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February 8, 2017

VIA ELECTRONIC FILING

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

Re: Petition for rate increase by Gulf Power Company, Docket No. 160186-EI

Dear Ms. Stauffer:

Attached is the Rebuttal Testimony and Exhibit of Gulf Power Company Witness  
Richard M. Markey.

(Document 9 of 16)

Sincerely,

A handwritten signature in blue ink that reads "Robert L. McGee, Jr." with a stylized flourish at the end.

Robert L. McGee, Jr.  
Regulatory & Pricing Manager

**BEFORE THE  
FLORIDA PUBLIC SERVICE COMMISSION**

**DOCKET NO. 160186-EI**



**Gulf Power**

**REBUTTAL TESTIMONY AND EXHIBIT  
OF  
RICHARD M. MARKEY**

1 GULF POWER COMPANY

2 Before the Florida Public Service Commission  
3 Rebuttal Testimony of  
4 Richard M. Markey  
5 Docket No. 160186-EI  
6 In Support of Rate Relief  
7 Date of Filing: February 8, 2017

8 Q. Please state your name, business address and occupation.

9 A. My name is Richard M. Markey and my business address is One Energy  
10 Place, Pensacola, Florida, 32520. I am the Director of Environmental  
11 Affairs for Gulf Power Company (Gulf or the Company).

12 Q. Have you previously filed testimony in this proceeding?

13 A. Yes.

14 Q. What is the purpose of your rebuttal testimony?

15 A. The purpose of my rebuttal testimony is to address the portions of Office of  
16 Public Counsel (OPC) Witness Ramas's testimony in which she argues that  
17 Gulf has not justified putting the entire North Escambia site into Plant Held  
18 for Future Use. I show that the entire 2,728 acreage at the North Escambia  
19 site will be needed to site gas-fired generation and that the requested  
20 preliminary survey and investigation (PS&I) costs will be used in siting gas-  
21 fired generation and are, therefore, reasonable and prudent.

22 Q. Are you sponsoring any rebuttal exhibits?

23 A. Yes. I am sponsoring Exhibit RMM-3 which includes the following  
24 documents:  
25

- 1           ○ Schedule 1 - Late-Filed Exhibit No.3 to the Deposition of Michael  
2           Burroughs (Redacted)
- 3           ○ Schedule 2 - North Escambia Preliminary Well Field Location  
4           (Confidential)
- 5           ○ Schedule 3 - North Escambia Summary of PS&I Costs  
6

7           Exhibit RMM-3 was prepared under my direction and control, and the  
8           information contained therein is true and correct to the best of my  
9           knowledge and belief.

10

11

12   **THE MATTER AT ISSUE**

13

14   Q.     Have you read the testimony of Ms. Ramas?

15   A.     Yes, I have.

16

17   Q.     Do you agree with the conclusion drawn by Ms. Ramas on page 66 of her  
18         testimony regarding whether the entire 2,728 acres of the North Escambia  
19         site are necessary for construction of gas-fired generation?

20   A.     I do not. Gulf needs the full 2,728 acres to site future gas-fired generation  
21         at the North Escambia site. Groundwater modeling is underway to  
22         determine the quantity and configuration of groundwater supply wells  
23         required to provide the normal water supplies needed for gas-fired  
24         generation and the necessary backup water source adequate for  
25         emergency drought situations and other supply interruptions. Under normal

1 conditions, the majority of the water required for generation will be pulled  
2 from the Escambia River. However, as a risk mitigation measure and to  
3 protect against significant drought periods, additional groundwater  
4 withdrawals will be necessary to supplement surface water flows.

5  
6 A professional geologist was retained to model and to provide a  
7 professional opinion regarding the land needs for a well field. This  
8 professional opinion was provided to the OPC prior to the filing of Ms.  
9 Ramas's testimony, as Late-Filed Exhibit No.3 to the deposition of Gulf  
10 Witness Burroughs. I provide a copy of this professional opinion in my  
11 Exhibit RMM-3, Schedule 1. This document shows that preliminary  
12 groundwater modeling indicates that a well field across the site will be  
13 required to produce an adequate volume of water for gas-fired generation  
14 during drought and other interruption periods.

15  
16 A figure depicting the preliminary well field location is provided in Exhibit  
17 RMM-3, Schedule 2. As depicted on Schedule 2, the well field will  
18 encompass the entire 2,728 acres to obtain an adequate volume of water;  
19 therefore, the entire 2,728 acres is needed to allow for gas-fired generation  
20 at the North Escambia site.

21  
22 Q. Do you agree with the conclusion drawn by Ms. Ramas on page 63 of her  
23 testimony regarding the prudence of the PS&I costs?

24 A. No. The PS&I studies provided information that is necessary for site layout  
25 and design of gas-fired generation at the North Escambia site and will be a

1 key component in obtaining state permits and meeting licensing  
2 requirements for gas-fired generation. Specifically, the information is  
3 needed both to develop a Site Certification Application required by the  
4 Florida Siting Board under the Florida Electrical Power Plant Siting Act for a  
5 combined cycle generating unit and to support groundwater modeling  
6 required for the Northwest Florida Water Management District (NFWFMD)  
7 consumptive use permit. My Schedule 3 is a summary of the North  
8 Escambia PS&I costs.

9  
10 Q. How does Gulf plan to use the PS&I information to benefit Gulf in siting and  
11 permitting new gas generation on the North Escambia site?

12 A. The PS&I information is needed for three critical aspects of siting gas-fired  
13 generation: 1) geotechnical investigation; 2) site assessment; and 3) the  
14 water supply resource assessments.

15  
16 Q. Explain how the PS&I information is critical to the geotechnical  
17 investigation.

18 A. During the preliminary planning and evaluation phases of a new generation  
19 project, it is necessary to perform a geotechnical exploration of a potential  
20 site to evaluate and characterize soil conditions across the property. This  
21 investigation assists with preliminary cost estimates and the evaluation of  
22 available sources of water on the site. While the geotechnical investigation  
23 may have been performed initially in evaluating other potential generation  
24 resources, it is needed and will be used for siting gas-fired generation at the  
25 North Escambia site. Geotechnical information gathered during PS&I

1 activities will be relied upon heavily when determining the most appropriate  
2 footprint(s) for any future generation facilities.

3

4 Q. Explain how the PS&I information is critical to the site assessment  
5 necessary for siting gas-fired generation at the North Escambia site.

6 A. The PS&I information will directly respond to requirements of the Site  
7 Certification Application under the Florida Electrical Power Plant Siting Act.  
8 These requirements include assessment of water supply resources,  
9 hydrological studies, geologic assessments, and water supply treatment  
10 options. Additionally, the PS&I information encompassed an investigation of  
11 site and vicinity characterization which includes: transmission lines,  
12 pipelines, airports, Superfund Amendments and Reauthorization Act sites,  
13 floodplains, wetlands, Class 1 Areas, nearest dams, and population density,  
14 along with access and egress to the site via roadway, railway, and barge.  
15 This information will be necessary for siting of gas-fired generation at the  
16 North Escambia site.

17

18 Q. Explain how the PS&I information is critical to water supply resource  
19 assessments necessary for siting gas-fired generation at the North  
20 Escambia site.

21 A. The geotechnical and geophysical data developed during PS&I activities  
22 has been used for groundwater modeling needed to evaluate water supply  
23 resources at the site. A water supply well was constructed and was used  
24 for pump testing in 2016 to calibrate required groundwater modeling. The  
25 geotechnical and geophysical information from previous investigations has

1 also been utilized to help construct the groundwater model needed to  
2 design a well field and will be needed to apply for a consumptive use permit.

3

4 Q. Mr. Markey, is Gulf currently conducting preliminary engineering studies or  
5 investigations of the North Escambia site?

6 A. Yes. In 2016, Gulf performed a groundwater pump test that is required to  
7 collect additional information needed to support a NFWWMD consumptive  
8 use permit application for the site. Gulf is also in discussions with the  
9 NFWWMD to work toward permitting for consumptive use.

10

11 Q. How long would it take to permit and build a combined cycle generating  
12 facility at a new site?

13 A. Permitting and construction of a combined cycle generation facility is  
14 estimated to take up to six years for a new Greenfield site once the property  
15 is purchased. Gulf's ownership of the North Escambia property provides a  
16 benefit to our customers because preliminary data is already available. This  
17 available data can be utilized to permit new generation at the North  
18 Escambia site, whether it be gas-fired or even solar generation, which will  
19 shorten the time required for site layout and design as well as the permitting  
20 timeline.

21

22 Q. Do the requested PS&I charges of \$3,576,010 include all charges  
23 associated with the PS&I activities for North Escambia?

24 A. No. Gulf reviewed all expenditures for the North Escambia site and  
25 excluded costs that could not be used for siting gas-fired generation. The



1 excluded costs total \$1,349,632, representing legal fees and other studies  
2 specific to nuclear generation, which, in contrast to other studies, cannot be  
3 used for siting a combined cycle facility.

4  
5 Q. Mr. Markey, please summarize the costs that are currently included in the  
6 PS&I account.

7 A. The costs are primarily associated with geotechnical studies, professional  
8 services for selection of the water intake and discharge locations,  
9 groundwater and surface water studies, and meteorological data collection,  
10 all of which can and will be used for evaluating combustion turbine or  
11 combined cycle units at the site.

12

13 Q. Mr. Markey, please summarize your rebuttal testimony.

14 A. The entire acreage at the North Escambia site will be needed to site gas-  
15 fired generation. The remaining PS&I costs that have not been excluded  
16 have and will be used to develop reports and studies that will be used in  
17 siting gas-fired generation in the future and are, therefore, reasonable and  
18 prudent. The investigation and purchase of this site preserves valuable  
19 gas-fired generation options for Gulf's customers.

20

21 Q. Does this conclude your rebuttal testimony?

22 A. Yes.

23

24

25

AFFIDAVIT

STATE OF FLORIDA     )  
                                  )  
COUNTY OF ESCAMBIA )

Docket No. 160186-EI

Before me the undersigned authority, personally appeared Richard M. Markey, who being first duly sworn, deposes, and says that he is the Director of Environmental Affairs of Gulf Power Company, a Florida corporation, and that the foregoing is true and correct to the best of his knowledge, information, and belief. He is personally known to me.

s/ Richard M. Markey  
Richard M. Markey  
Director of Environmental Affairs

Sworn to and subscribed before me this 3<sup>rd</sup> day of February, 2017.

Melissa Darnes

Notary Public, State of Florida at Large

Commission No. FF912698

My Commission Expires December 17, 2019



MELISSA DARNES  
MY COMMISSION # FF 912698  
EXPIRES: December 17, 2019  
Bonded Thru Budget Notary Services

# Exhibit

Gulf Power Company  
Late-Filed Exhibit No. 3  
Deposition of Michael L. Burroughs  
Docket No. 160186-EI  
Page 1 of 1

**Request:** Documentation of any environmental analysis supporting the statement that 2,728 acres is the minimum acreage necessary to get a Consumptive Use Permit (CUP) for the North Escambia site.

**Response:** The following is a letter provided in support of the statement that 2,728 acres is the minimum acreage necessary to get a CUP for the North Escambia site.

Gulf Power conducted a preliminary evaluation of the North Escambia site groundwater pump test data, as well as hydrologic units beneath the site, to determine input parameters required to support a Northwest Florida Water Management District consumptive use permit. Several criteria are required for permit approval including 1) that the water proposed to be used will not significantly impact adjacent water users, and 2) the water use will not have a significant impact on the natural systems surrounding the site.

I have been modeling groundwater systems for the past 26 years with Southern Company and others. My professional opinion of the generation site is as follows:

Under normal conditions, the majority of the water required for generation will be pulled from the Escambia River. In addition to surface water withdrawals, the generating units will have daily water needs that require groundwater due to its water quality. During significant drought periods, additional groundwater withdrawals will be necessary to supplement surface water flows.

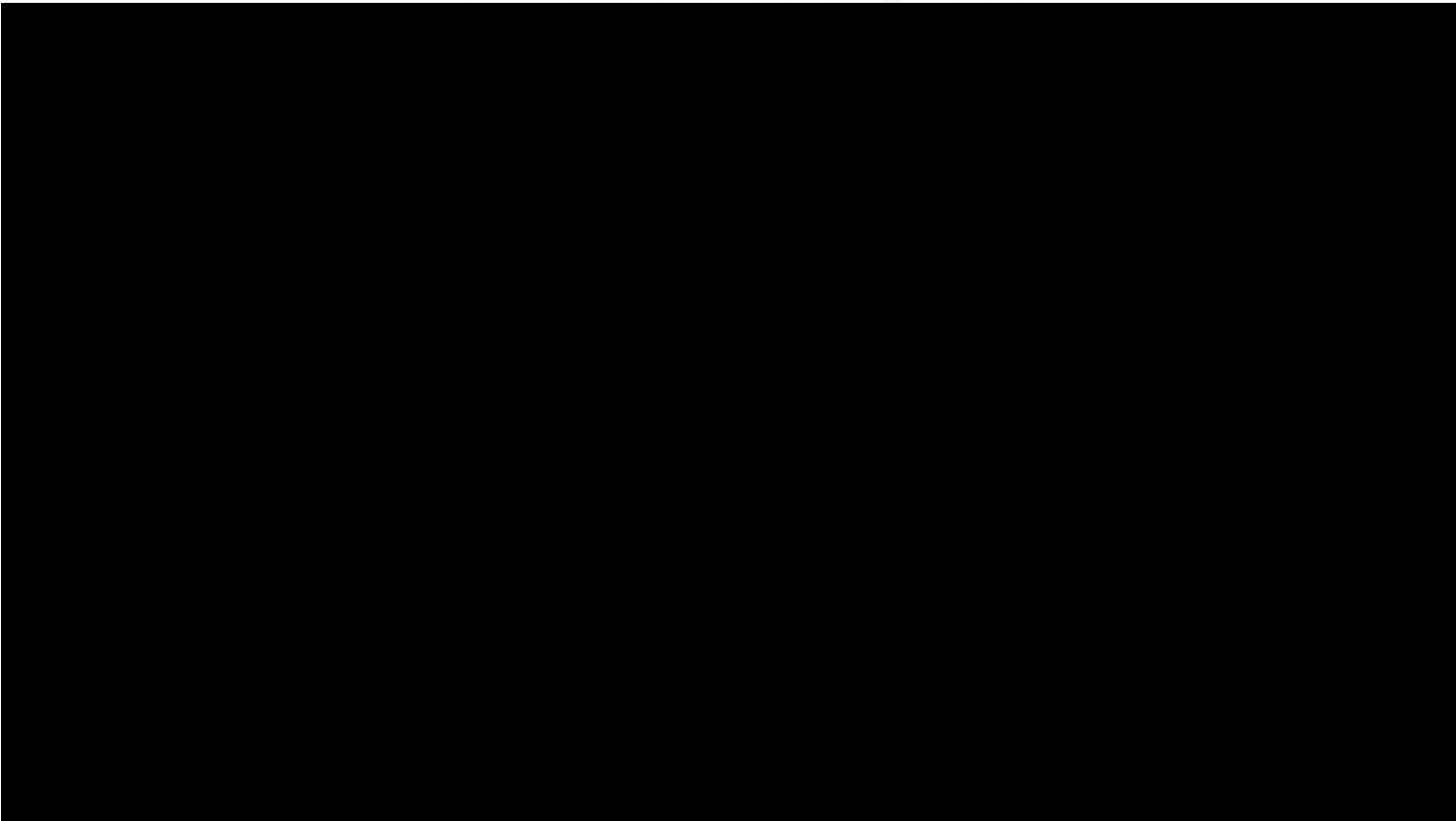
Based on the preliminary evaluation of the North Escambia Site, the entire 2,728 acres will be necessary to support the Consumptive Use groundwater needs for future generation at this site.



A handwritten signature in blue ink, appearing to read "Steven C. Bearce".

Steven C. Bearce  
Professional Geology License PG#1911  
1/11/2017 Date

# Escambia County Site

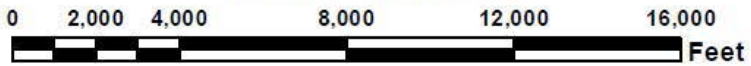


Note:  
This map is informational only, and is not a survey.  
Boundaries shown hereon are approximate.

Map Projection: Lambert Conformal Conic  
Data Sources: Escambia County Property Appraiser,  
Florida Department of Revenue, Bing Maps

● Well  
□ Gulf Power Property

1 inch = 4,000 feet



Florida Public Service Commission  
Docket No. 160186-EI  
GULF POWER COMPANY  
Witness: Richard M. Markey  
Exhibit No. \_\_\_\_ (RMM-3)  
Schedule 2  
Page 1 of 1

<b>North Escambia</b>	
<b>Preliminary Survey &amp; Investigation Costs</b>	
<b>General Support</b>	<b>\$3,043,557</b>
Preliminary Geotechnical Investigation	\$ 466,134
Phase 1 Analysis (Bechtel)	\$ 767,237
Phase 1 Analysis (Mactec)	\$ 667,721
Hydrogeological Study & Other Site Investigation	\$1,142,465
<b>Resource/Financial Planning</b>	<b>\$524,783</b>
<b>Legal Fees</b>	<b>\$7,670</b>
<b>Total Site Investigation</b>	<b>\$3,576,010</b>