's customers. Due to the must run status of Plant Smith, Gulf does not schedule planned outages for the entire Plant Smith generation fleet at the same time. It is highly unlikely that a single event, other than a storm event such as a hurricane, could force all four units offline at the same time because no single piece of equipment, such as a scrubber, is needed in order to operate the units. Shutting down Plant Smith Units 1 and 2 prior to completing the necessary proposed transmission upgrades would result in multiple transmission thermal overloads and inadequate voltage levels in Panama City and surrounding areas thus significantly impacting Gulf's ability to serve its customers.
- b. See the response to 4(a).
- c. Shutting down Plant Smith Unit 1 and Unit 2 in 2017 prior to completing the necessary proposed transmission upgrades would result in multiple transmission thermal overloads and inadequate voltage levels in Panama City and surrounding areas thus significantly impacting Gulf's ability to serve its customers.

5. On page 2 witness Cain testifies that the purpose of her testimony is to discuss the economic analysis supporting Gulf's MATS compliance strategy for Plant Crist.
- a. What time frame is assumed for the Plant Crist compliance strategy evaluation?
  - b. How was the time frame selected?

Response:

- a. Table 3.3-1 on page 17 of Gulf's Environmental Compliance Program Update shows the Plant Crist MATS evaluation results. The analysis identified all relevant expenses and capital expenditures during the 2015-2025 timeframe. The timeframe from 2015-2025 is the appropriate time period to examine all relevant expenses and capital expenditures since after that time, the set of transmission projects in question are expected to be complete in any of the four options.

Fuel and Must Run costs are expense items, so the Net Present Values (NPVs) associated with those components include only the annual revenue requirements projected during this relevant 2015-2024 operation period.

For capital expenditure items, the NPV includes the full revenue requirement stream across the approximate life of each asset—40 years for transmission assets and 20 years for the emission control equipment.

- b. Gulf has identified several options for compliance with MATS as described in Section 3.3.1 of the Environmental Compliance Program Update. Those options require either must running Plant Crist generation at certain times under varying operating schemes (Options 1-3) or accelerating transmission upgrade projects to alleviate those relevant must run costs altogether (Option 4). The timeframe from 2015-2025 is the appropriate time period to examine all relevant expenses and capital expenditures since after that time, the set of transmission projects in question are expected to be complete in any of the four options.

6. On page 2 the witness testifies that the purpose of her testimony is to discuss the economic analysis supporting Gulf's MATS compliance strategy for Plant Smith.
  - a. What was the time frame over which the compliance strategy for Plant Smith was evaluated?
  - b. How was the time frame selected?

**Response:**

- a. Table 3.3-2 on page 26 of the Environmental Compliance Program Update shows the Plant Smith MATS analysis results. The analysis identified all relevant expenses and capital expenditures during the 2015-2023 timeframe. The timeframe from 2015-2023 is the appropriate time period to examine all relevant expenses and capital expenditures, since after that time, the transmission projects in question are expected to be complete in both options.

Must run production costs are expense items, so the NPVs associated with those components include only the annual revenue requirements projected during this relevant 2015-2022 operation period.

For capital expenditure items, the NPV includes the full revenue requirement stream across the approximate 40 year life of each transmission asset.

- b. Gulf has identified two options for compliance with MATS as described in Section 3.3.1 of the Environmental Compliance Program Update. Those options require either must running Plant Smith generation at certain times under varying operating schemes (Option 1) or accelerating transmission upgrade projects to alleviate those relevant must run costs altogether (Option 2). The timeframe from 2015-2023 is the appropriate time period to examine all relevant expenses and capital expenditures, since after that time, the set of transmission projects in question are expected to be complete in both options.

7. On page 3 the witness testifies that three fixed costs were considered in the economic evaluation of Gulf's MATS strategy. Please describe how each fixed cost was developed.

Response:

Firm natural gas transportation cost is developed considering required contract volume, available pipeline capacity, and cost structures on relevant pipelines for the plant.

Revenue requirements for incremental capital additions for environmental controls use 20-year useful life assumptions. The in-service capital estimates are developed given the best engineering estimate knowledge at the time using conceptual engineering principles.

Similarly, revenue requirements for incremental transmission capital additions use 40-year useful life assumptions. The in-service capital estimates are developed given the best engineering estimate knowledge at the time based on similar ongoing project costs and material and equipment cost estimates

8. On page 4 the witness testifies that the economic evaluation of Gulf's MATS considers a range of CO2 penalties.
- a. Please describe how the CO2 penalties, used in the economic evaluation, were developed.
  - b. Please provide the CO2 penalties (\$/metric tonne) for each year evaluated.

Response:

The Company considers a range of possible future controls on its emissions of CO2. Two of these possible future controls include i) a price on emissions beginning in 2017 at \$10 per metric ton and rising over the model period and ii) a price on emissions beginning in 2020 at \$20 per metric ton in 2020 and rising over the model period. The Company also considers the possibility that there will be no price on emissions during the model period. These possible future CO2 price projections were developed considering analyses of recent policy proposals. Recent policy proposals have included both price-based control mechanisms, such as CO2 cap-and-trade, and a carbon tax and technology-based control mechanisms, such as the draft New Source Performance Standards. The Company believes that the price projections it analyzes are a useful proxy for the possible future CO2 controls that may affect the operation of the Company's units.

**CO<sub>2</sub> Prices (Nominal \$/metric tonne)**

Gas Scenario	CO2 View	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Low	Existing	--	--	--	--	--	--	--	--	--	--
Low	Moderate	--	--								
Low	Substantial	--	--	--	--	--					
Moderate	Existing	--	--	--	--	--	--	--	--	--	--
Moderate	Moderate	--	--								
Moderate	Substantial	--	--	--	--	--					
High	Existing	--	--	--	--	--	--	--	--	--	--
High	Moderate	--	--								
High	Substantial	--	--	--	--	--					

9. On page 4 the witness testifies that the economic evaluation of Gulf's MATS strategy considers a range of natural gas prices.
- a. Please describe how the range of natural gas prices, used in the economic evaluation, was developed.
  - b. For each scenario considered, please provide the natural gas cost (\$/mmbtu) for each year evaluated.

Response:

- a. The Company, with its consultant Charles River Associates (CRA), annually develops and analyzes several scenarios of the future evolution of the U.S. energy economy. These analyses are done using an integrated model of the U.S. energy economy that reflects important feedbacks and trade-offs among fuels and among energy-using sectors. The price of natural gas is a key output of each scenario analyzed. The scenarios consider different views of the future of CO2 policy stringency (see item 8) and the scenarios consider different views of future conditions in the demand and supply for natural gas such as the production of shale gas, the growth of industrial and transportation uses of natural gas and the export of natural gas as liquefied natural gas (LNG). All of these factors affect energy use, the demand and supply of natural gas and thus the price of natural gas resulting from the modeling analysis of each scenario.
- b. The Company considered nine scenarios and analyzed them with CRA. These nine scenarios were formed by considering all combinations of three views of future CO2 stringency ("Existing" (\$0), "Moderate" (\$10+) and "Substantial" (\$20+)) and three views of future conditions in natural gas markets ("Low" price, "Moderate" price and "High" price). For each scenario, the CRA modeling analysis produces a forecast price every 5 years beginning in 2017. The natural gas prices in each of these nine scenarios are provided below.



10. For Plant Crist MATS Option 1, included on page 14 of Gulf's Environmental Compliance Program Update, please describe each transmission upgrade that is needed. As part of this description please provide a schedule, similar to Schedule 10 of Gulf's Ten-Year Site Plan.

Response:

The only transmission upgrades needed for Plant Crist MATS Option 1 are those identified as the "base transmission plan" for the Plant Crist area, which are not anticipated to be needed until the 2018-2025 timeframe as listed below:

- a. North Brewton – Alligator Swamp Transmission Line: Build new 59.5 mile 1351 ACSS 230 kV transmission line from Alabama Power substation to Gulf Power substation
- (1) **Point of Origin:** Brewton, AL (Escambia Co.) **Termination:** Pace, FL (Santa Rosa Co.)
  - (2) **Number of Lines:** 1
  - (3) **Right-of-Way:** Existing
  - (4) **Line Length:** 59.5 miles (42.5 miles for Gulf Power)
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** 2022
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** North Brewton, Alligator Swamp
  - (9) **Participation with Other Utilities:** Alabama Power Company
- b. Build new substation terminal at Alligator Swamp substation
- (1) **Point of Origin:** Pace, FL (Santa Rosa Co.)
  - (2) **Number of Lines:** N/A
  - (3) **Right-of-Way:** N/A
  - (4) **Line Length:** N/A
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** 2022
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** Alligator Swamp
  - (9) **Participation with Other Utilities:** N/A
- c. Install Alligator Swamp +/- 100 MVAR Static VAR System (SVS)
- (1) **Point of Origin:** Pace, FL (Santa Rosa Co.)
  - (2) **Number of Lines:** N/A
  - (3) **Right-of-Way:** N/A

- (4) **Line Length:** N/A
- (5) **Voltage:** 230 kV
- (6) **Anticipated Construction Timing:** 2018
- (7) **Anticipated Capital Investment:** [REDACTED]
- (8) **Substations:** Alligator Swamp
- (9) **Participation with Other Utilities:** N/A

d. Install Alligator Swamp 100 MVAR 230 kV Capacitor Bank

- (1) **Point of Origin:** Pace, FL (Santa Rosa Co.)
- (2) **Number of Lines:** N/A
- (3) **Right-of-Way:** N/A
- (4) **Line Length:** N/A
- (5) **Voltage:** 230 kV
- (6) **Anticipated Construction Timing:** 2022
- (7) **Anticipated Capital Investment:** [REDACTED]
- (8) **Substations:** Alligator Swamp
- (9) **Participation with Other Utilities:** N/A

e. Brentwood to Scenic Hills - Reconductor 4.8 miles of existing 1033.5 ACSR 115 kV transmission line with 1033.5 ACSS @ 200°C

- (1) **Point of Origin:** Pensacola, FL (Escambia Co.) **Termination:** Pensacola, FL (Escambia Co.)
- (2) **Number of Lines:** 1
- (3) **Right-of-Way:** Existing
- (4) **Line Length:** 4.8 miles
- (5) **Voltage:** 115 kV
- (6) **Anticipated Construction Timing:** 2025
- (7) **Anticipated Capital Investment:** [REDACTED]
- (8) **Substations:** Brentwood, Scenic Hills
- (9) **Participation with Other Utilities:** N/A

f. Install West Pensacola 100 MVAR 230 kV Capacitor Bank

- (1) **Point of Origin:** Pensacola, FL (Escambia Co.)
- (2) **Number of Lines:** N/A
- (3) **Right-of-Way:** N/A
- (4) **Line Length:** N/A
- (5) **Voltage:** 230 kV
- (6) **Anticipated Construction Timing:** 2022
- (7) **Anticipated Capital Investment:** [REDACTED]
- (8) **Substations:** West Pensacola
- (9) **Participation with Other Utilities:** N/A

g. Install West Pensacola +/- 100 MVAR Static VAR System

- (1) **Point of Origin:** Pensacola, FL (Escambia Co.)
- (2) **Number of Lines:** N/A
- (3) **Right-of-Way:** N/A
- (4) **Line Length:** N/A
- (5) **Voltage:** 230 kV
- (6) **Anticipated Construction Timing:** 2020
- (7) **Anticipated Capital Investment:** [REDACTED]
- (8) **Substations:** West Pensacola
- (9) **Participation with Other Utilities:** N/A

11. For Plant Crist MATS Option 4, included on pages 14-15 of Gulf's Environmental Compliance Program Update, please describe each transmission upgrade that is needed. As part of this description please provide a schedule, similar to Schedule 10 of Gulf's Ten-Year Site Plan.

Response:

For Plant Crist MATS Option 4, the following transmission upgrades need to be accelerated as required to meet and maintain MATS compliance.

- a. North Brewton – Alligator Swamp Transmission Line: Build new 59.5 mile 1351 ACSS 230 kV transmission line from Alabama Power substation to Gulf Power substation
- (1) **Point of Origin:** Brewton, AL (Escambia Co.) **Termination:** Pace, FL (Santa Rosa Co.)
  - (2) **Number of Lines:** 1
  - (3) **Right-of-Way:** Existing
  - (4) **Line Length:** 59.5 miles (Gulf Power- 42.5 miles)
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** January 2014 – June 2015
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** North Brewton, Alligator Swamp
  - (9) **Participation with Other Utilities:** Alabama Power Company
- b. Build new substation terminal at Alligator Swamp substation
- (1) **Point of Origin:** Pace, FL (Santa Rosa Co.)
  - (2) **Number of Lines:** N/A
  - (3) **Right-of-Way:** N/A
  - (4) **Line Length:** N/A
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** January 2014 – June 2015
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** North Brewton, Alligator Swamp
  - (9) **Participation with Other Utilities:** N/A
- c. Install Alligator Swamp +/- 100 MVAR Static VAR System (SVS)
- (1) **Point of Origin:** Pace, FL (Santa Rosa Co.)
  - (2) **Number of Lines:** N/A
  - (3) **Right-of-Way:** N/A

- (4) **Line Length:** N/A
- (5) **Voltage:** 230 kV
- (6) **Anticipated Construction Timing:** April 2014 – April 2015
- (7) **Anticipated Capital Investment:** [REDACTED]
- (8) **Substations:** Alligator Swamp
- (9) **Participation with Other Utilities:** N/A

d. Install Alligator Swamp 100 MVAR 230 kV Capacitor Bank

- (1) **Point of Origin:** Pace, FL (Santa Rosa Co.)
- (2) **Number of Lines:** N/A
- (3) **Right-of-Way:** N/A
- (4) **Line Length:** N/A
- (5) **Voltage:** 230 kV
- (6) **Anticipated Construction Timing:** Jan 2015 – April 2015
- (7) **Anticipated Capital Investment:** [REDACTED]
- (8) **Substations:** Alligator Swamp
- (9) **Participation with Other Utilities:** N/A

e. Brentwood to Scenic Hills - Reconductor 4.8 miles of existing 1033.5 ACSR 115 kV transmission line with 1033.5 ACSS @ 200°C

- (1) **Point of Origin:** Pensacola, FL (Escambia Co.) **Termination:** Pensacola, FL (Escambia Co.)
- (2) **Number of Lines:** 1
- (3) **Right-of-Way:** Existing
- (4) **Line Length:** 4.8 miles
- (5) **Voltage:** 115 kV
- (6) **Anticipated Construction Timing:** Dec 2016 – June 2017
- (7) **Anticipated Capital Investment:** [REDACTED]
- (8) **Substations:** Brentwood, Scenic Hills
- (9) **Participation with Other Utilities:** N/A

f. Install West Pensacola 100 MVAR 230 kV Capacitor Bank

- (1) **Point of Origin:** Pensacola, FL (Escambia Co.)
- (2) **Number of Lines:** N/A
- (3) **Right-of-Way:** N/A
- (4) **Line Length:** N/A
- (5) **Voltage:** 230 kV
- (6) **Anticipated Construction Timing:** Jan 2015 – April 2015
- (7) **Anticipated Capital Investment:** [REDACTED]
- (8) **Substations:** West Pensacola
- (9) **Participation with Other Utilities:** N/A

- g. Install West Pensacola +/- 100 MVAR Static VAR System
- (1) **Point of Origin:** Pensacola, FL (Escambia Co.)
  - (2) **Number of Lines:** N/A
  - (3) **Right-of-Way:** N/A
  - (4) **Line Length:** N/A
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** June 2017 – June 2018
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** West Pensacola
  - (9) **Participation with Other Utilities:** N/A

12. For Plant Smith MATS Option 1 discussed in Gulf's Environmental Compliance Program Update, please describe each transmission upgrade that is needed. As part of this description please provide a schedule, similar to Schedule 10 of Gulf's Ten-Year Site Plan.

Response:

The only transmission upgrades needed for Plant Smith MATS Option 1 are those identified as the "base transmission plan" for the Plant Smith area, which are not anticipated to be needed until the 2020-2023 timeframe as listed below:

- a. Holmes Creek to Highland City - Build new 70 mile 1033 ACSS 230 kV transmission line from a Gulf Power substation located in Graceville, FL to a Gulf Power substation in Panama City, FL.
- (1) **Point of Origin:** Graceville, FL (Homes Creek Co.) **Termination:** Panama City, FL (Bay Co.)
  - (2) **Number of Lines:** 1
  - (3) **Right-of-Way:** Existing
  - (4) **Line Length:** 70 miles
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** 2023
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** Homes Creek, Highland City
  - (9) **Participation with Other Utilities:** N/A
- b. Install a new 230 kV autobank at Holmes Creek substation, rebuild the 115 kV straight bus as a 115 kV ring bus, construct a new 230 kV ring bus and install a 230 kV 100 MVAR capacitor bank.
- (1) **Point of Origin:** Graceville, FL (Holmes Creek County)
  - (2) **Number of Lines:** N/A
  - (3) **Right-of-Way:** N/A
  - (4) **Line Length:** N/A
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** 2023
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** Homes Creek
  - (9) **Participation with Other Utilities:** N/A

- c. Install Sinai Cemetery - 100 MVAR 230 kV Capacitor Bank
- (1) **Point of Origin:** Sneads, FL (Jackson County)
  - (2) **Number of Lines:** N/A
  - (3) **Right-of-Way:** N/A
  - (4) **Line Length:** N/A
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** 2023
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** Sinai Cemetery
  - (9) **Participation with Other Utilities:** N/A
- d. Rebuild the Holmes Creek – Bonifay section (2 miles) of the Holmes Creek - Marianna 115 kV transmission line with double-circuit 230 kV structures.
- (1) **Point of Origin:** Graceville, FL (Holmes Creek Co.) **Termination:** Marianna, FL (Escambia Co.)
  - (2) **Number of Lines:** 1
  - (3) **Right-of-Way:** Existing
  - (4) **Line Length:** 2 miles
  - (5) **Voltage:** 115 kV
  - (6) **Anticipated Construction Timing:** 2023
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** Holmes Creek
  - (9) **Participation with Other Utilities:** N/A
- e. Highland City - Install +/- 100 MVAR Static VAR System
- (1) **Point of Origin:** Panama City, FL (Bay County)
  - (2) **Number of Lines:** N/A
  - (3) **Right-of-Way:** N/A
  - (4) **Line Length:** N/A
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** 2020
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** Highland City
  - (9) **Participation with Other Utilities:** N/A

13. For Plant Smith MATS Option 2 discussed in Gulf's Environmental Compliance Program Update, please describe each transmission upgrade that is needed. As part of this description please provide a schedule, similar to Schedule 10 of Gulf's Ten-Year Site Plan.

Response:

For Plant Smith MATS Option 2, the following transmission upgrades need to be accelerated as required in order to meet and maintain MATS compliance:

- a. Holmes Creek to Highland City - Build new 70 mile 1033 ACSS 230 kV transmission line from a Gulf Power substation located in Graceville, FL to a Gulf Power substation in Panama City, FL.
- (1) **Point of Origin:** Graceville, FL (Homes Creek Co.) **Termination:** Panama City, FL (Bay Co.)
  - (2) **Number of Lines:** 1
  - (3) **Right-of-Way:** Existing
  - (4) **Line Length:** 70 miles
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** Oct 2013 – May 2015
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** Homes Creek, Highland City
  - (9) **Participation with Other Utilities:** N/A
- b. Install a new 230 kV autobank at Holmes Creek substation, rebuild the 115 kV straight bus as a 115 kV ring bus, construct a new 230 kV ring bus and install a 230 kV 100 MVAR capacitor bank.
- (1) **Point of Origin:** Graceville, FL (Holmes Creek County)
  - (2) **Number of Lines:** N/A
  - (3) **Right-of-Way:** N/A
  - (4) **Line Length:** N/A
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** October 2013 – Dec 2014
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** Homes Creek
  - (9) **Participation with Other Utilities:** N/A

- c. Sinai Cemetery - Install 100 MVAR 230 kV Capacitor Bank
- (1) **Point of Origin:** Sneads, FL (Jackson County)
  - (2) **Number of Lines:** N/A
  - (3) **Right-of-Way:** N/A
  - (4) **Line Length:** N/A
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** September 2014 – Dec 2014
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** Sinai Cemetery
  - (9) **Participation with Other Utilities:** N/A
- d. Rebuild the Holmes Creek – Bonifay section (2 miles) of the Holmes Creek - Marianna 115 kV transmission line with double-circuit 230 kV structures.
- (1) **Point of Origin:** Graceville, FL (Holmes Creek Co.) **Termination:** Marianna, FL (Escambia Co.)
  - (2) **Number of Lines:** 1
  - (3) **Right-of-Way:** Existing
  - (4) **Line Length:** 2 miles
  - (5) **Voltage:** 115 kV
  - (6) **Anticipated Construction Timing:** Jan 2014 – May 2014
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** Holmes Creek
  - (9) **Participation with Other Utilities:** N/A
- e. Highland City - Install +/- 100 MVAR Static VAR System
- (1) **Point of Origin:** Panama City, FL (Bay County)
  - (2) **Number of Lines:** N/A
  - (3) **Right-of-Way:** N/A
  - (4) **Line Length:** N/A
  - (5) **Voltage:** 230 kV
  - (6) **Anticipated Construction Timing:** April 2014 – April 2015
  - (7) **Anticipated Capital Investment:** [REDACTED]
  - (8) **Substations:** Highland City
  - (9) **Participation with Other Utilities:** N/A

14. For Options 1 and 2, please provide the projected capacity factor for Plant Smith for each year of Gulf's economic evaluation.

Response:

As described in Section 3.2, page 12 of the Environmental Compliance Program Update, Plant Smith operation was simulated for each option across a range of integrated planning scenarios. The capacity factor ranges for each year across those nine planning scenarios are shown in the table below.

<b>Unit</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b><u>OPTION 1</u></b>								
SMITH 1	70%	80%	75%	80%	75%	80%	75%	80%
SMITH 2	10%	10-20%	10-40%	10-40%	10-50%	15-50%	25-60%	20-70%
SMITH 3	90-95%	80-90%	70-80%	80-90%	80-90%	80-90%	80-90%	80-90%
<b><u>OPTION 2</u></b>								
SMITH 1	0-20%	0-30%	0-45%	0-50%	0-50%	0-60%	0-65%	5-80%
SMITH 2	0-10%	0-20%	0-40%	0-40%	0-50%	0-50%	0-60%	5-70%
SMITH 3	70-90%	40-70%	25-80%	30-75%	30-75%	30-70%	30-75%	35-75%

15. How often does Gulf anticipate performing maintenance on the scrubbers for Plant Crist?

Response:

Gulf anticipates performing planned scrubber maintenance outages on an annual basis.

16. How often does Gulf anticipate that scrubber maintenance at Plant Crist would be performed during an unplanned outage?

Response:

The frequency of unplanned outages and malfunctions of the Plant Crist scrubber is not predictable, but based on the last 3 years of scrubber operation, 2010 to 2012, there have been approximately 4 events per year. Unplanned scrubber outages have a wide range of duration and may occur at any time. During unplanned scrubber outages, Gulf performs additional scrubber maintenance beyond corrective and reactive maintenance if practical. In addition to unplanned outages, one planned scrubber outage up to 15 days in duration is expected to be needed each year. After the MATS compliance date, all scrubber outages will require all of the Plant Crist units to cease coal-fired operation.

17. Please identify each prior Commission decision, with pinpoint citation, that Gulf believes supports its request for recovery of the Plant Smith and Plant Crist transmission projects through the ECRC.

Response:

Gulf's request for recovery of the Plant Smith and Plant Crist transmission projects meet the criteria for cost recovery established by the Commission in Order No. PSC-94-0044-FOF-EI in that:

- (a) all expenditures will be prudently incurred after April 13, 1993;
- (b) the activities are legally required to comply with a governmentally imposed environmental regulation that was created, became effective, or whose effect was triggered after the company's last test year upon which rates are based; and
- (c) none of the expenditures are being recovered through some other cost recovery mechanism or through base rates.

Additionally, the Commission's decision in Order No. PSC-12-0432-PAA-EI, approving Progress Energy Florida's petition to modify scope of existing environmental program supports Gulf's request for recovery through ECRC as well. Gulf's proposed strategy to comply with the Mercury Air Toxics Standards (MATS), which includes the Plant Smith and Plant Crist transmission projects, is consistent with the findings in that case as noted on page four of the order:

"...1) is being made first and foremost to comply with the MATS rule, 2) is the most cost-effective option to comply with the MATS, 3) is reasonable, and 4) is an innovative compliance strategy."

18. Please describe any scrubber malfunction events or outages that have occurred since the scrubber at Plant Crist Units 4-7 has become operational. Please include the date that the event or outage occurred, the duration of the event or outage, and the reason for the event or outage.

Response:

<b>Bypass Start Date</b>	<b>Duration (hours)</b>	<b>Reason for Scrubber Bypass</b>
9-Jan-2010	68	Booster Fan B Blade Pitch Malfunction
15-Jan-2010	8	Booster Fan B Blade Pitch Malfunction
15-Feb-2010	6	Breaker Testing Caused Fault to Protection Circuit
26-Feb-2010	3	Booster Fan Trip Due of Incorrect JBR Low Level Signal
2-Mar-2010	181	Raw Water Supply Pump Malfunction/Planned Outage
8-Apr-2010	16	FGD Booster Fan Outlet Damper Linkage
9-Apr-2010	21	FGD Booster Fan Outlet Damper Linkage
19-Jul-2010	65	Short-Term FGD Maintenance Outage
2-Oct-2010	87	Duct Leaks
11-Dec-2010	185	Duct Leaks
5-Apr-2011	2	Fan Trip
11-Apr-2011	20	CEMS Certification Testing
13-Apr-2011	13	CEMS RATA Testing
4-May-2011	79	Leaking Pre-Quench Flanges
3-Dec-2011	258	Planned Long-Term FGD Maintenance
7-Mar-2012	1	Fan Trip
1-Oct-2012	10	Pre-Outage FGD Inspection
3-Nov-2012	4	FGD Supply Transformer Corona Discharge
9-Nov-2012	260	Planned FGD Outage

19. If Gulf does not proceed with the transmission projects as proposed, what environmental rule or regulation will be violated?

**Response:**

The MATS Rule, officially titled the "National Emission Standards for Hazardous Air Pollutants From Coal and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units" as published in the February 16, 2012, Federal Register, would be violated. It is the policy of Gulf Power Company to conduct all of its operations in compliance with federal, state, and local environmental laws and regulations.

20. At page 5 of its Petition, Gulf states "the MATS rule does limit the ability of the units to operate in the event of a scrubber malfunction or outage for any meaningful period of time without the addition of further environmental controls." Please provide pinpoint citation(s) to the MATS rule limitation referenced in this statement.

Response:

The MATS emission limits are described in 40 CFR 63 Subpart UUUUU § 63.9991. An excerpt of the regulation is provided below.

§ 63.9991 What emission limitations, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) and (2) of this section. You must meet these requirements at all times.

(1) You must meet each emission limit and work practice standard in Table 1 through 3 to this subpart that applies to your EGU, for each EGU at your source, except as provided under § 63.10009.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your EGU.

(b) As provided in § 63.6(g), the Administrator may approve use of an alternative to the work practice standards in this section.

(c) You may use the alternate SO<sub>2</sub> limit in Tables 1 and 2 to this subpart only if your coal-fired EGU:

(1) Has a system using wet or dry flue gas desulfurization technology and SO<sub>2</sub> continuous emissions monitoring system (CEMS) installed on the unit; and

(2) At all times, you operate the wet or dry flue gas desulfurization technology installed on the unit consistent with § 63.10000(b).

Table 2 to Subpart UUUUU of Part 63—Emission Limits for Existing EGUs [77 FR 23405, Apr. 19, 2012]  
As stated in § 63.9991, you must comply with the following applicable emission limits:<sup>1</sup>

your EGU is in this subcategory . . .	For the following pollutants . . .	You must meet the following emission limits and work practice standards . . .	Using these requirements, as appropriate (e.g., specified sampling volume or test run duration) and limitations with the test methods in Table 5 . . .
1. Coal-fired unit not low rank virgin coal	a. Filterable particulate matter (PM)	3.0E-2 lb/MMBtu or 3.0E-1 lb/MWh. <sup>2</sup>	Collect a minimum of 1 dscm per run.
	OR	OR	
	Total non-Hg HAP metals	5.0E-5 lb/MMBtu or 5.0E-1 lb/GWh.	Collect a minimum of 1 dscm per run.
	OR	OR	
	Individual HAP metals:		Collect a minimum of 3 dscm per run.
	Antimony (Sb)	8.0E-1 lb/TBtu or 8.0E-3 lb/GWh.	
	Arsenic (As)	1.1E0 lb/TBtu or 2.0E-2 lb/GWh.	
	Beryllium (Be)	2.0E-1 lb/TBtu or 2.0E-3 lb/GWh.	
	Cadmium (Cd)	3.0E-1 lb/TBtu or 3.0E-3 lb/GWh.	
	Chromium (Cr)	2.8E0 lb/TBtu or 3.0E-2 lb/GWh.	
	Cobalt (Co)	8.0E-1 lb/TBtu or 8.0E-3 lb/GWh.	
	Lead (Pb)	1.2E0 lb/TBtu or 2.0E-2 lb/GWh.	
	Manganese (Mn)	4.0E0 lb/TBtu or 5.0E-2 lb/GWh.	
	Nickel (Ni)	3.5E0 lb/TBtu or 4.0E-2 lb/GWh.	
Selenium (Se)	5.0E0 lb/TBtu or 6.0E-2 lb/GWh.		
	b. Hydrogen chloride (HCl)	2.0E-3 lb/MMBtu or 2.0E-2 lb/MWh.	For Method 26A, collect a minimum of 0.75 dscm per run; for Method 26, collect a minimum of 120 liters per run.
			For ASTM D6348-03 <sup>3</sup> or Method 320, sample for a minimum of 1 hour.
	OR		
	Sulfur dioxide (SO <sub>2</sub> ) <sup>4</sup>	2.0E-1 lb/MMBtu or 1.5E0 lb/MWh.	SO <sub>2</sub> CEMS.
	c. Mercury (Hg)	1.2E0 lb/TBtu or 1.3E-2 lb/GWh	LEE Testing for 30 days with 10 days maximum per Method 30B run or Hg CEMS or sorbent trap monitoring system only.

<sup>1</sup>For LEE emissions testing for total PM, total HAP metals, individual HAP metals, HCl, and HF, the required minimum sampling volume must be increased nominally by a factor of two.

<sup>2</sup>Gross electric output.

<sup>3</sup>Incorporated by reference, see § 63.14.

<sup>4</sup>You may not use the alternate SO<sub>2</sub> limit if your EGU does not have some form of FGD system and SO<sub>2</sub>CEMS installed.

21. Please identify any economic penalties that might result from operating Plant Crist while the scrubber is down for maintenance, and describe how the potential for such penalties was incorporated into the economic analysis for Plant Crist.

**Response:**

After the MATS compliance date, Gulf Power will not be able to utilize coal-fired operation of the Plant Crist units while the scrubber is off line. Continued coal-fired operation at Plant Crist without the scrubber in service would be a knowing violation of the MATS rule and would subject the Company and certain employees to civil and criminal penalties. It is the policy of Gulf Power Company to conduct all of its operations in compliance with federal, state, and local environmental laws and regulations. Penalties due to non-compliance are not part of the Company's economic analyses for Plant Crist.

22. Please provide an itemized breakdown of the costs associated with the proposed transmission projects.

Response:

Transmission Upgrades	Cost	In-Service Year
Holmes Creek – Bonifay 115 kV transmission line section rebuild on 230 kV structures		2014
North Brewton – Alligator Swamp 1351 ACSS 230 kV transmission line		2015
Alligator Swamp New Substation Terminal		2015
Alligator Swamp +/- 100 MVAR Static VAR System		2015
Alligator Swamp 100 MVAR Capacitor Bank		2015
West Pensacola 100 MVAR Capacitor Bank		2015
Holmes Creek – Highland City 1033 ACSS 230 kV transmission line		2015
Holmes Creek Autobank , 100 MVAR Capacitor Bank, 115 kV ring bus and 230 kV ring bus		2015
Sinai Cemetery Capacitor bank		2015
Highland City +/- 100 MVAR Static VAR System		2015
Brentwood – Scenic Hills 115 kV T.L. Reconductor		2017
West Pensacola +/- 100 MVAR Static VAR System		2018
Total		

Note: Cost estimates as of April 2013 as shown in Table 3.1-1 of Gulf's Compliance Program Update.

23. Please provide critical milestones for completion of the proposed transmission projects.

Response:

Our current evaluations indicate that the projects that are in the critical path and therefore have the greatest potential to significantly impact Gulf's ability to meet the MATS requirements deadline are the North Brewton – Alligator Swamp new 230 kV transmission line, Holmes Creek - Highland City new 230 kV transmission line, Alligator Swamp Static VAR System and Highland City Static VAR System.

The critical milestones for these projects are:

- **Permitting:** Permitting must be finalized for the North Brewton – Alligator Swamp and Holmes Creek – Highland City 230 kV transmission lines by January 2014 and for the Alligator Swamp Static VAR System by October 2013 to prevent project delays
- **Design:** Final design must be completed for the North Brewton – Alligator Swamp and Holmes Creek – Highland City 230 kV transmission lines by October 2013
- **Materials:** Major materials for the North Brewton – Alligator Swamp and Holmes Creek – Highland City 230 kV transmission lines must be received by December 2013 to effectively execute the construction work plan
- **Site Preparation:** Site preparation for the Alligator Swamp and Highland City Static VAR Systems must be completed by April 2014 to allow construction to begin

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: Petition of Gulf Power Company to include ) Docket No.: 130092-EI  
the Plant Daniel Bromine and ACI Project, )  
the Plant Crist Transmission Upgrades )  
Project, and the Plant Smith Transmission )  
Upgrades Project in the Company's program, )  
and approve the costs associated with those )  
compliance strategies for recovery through )  
the ECRC )

**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true copy of the foregoing was furnished by overnight mail this 23rd day of May, 2013 on the following:

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