BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 110138-EI

REBUTTAL TESTIMONY AND EXHIBIT

OF

RHONDA J. ALEXANDER

GULF POWER

A SOUTHERN COMPANY

GULF POWER COMPANY

Before the Florida Public Service Commission
Rebuttal Testimony and Exhibit of
Rhonda J. Alexander
Docket No. 110138-EI
In Support of Rate Relief
November 4, 2011

Q. Please state your name and business address.

A. My name is Rhonda Alexander. My business address is One Energy Place, Pensacola Florida, 32520.

Q. What is your position?

A. I am currently the Forecasting Supervisor for Gulf Power Company (Gulf or the Company), but my testimony relates to my former position as Gulf's Nuclear Development Manager from 2008 through 2010. In that capacity, I coordinated Gulf's efforts to investigate a potential nuclear site and to begin the processes for licensing and permitting a potential nuclear plant.

Q. Please state your educational and prior work experiences.

A. I graduated from the University of West Florida in Pensacola, Florida in 1994 with a Bachelor of Arts Degree in Accounting. I am also a licensed Certified Public Accountant. In 1994, I began my career with Gulf as an accountant and advanced to the position of Team Leader of Corporate Accounting in which I was primarily responsible for the Company's monthly closing and reporting of financial data. Subsequently, I served as the Supervisor of Financial Planning for four years and managed the development of the Company's financial forecast and performed as

needed financial and economic project analyses. Prior to assuming my position as Nuclear Development Manager, I was the Supervisor of Rates and Regulatory Matters for two years responsible for tariff administration, cost of service activities, calculation of cost recovery factors, and the regulatory filing function. From 2008 through 2010, I served as Gulf's Nuclear Development Manager and coordinated Gulf's efforts to investigate a potential nuclear site and to begin the processes for licensing and permitting a potential nuclear plant.

Q. Have you previously filed testimony with the Florida Public Service Commission (FPSC or Commission)?

A. Yes. In my previous role as Gulf's Supervisor of Rates and Regulatory Matters, I have filed testimony with the Commission in the Fuel Cost Recovery, Capacity Cost Recovery, and Environmental Cost Recovery Clause dockets during the years 2006 through 2008.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to address the portions of the testimony of witnesses Helmuth W. Schultz, III, Greg R. Meyer, and Steve W. Chriss in which they argue that all or part of the costs associated with the North Escambia site should not be included in rate base. I show that the entire costs associated with the North Escambia site should be included in rate base because the land, as well as the site investigation and project development costs, were reasonable and prudent. The

investigation and purchase of this site preserve a valuable option for Gulf's customers.

Q. Have you prepared an exhibit that contains information to which you will refer in your testimony?

A. Yes. I am sponsoring Exhibit RJA-1, Schedules 1 through 12. Exhibit RJA-1 was prepared under my direction and control, and the information contained therein is true and correct to the best of my knowledge and belief.

I. THE MATTER AT ISSUE

Q. Regarding the North Escambia site, what has Gulf Power requested that is contested in the testimonies of witnesses Schultz, Meyer and Chriss?

A. As discussed on pages 5 and 6 of Gulf witness McMillan's direct testimony, Gulf Power is requesting to include $27,687,000 of costs for the North Escambia site in rate base in the 2012 test year.

Q. What does the $27,687,000 of North Escambia site costs consist of?

A. The $27,687,000 North Escambia site costs consist of two primary elements: site acquisition costs and costs other than site acquisition.

Q. What is the amount of cost for the acquisition of the North Escambia site?

A. For the 2012 test year, Gulf projects average site acquisition costs of approximately $18.9 million as stated in the Company's response to Staff's Fifth Set of Interrogatories No. 47, a copy of which is attached as Exhibit RJA-1, Schedule 1.

Q. What amount has Gulf projected for costs other than site acquisition costs associated with the North Escambia site?

A. For the 2012 test year, Gulf projects average costs other than site acquisition of approximately $8.8 million.

Q. What portion of Gulf's total base rate revenues would the North Escambia site represent?

A. The revenue requirements associated with the North Escambia site are approximately $3.1 million, which would amount to less than 0.6% of Gulf's total base rate revenues if Gulf's requested increase in this case is ultimately granted. The cost of including the North Escambia site in rate base would be roughly 26¢ on a 1,000 kWh residential bill.

II. MR. SCHULTZ'S ARGUMENTS FOR DISALLOWANCE

Q. Mr. Schultz states on page 3, lines 20 and 21 of his testimony that it is "unclear as to whether the costs other than land costs have been incurred or are instead projected to be incurred." Please address this statement.

A. The costs other than site acquisition costs, which include $4.5 million for site investigation costs, $1.2 million for project development, and $3.0 million for carrying costs, represent actual costs incurred through December 2010 and projected costs for the year 2011. Through September 2011, site investigation and project development costs total $4.7 million, which is approximately $656,000 below budget due to timing of work which is expected to be completed in 2012. Carrying charges on actual deferred costs are accrued monthly and will continue to be accrued until such time that these costs are included in rate base. Through September 2011, carrying costs total $2.2 million.

Q. Over what period of time did Gulf incur the North Escambia site costs other than site acquisition costs that are challenged?

A. While a few costs were incurred in 2007, most of the North Escambia site costs other than site acquisition costs were incurred during 2008 through 2011. Carrying charges have been accrued monthly since January 2008 and will continue to be accrued until such time that these costs are included in rate base.

Q. Please explain how these various costs other than site acquisition costs that are challenged were incurred over the 2007-2011 period.

A. These costs were incurred beginning in 2007 when Gulf first considered the feasibility of constructing a nuclear plant. On July 13, 2007, Governor Crist signed Executive Order 07-127 (Exhibit RJA-1, Schedule 2) targeting dramatic reductions of greenhouse gas (GHG) emissions for the electric

utility industry in Florida. At that time, Congress was also looking at legislation designed to significantly reduce GHG emissions, particularly carbon dioxide (CO_2) emissions. Gulf took both Governor Crist's Executive Order and the pending congressional legislation very seriously. Other factors driving the consideration of nuclear generation and the incurrence of these costs included, but are not limited to: state policy encouraging the development of nuclear power through cost recovery mechanisms; forecasted capacity needs on Gulf's system; the prospect of potential coal unit retirements because of emerging state and federal policies regarding GHG regulation and other environmental regulations; and high forecasted gas prices. This host of factors caused Gulf to consider the potential feasibility of constructing a nuclear unit in Northwest Florida. Gulf, with the assistance of Southern Company Services (SCS), began to review how these initiatives would impact its generation assets.

Gulf's initial assessment evaluated the cost impacts to Gulf for CO_2 legislation and showed that extensive retirements of coal generation would be required if stringent GHG emissions were adopted. So, Gulf began more extensive analyses to examine whether a nuclear option made sense for Gulf and its customers.

Those more extensive studies showed that a self-build nuclear option, while challenging, was feasible. In a severely carbon emission constrained environment such as that being proposed by then-Governor Crist, nuclear was the only cost-effective, carbon free option potentially

available to Gulf. So, Gulf began site investigations to identify potential nuclear sites.

Q. Please explain in more detail what the initial analysis of Governor Crist's proposed stringent reductions of CO_2 and other GHG emissions showed.

A. At the time of initial analysis, Gulf had 1,914 MW of coal capacity (without Scherer). The analysis of Governor Crist's proposal showed that for Gulf to meet projected limits of GHG emissions, Gulf would have to retire significant coal assets. Specifically, one of the earliest analyses showed that: Smith Units 1 and 2 (357 MW total) would have to install sorbent injection for mercury control in 2010 in order to operate until early retirement at the end of 2016; even though Crist Units 4-7 were projected to have a scrubber, Units 4 and 5 (150 MW total) might have to be converted to natural gas peaking units prior to early retirement at the end of 2016; and Crist Units 6 and 7 (760 MW total) could possibly survive until the end of 2019. This initial analysis is attached as Exhibit RJA-1, Schedule 3.

Q. What were Gulf's options to meet the potential needs that would be created by GHG regulation?

A. Realistically, coal was not an option. The only two base load resources available to Gulf to replace coal unit retirements due to GHG regulation were gas-fired combined cycle units and nuclear units. Each has their respective advantages and disadvantages.

Some advantages of gas-fired combined cycle units are they have much lower initial cost of construction than nuclear units, and they have shorter development time lines. However, they also face disadvantages: they have some GHG emissions where nuclear has none, and they require natural gas, which is subject to much volatility and uncertainty of price in the long-term. A system comprised of mostly gas resources would place customers in a position of significant risk: they would face the risk of gas price increases, something that had happened not long before, and Gulf's fuel diversity would decrease, making Gulf overly dependent upon gas. Also, Gulf's system would be in danger of interruption if there was a supply or transportation disruption.

The advantages of nuclear generation are zero GHG emissions and less volatility in fuel costs relative to gas. The disadvantages of nuclear generation are a large up-front capital investment, a longer timeline for licensing and construction of a new unit, and stringent siting requirements, which limit site availability. Also, at the time of Gulf's analysis, a commercial reactor had not been built in the United States in roughly 30 years. Mitigating those disadvantages were several factors: the federal government was offering economic incentives for the development of nuclear units; several companies, including one of Gulf's sister companies, had announced their intent to develop nuclear projects, which would allow Gulf the opportunity to gain from their experiences; potential fuel savings relative to gas were immense; and finally, Florida had passed legislation that allowed for cost recovery during development and

construction, making it financially feasible for Gulf to consider the nuclear option.

Based upon the relative advantages and disadvantages of gas-fired combined cycle and nuclear technologies, Gulf decided it needed to put the nuclear option "on the table" and examine it more closely.

Q. At the time of this analysis of Gulf coal unit retirements due to potential GHG regulation, what were Gulf's forecasted capacity needs assuming no early coal unit retirements?

A. As shown in Gulf's 2007 Ten Year Site Plan, Gulf showed a 1,006 MW capacity need by the summer of 2016. This is shown in Exhibit RJA-1, Schedule 4, which is an excerpt from Gulf's 2007 Ten Year Site Plan. The projected need in 2014 was 882 MW following the expiration of two power purchase agreements (PPAs). Gulf proposed to serve this capacity need with the addition of a combined cycle unit.

By the time Gulf made its 2008 Ten Year Site Plan filing, the projected need for 2014 had increased to 929 MW. Gulf proposed to meet this 2014 need by adding an 840 MW G series combined cycle unit. The 2008 Ten Year Site Plan showed that without this G series combined cycle unit, Gulf's need for capacity would increase to 1,162 MW by the summer of 2017. My Exhibit RJA-1, Schedule 5 is an excerpt from Gulf's 2008 Ten Year Site Plan showing Gulf's forecasted capacity needs.

So, Gulf's Ten Year Site Plans for both 2007 and 2008 showed a capacity need ten years out in excess of 1,000 MW, without potential coal unit retirements. If a gas-fired unit was not built in 2014 to meet part of this need, a nuclear unit could be a means of addressing this need long-term, as long as bridging capacity could be found (bridging capacity is a short-term resource that allows a utility to defer a capacity need).

Q. Did Gulf consider nuclear generation to meet requirements resulting from potential coal unit retirements or to meet forecasted system load growth requirements?

A. Nuclear generation was considered for both purposes. However, with nuclear's long lead time, if Gulf decided to pursue a nuclear option, it might have been necessary to bridge needs that arose during the period the unit was under development and construction. Gulf was comfortable with a bridging approach, because Gulf had used PPAs as bridging capacity to move its 2009 forecasted need to 2014.

Q. After performing initial need assessments and technology comparisons between nuclear and gas-fired units, what did Gulf do next?

A. Gulf performed analyses of the relative cost-effectiveness of adding both types of units to its system. In doing so, it relied upon cost information available from its sister company that was developing its own nuclear option to price the nuclear technology. Once reasonable cost estimates were developed, then production costing modeling was performed to consider the relative system economics of these two options.

Q. What did Gulf learn from these analyses?

A. Gulf learned that the nuclear option was cost effective relative to natural gas. The nuclear option also improved fuel diversity.

Based on this, Gulf decided to begin parallel tracks to further investigate potential sites and to begin preparation for permitting and licensing a nuclear site. Investigations of multiple sites had been proceeding during the earlier analyses, but to move forward in permitting and licensing to preserve the nuclear option, Gulf needed to perform a detailed site investigation and choose a site.

Q. What did this detailed site investigation entail?

A. Gulf looked to its affiliate Southern Nuclear for assistance in site investigation. Southern Nuclear had the expertise to bring internal resources to bear, and it was also aware of external resources that could be employed for site investigation. This is a great example of an advantage of being part of the Southern System. These resources were available at cost to Gulf, with no profit or markup paid for Southern Nuclear's time and resources.

Several different criteria were used to evaluate sites, but geological formation is critical to meet Nuclear Regulatory Commission (NRC) requirements. Other criteria included access to cooling water, residential development proximity, military base proximity, wetland impacts, number

of homesteads impacted, number of land owners impacted, and sufficient acreage.

Q. How many potential nuclear unit sites did Gulf consider?

A. Gulf considered over two dozen unique locations across our service area. A map showing most of these sites is attached as Exhibit RJA-1, Schedule 6. In January 2008, the list was narrowed down to two eastern sites and two western sites. The top ranked sites included Plant Scholz, Escambia South, Brownsdale, and Bay Site.

Gulf continued performing geotechnical studies on these sites. Plant Scholz was dropped due to the Apalachicola River water reservation. A fatal geotechnical flaw was found in the Escambia South site. The Brownsdale site was screened out because geotechnical studies showed inconsistencies in the soil samplings that would likely not meet NRC's stringent requirements without costly engineering improvements, if at all. In April 2008, testing revealed unsuitable subsurface conditions in the Bay Site as well.

Gulf's land department began identifying other sites in Escambia County. Historical borings for McDavid, in North Escambia County, were reviewed. Initial testing of the McDavid site had been favorable, but the area had become populated. Geographic Information System (GIS) mapping of topography, highways, and parcel lines led Gulf to an area just northwest of the McDavid site, which is called the North Escambia site. Preliminary

geotechnical studies on North Escambia were completed in July 2008 and had positive results. This site had many great attributes (see Exhibit RJA-1, Schedule 7) such as good access to cooling water, low number of homesteads impacted, significant distance from military bases and sufficient acreage. The North Escambia site was designated the primary site, and in August 2008 the decision was made to purchase land.

Gulf learned from these extensive efforts that North Escambia was the only potential nuclear unit site in Gulf's service area and Gulf needed to purchase the site if it was going to preserve a nuclear option for its customers.

Q. How much are the costs for Gulf's site investigation?

A. For the 2012 test year, Gulf projects average costs of roughly $4.5 million for nuclear site investigations. These costs were detailed in discovery and are shown in Exhibit RJA-1, Schedule 1.

Q. Earlier you testified that site investigation and preparation for permitting and licensing proceeded on parallel paths. What activities did Gulf undertake for permitting and licensing a potential nuclear plant?

A. Gulf began work on three separate activities that required close coordination among the teams: licensing of the nuclear site by the NRC, permitting of the site under the Florida Electrical Power Plant Siting Act, and the filing of a determination of need with the FPSC. To build a nuclear unit, a Company must first be awarded a combined construction

and operating license (COL) by the NRC. To prepare to secure the documents necessary for an application to the NRC, Gulf, through Southern Nuclear, assembled a team of attorneys, consultants and contractors to assist in the formulation of this application.

A nuclear unit also must be permitted by the Florida Siting Board under the Florida Electrical Power Plant Siting Act. Attorneys and consultants familiar with siting and permitting requirements began work on this process.

A nuclear unit must also secure a determination of need from the Commission. Gulf retained an experienced siting attorney and began preparations of the extensive materials that would have to be presented to the Commission for an affirmative determination of need.

Q. Did Gulf consider another alternative to a self-build nuclear plant?

A. Yes. In lieu of a self-build nuclear plant, Gulf gave serious consideration to participating in another nuclear project. This is discreetly referred to as "Project Frank" in Gulf's documents and in discovery. It is referred to by this name because Gulf is required under the terms of a non-disclosure agreement not to reveal the name of the developing company or the terms that were being considered, as this might adversely affect the developer's ability to negotiate with other potential entities that might be interested in participating in the plant. After due diligence and serious negotiation, Gulf

decided to pursue its own self-build option rather than participate in Project Frank.

Q. What costs did Gulf incur in nuclear project development?

A. Gulf spent approximately $1.2 million in project development costs for a potential nuclear unit. These costs were detailed in Gulf's response to Staff's Interrogatory No. 47 and are shown in Exhibit RJA-1, Schedule 1.

Q. If Gulf spent all these funds on site investigation and project development, why did Gulf not pursue licensing and permitting?

A. Gulf decided to defer its nuclear licensing and permitting activities. That decision was based upon a number of changed circumstances. First, the pressure to adopt stringent GHG emission reductions that would require significant retirements of Gulf's coal units had lessened. The Florida Legislature rejected Governor Crist's proposal, and Congress could not agree on new proposed legislation. Second, the discovery and development of shale gas significantly changed both the pricing and reserve picture for natural gas. Third, Gulf had seized a unique opportunity for a low cost resource in the form of the Central Alabama PPA to move its capacity need out to 2023. Fourth, the effect of the economic recession had reduced Gulf's energy sales and lowered Gulf's forecasted capacity needs. Therefore, Gulf decided to defer its nuclear licensing, permitting, and determination of need efforts into the future.

Q. If Gulf decided to defer its nuclear licensing efforts into the future, why did Gulf continue to purchase land for the North Escambia site?

A. Siting requirements of NRC and specific vendor technologies are stringent, which limits the number of available sites. Gulf had learned from its extensive site investigation that there was only one acceptable nuclear plant site in Northwest Florida. If Gulf was going to preserve the nuclear option for its customers, the North Escambia site needed to be secured by Gulf. If Gulf lost the ability to use that site, it would be precluded from building nuclear in the future.

Q. Since Gulf deferred the nuclear licensing and permitting efforts, does this mean Gulf has abandoned the nuclear option?

A. No, Gulf has not abandoned the nuclear option. Gulf deferred those efforts until a later time, if and when nuclear is needed and is the most cost-effective option. In fact, a nuclear option for Gulf cannot be ruled out at this time given Gulf's projected load requirements and given the great uncertainty surrounding the future of its coal-fired generation due to environmental regulations. In the summer of 2023, Gulf is currently projected to have a need of approximately 943 MW. In addition, even though carbon legislation seems more uncertain, its prospect has not gone away. As Gulf has reported to the Commission, there are also a host of other environmental initiatives (mercury, SO_2, NO_x, 316(b) water, and coal ash regulation) that could be implemented between now and 2023 that could require Gulf to retire most or all of its coal fleet.

Q. Mr. Schultz argues on page 4 of his testimony that including the North Escambia site in Plant Held for Future Use (PHFU) would cause an increase in revenue requirements associated with PHFU in rate base by 487%. Please address this observation.

A. The large percentage value by itself tells the Commission nothing about the merits of including the North Escambia site in rate base. This quantification says nothing about the prudence of decisions Gulf made to consider a nuclear option, incur site investigation costs, purchase the North Escambia site, incur determination of need costs, and suspend its licensing, permitting, and determination of need efforts.

Q. Mr. Schultz argues on pages 5 and 6 of his testimony that the inclusion of the North Escambia costs in rate base is inconsistent with his understanding of Section 366.93, Florida Statutes. Is Gulf asking the Commission to include the North Escambia site costs in rate base pursuant to Section 366.93, Florida Statutes?

A. No. My attorneys inform me that Gulf is asking for the Commission to include all these costs in rate base pursuant to the Commission's inherent and broad rate making authority under Chapter 366. I defer to Mr. McMillan on why accrual of carrying costs is appropriate in this case.

Q. Mr. Schultz argues on page 7 of his testimony that the addition of a nuclear unit to Gulf's generating portfolio does not make any sense from an operational perspective. Please address this argument.

A. It should be noted that he draws this conclusion based not on any technical analysis but on "common sense," but none of his "common sense" observations withstands scrutiny. Gulf looked at each of these considerations as well as others in its assessment of the viability of a nuclear option. I will address each argument in turn.

First, Mr. Schultz argues that Gulf has not demonstrated the necessity of a nuclear unit to meet energy and demand requirements. It is important to remember what is at issue here. Gulf has not requested a determination of need for a particular generating unit. What Gulf seeks is much more limited – recovery of limited costs necessary to preserve Gulf's nuclear option in the future. Gulf is not seeking recovery of billions of dollars of investment that would be associated with a nuclear plant. Gulf is seeking inclusion in rate base of less than $30 million of land acquisition costs and related costs it has incurred that were necessary to preserve the nuclear option for Gulf's customers. Gulf prudently incurred these costs.

Second, Mr. Schultz argues that a nuclear generating unit would add approximately 1,150 MW of capacity, roughly 45-46% of Gulf's system peak, and he is unaware of any other utility with a comparable peak that would have that large a portion of resources in a single nuclear unit. The real technical issue to be answered is not whether the system would have a single unit that comprised 45% of peak load, but whether the unit could run at full capacity at minimal system load levels. The answer we determined was that at most times there would be sufficient load on Gulf's

system to justify a must run unit. Since Gulf is a member of the Southern Operating System, the low dispatch cost of a nuclear unit would ensure that Gulf's nuclear unit would be economically dispatched as must run.

Q. Mr. Schultz argues that Gulf has not investigated whether another company comparable in size had a nuclear unit for its own use. Please address this argument.

A. Gulf is aware of a number of utilities the same size as Gulf or smaller that own a portion of one or more nuclear units. However, the discovery question posed to Gulf was whether Gulf was aware of another utility with less than 500,000 customers that had constructed a nuclear unit. Gulf is not, but that does not answer the pertinent question, which is – might it be prudent for Gulf, which is part of the Southern System, to construct and own all of a nuclear unit or part of several nuclear units to meet future needs?

Gulf focused on what Gulf, as part of a large power pool, could do or might be required to do in a carbon constrained world. That was the pertinent question upon which Gulf focused.

Q. Mr. Schultz's next argument begins with a suggestion that Gulf is considering building a 1,200 MW nuclear unit to meet a 30 MW need in 2022 (page 9, lines 4-8). Is that an accurate characterization?

A. No. Gulf faced a forecasted need, without coal unit retirements for environmental considerations, of more than 1,000 MW when it first began

considering a nuclear option. Gulf has never considered building a 1,200 MW nuclear plant to meet a 30 MW need, and I have no reason to believe it would in the future. If Gulf resumes pursuit of a nuclear plant, it will be because there is a need for the capacity (due to load growth, the need for fuel diversity, retirements of existing capacity due to environmental requirements or some combination of these factors) and because nuclear would be the most cost-effective option for its customers.

Q. Please address Mr. Schultz's next argument that states it is inappropriate to charge customers for costs that might be shared in the future.

A. What customers are being asked to pay for is to preserve an option for them. If Gulf decides to proceed in a co-ownership arrangement, then parties coming to the table will be required to share costs, reducing costs to be covered by Gulf's customers. What Gulf's customers are paying for now is to preserve an option for them, and it is a relatively small price to pay for potentially millions of dollars of savings if a nuclear unit is needed.

Q. Mr. Schultz takes issue with the inclusion of $187,000 of costs entitled "Need Determination Filing." Please address their prudence.

A. As I previously stated, Gulf was far enough along in its analysis that it began preparing for a determination of need filing. These are time constrained but resource-intensive permitting proceedings in which experts have to be brought before the Commission to show that a plant meets established criteria. The incurrence of these costs was prudent.

Q. Mr. Schultz also argues that $650,000 of costs incurred for travel expenses, resource planning and legal fees are "extremely high" without a definite plan for the property. Please address this observation.

A. All of these expenses were incurred in evaluating the nuclear option, and I would characterize them as "extremely reasonable" rather than "extremely high." Mr. Schultz's characterization of this $650,000 costs is incomplete. The total was taken from Gulf's response to Staff Interrogatory No. 47 as shown in Exhibit RJA-1, Schedule 1. As one can see, there are more costs in this category than Mr. Schultz listed. The breakdown of the $650,000, which is listed as Project Support Costs, is as follows:

Southern Nuclear labor / travel expenses (General Support) $261,328

Southern Nuclear provided technical expertise to Gulf at cost. When they did not have in-house expertise, they contracted with competent outside vendors. It should be noted that this subset of costs was not just for travel, as suggested by Mr. Schultz. It also includes labor costs, legal fees, and contract expenses related to geotechnical studies.

SCS Support (Resource Planning & Financial Planning) $ 39,114

SCS provides resource planning services for all Southern Company retail operating companies. In this instance, there were a number of extensive resource analyses that were performed for Gulf so that it could make informed decisions regarding its potential need and the cost-effectiveness of resource options. This was provided at cost with no mark up for profit, and it was essential to good decision making.

Gulf Labor and Travel $132,533

Once again, this was not just "travel" as suggested by Mr. Schultz. These costs also include Gulf labor for project development support. These costs were necessary and proper.

Gulf Labor Overheads $221

These are the overheads associated with Gulf's labor costs. They were also necessary and proper.

Legal Fees $217,545

These were legal fees incurred independent of permitting, licensing, determination of need and land acquisition. These were the costs Gulf incurred in consulting with legal counsel regarding regulatory requirements, potential cost recovery and project development. These were also necessary and reasonable.

Q. Mr. Schultz questions Gulf for not explaining "Project Frank" costs in a discovery response. Please address this criticism.

A. Gulf was intentionally discreet in addressing these costs as it involved a confidential discussion with another entity that must remain confidential under a non-disclosure agreement. These were serious discussions requiring financial analyses, resource planning analyses, legal assistance and a host of other technical resources necessary for Gulf to perform due diligence. It was prudent for Gulf to seriously consider this alternative, but to undertake that effort, Gulf had to spend resources.

Q. Mr. Schultz's next argument is that including the North Escambia site in PHFU is inconsistent with a policy established by the Commission in Order No. 5471. He states that the North Escambia site is not a "reasonable and prudent investment" and will not be "used for Gulf's system purposes in the reasonably near future." Please respond.

A. Let me address first the reasonableness and prudence of these costs. Gulf was entirely prudent in its initial investigation of a nuclear option. Gulf had a significant capacity need and was facing a significant additional capacity need due to government policy designed to reduce carbon emissions. Gulf was entirely prudent in further pursuing nuclear when under most planning scenarios it was the most cost-effective option available to its customers. Gulf was prudent in engaging in detailed site investigations to determine whether there were potential nuclear sites in Northwest Florida. Gulf was prudent in beginning the long and demanding permitting processes, including preparation for a determination of need, for a long lead time plant. In turn, when circumstances changed, Gulf was prudent in deferring its determination of need and project development efforts. However, given the significant value nuclear continued to have in circumstances where Gulf might find itself having to retire significant amounts of coal resources, and knowing that there was only one available nuclear site in Northwest Florida, Gulf was prudent in purchasing that site to preserve the nuclear option for its customers. All of those decisions and related costs were both reasonable and prudent.

The second aspect of this "policy" – that the site will be used in the reasonably near future - is also satisfied. It will be used in the reasonably near future for its intended purpose – preservation of a potentially valuable nuclear resource for customers. That is its immediate purpose.

As to the potential longer-term use of the site – actually hosting a generating unit - the circumstances in this case are far different than the circumstances in the Caryville case. In this case, unlike Caryville, there was only a single potential site available to Gulf for a nuclear plant. The language in the Caryville case simply addresses a very different circumstance than there is in this case. If Gulf had not made this prudent decision, it would have been concerned about someone arguing after the fact that Gulf should have, but did not, preserve this option. Mr. Schultz's "policy" argument simply does not hold up to scrutiny.

Q. Mr. Schultz's next argument is Gulf stated in a discovery response that the North Escambia site could be used for generation types other than or in addition to nuclear, and its multi-technology use does not justify the purchase and carrying charges. Please address Mr. Schultz's argument.

A. Gulf is not justifying the site on this basis. Its justification is that the purchase of the site was prudent and preserves a nuclear option for Gulf's customers. However, Gulf appropriately pointed out that the site had other valuable attributes that would serve its customers. This reinforces the prudence of the decisions made to investigate and acquire the site.

Q. Mr. Schultz argues against including the North Escambia site and related costs in rate base because Gulf has two other potential power plant sites already in PHFU that could site alternative generation, so there is no need for North Escambia. Please address this argument.

A. Mr. Schultz misunderstands the purpose of the North Escambia site. It was investigated and purchased to preserve a nuclear option for Gulf's customers because that option has such a high potential value to Gulf's customers and the site was unique. Nuclear cannot be built on either of the other two sites.

Q. Mr. Schultz's next argument is that Gulf has not presented any studies that show the need for capacity or that nuclear would be an option. Please comment.

A. Mr. Schultz criticizes Gulf for not submitting any studies in its direct case. This criticism of Gulf's direct case is inconsistent with the statement Mr. Schultz makes a few pages later when he states, "a base rate case is not the appropriate forum in which to examine future plant growth and needs."

Gulf and Mr. Schultz agree that a base rate case is not the appropriate place in which to determine future plant growth and needs. However, given the repeated refrain of witnesses Schultz, Chriss and Meyer that no studies have been presented, I am presenting in my rebuttal representative studies that Gulf conducted.

Gulf's 2007 Ten Year Site Plan (Exhibit RJA-1, Schedule 4) reflected a substantial need at the end of the planning period for 1,006 MW. The subsequent 2008 Ten Year Site Plan, Exhibit RJA-1, Schedule 5, showed an even larger need by 2017. Both site plans included a minimal retirement of existing coal units.

Gulf was facing carbon legislation that if enacted would place an enormous need for generation in Gulf's future. Exhibit RJA-1, Schedule 8 was an early assessment of the cost impacts to Gulf for CO_2 legislation. This was performed in the fall of 2007 and shows that carbon legislation could have a significant cost impact.

A series of cost-effectiveness analyses were performed in addition to need assessments. Exhibit RJA-1, Schedule 9 was a cost-effectiveness assessment performed in February 2008 that assesses the cost-effectiveness of a nuclear option. A preliminary cost-effectiveness analysis prepared for the early part of the determination of need effort is attached as Exhibit RJA-1, Schedule 10. It was a multiple scenario analysis using multiple levels of gas costs and multiple levels of carbon costs. This was based upon assumptions out of the 2008 resource planning process. The most refined study performed by Gulf is attached as Exhibit RJA-1, Schedule 11. It was the same analysis as shown in Schedule 10 with updated cost information. It showed that nuclear was the most cost-effective option in 8 out of 9 scenarios.

Beyond need assessments and cost-effectiveness studies, there were several relevant site investigative studies performed that show the scope of Gulf's review of potential sites and why the North Escambia site was chosen as the sole site for nuclear. This information was provided in Gulf's response to Citizens' Requests to Produce Documents Nos. 6 and 90. These studies are also mentioned in Gulf witness Burroughs' direct testimony.

Also attached as Exhibit RJA-1, Schedule 12 is a chart showing the potential environmental requirements that could impact Gulf and result in early retirement of coal units. While the prospects of environmental requirements causing coal unit retirements have waxed and waned, this has been and continues to be a real risk to Gulf and its customers. Gulf shared these concerns with the Commission at Internal Affairs during April of 2011 and in response to a FPSC Information Request in June 2011.

Q. Mr. Schultz's next disallowance argument focuses on several points Mr. Burroughs made in his direct testimony. Please address Mr. Schultz's observations.

A. Mr. Schultz acknowledges that Mr. Burroughs testified in his direct testimony that Gulf's "broad technical evaluation has implications in Gulf's approach to land held for future use." That restatement of Mr. Burroughs' testimony was accurate. But he then restated what Mr. Burroughs said into something Mr. Burroughs did not say and Gulf did not do –"If by that he means Gulf's approach has changed such that the acquisition of 4,000

acres of land at a cost of $27 million precedes any technical analysis, I submit that shift is not a prudent one for which customers should bear the costs." He is rebutting his mischaracterization of what Mr. Burroughs said, not what Gulf actually did.

Gulf's purchase of the North Escambia site did not precede technical analysis. The purchase was the fruit of the technical analysis. Gulf needed to act to preserve the valuable nuclear option for its customers. The potential value of the nuclear option was supported by multiple years of site investigation, need assessments, cost-effectiveness analyses and other technical assessments.

Q. Mr. Schultz cites several discovery responses stating that Gulf has not used Gulf-owned generating sites and that Gulf has only 30 MW of need as arguments against the North Escambia site. Please respond.

A. These discovery responses have little or nothing to do with Gulf's long-term need to preserve the nuclear option for its customers. As Gulf witness Grove pointed out in his direct testimony, Gulf was prudent in its resource additions since the last rate case, adding four PPAs which the Commission has approved. That is why Gulf did not have to use a Company-owned site.

As to Gulf's future needs, nuclear is a long-term option that requires 10 or more years for development. What Mr. Schultz does not tell the Commission is that Gulf's need in 2023 will dwarf its 30 MW need in 2022.

By May 2023, Gulf will have to replace 885 MW plus meet its forecasted load growth for 2022 and 2023. That could mean a need of close to 1,000 MW in 2023, a mere year later than the 2022 date Mr. Schultz chose to use, and none of that need assumes any coal unit retirement due to environmental requirements. Nuclear might prove to be an attractive option in that time frame, but with only one site available, how could Gulf even consider nuclear for that need if it had not preserved the site? It was prudent for Gulf to preserve the nuclear option for Gulf's customers.

Q. Mr. Schultz also argues that buying this property is inconsistent with preserving planning flexibility because review of nuclear has not advanced to a determination of need. Please address this argument.

A. As I mentioned previously, Gulf's consideration of the nuclear option had advanced into preparation for nuclear licensing and permitting. Contrary to Mr. Schultz's testimony, there was no "acknowledgement" in the direct testimony of Mr. McMillan (nor that of Mr. Burroughs) "that the review of generation technologies had not taken place." On the contrary, Mr. Burroughs spoke of the technical evaluations undertaken in Gulf's planning process in his direct testimony.

The purchase of the North Escambia site assures planning flexibility. Gulf acquired the only available nuclear site. Without the available site, Gulf would have lost for its customers the only base load, carbon-free option that was economically viable – nuclear. Of course, the site also increases planning flexibility because it can also host other technologies in addition

to nuclear. This decision significantly increased Gulf's planning flexibility and is of real value to Gulf's customers.

III. OTHER INTERVENOR ARGUMENTS

Q. Mrs. Alexander, both Federal Executive Agencies (FEA) witness Meyer and Florida Retail Federation (FRF) witness Chriss argue against inclusion of the North Escambia site in rate base. Please address their arguments.

A. Mr. Meyer makes two arguments related to Section 366.93 Florida Statutes; however, both of his arguments are legal issues that I will defer to Gulf's attorneys.

Mr. Chriss offers one argument against the inclusion of the North Escambia County site in rate base. He argues that based on the Ten Year Site Plan, Gulf does not plan to use the site until at least 2020, so including the site in rate base would allow Gulf to earn a return on a site that is not used and useful in providing service to customers. I disagree with his argument.

The investigation and purchase of the North Escambia site has preserved the nuclear option for all of Gulf's customers. Absent these efforts, the sole site available in Northwest Florida that could accommodate a nuclear unit could have become lost to Gulf Power and its customers. Gulf could

not reasonably consider such a nuclear option if it had no site on which to build a facility. Therefore, the property is used and useful in providing service – it preserves an option that may prove critical for Gulf to be able to continue to serve customers. In that sense it is the most valuable plant held for future use in Gulf's possession, and its cost should be included in rate base.

IV. CONCLUSION

Q. Please summarize your rebuttal testimony.

A. The intervenors fail to understand that Gulf has acted in its customers' interest to preserve a nuclear option. Mr. Schultz recognizes that a base rate case is not the appropriate place to examine generating options, but he criticizes Gulf for not presenting studies in this case. He argues that the prudently incurred costs for investigating and acquiring the North Escambia site should not be included in rate base, but I have rebutted each and every argument. Mr. Schultz's characterization of Gulf's legitimate attempt to preserve a valuable nuclear option for its customers as "speculative overreaching" is clearly inaccurate.

In the face of government policy that discouraged carbon emissions, forecasted capacity needs on Gulf's system, high forecasted gas prices, and state legislation designed to encourage nuclear unit development, Gulf was prudent in investigating the nuclear option. When nuclear

appeared to hold promise to meet known and potential environmental induced need, Gulf was prudent to begin extensive site investigation and prepare for permitting and licensing. When Gulf learned there was only one nuclear site available in Northwest Florida, Gulf was prudent in beginning to purchase the site. When factors changed that made the need for capacity less imminent, Gulf was prudent again in deferring its licensing and permitting activities. And as Mr. McMillan points out in his direct testimony, ceasing to accrue carrying charges on the deferred nuclear site costs and asking for base rate recovery of those costs is also in the interest of Gulf's customers. The North Escambia site should be included in rate base.

Q. Does this conclude your rebuttal testimony?

A. Yes.

AFFIDAVIT

STATE OF FLORIDA)
)
COUNTY OF ESCAMBIA)

Docket No. 110138-EI

Before me the undersigned authority, personally appeared Rhonda J. Alexander, Forecasting Supervisor of Gulf Power Company, and who on behalf of said corporation, being first duly sworn, deposes, and says that pursuant to Rule 1.340(a), Florida Rules of Civil Procedure, she verifies that the foregoing is true and correct to the best of her knowledge, information, and belief. She is personally known to me.

The signed original affidavit is attached to the original testimony on file with the FPSC.

s/_____
Rhonda J. Alexander
Forecasting Supervisor

Sworn to and subscribed before me this 3rd day of November, 2011.

_____
Notary Public, State of Florida at Large

Florida Public Service Commission
Docket No. 110138-EI
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Plant Held For Future Use **Nuclear Project Costs**	**Staff's Fifth Set of Interrogatories** **Docket No. 110138-EI** **GULF POWER COMPANY** **August 5, 2011** **Item No. 47** **Attachment A**
	13 Month Avg. 2011
Site Acquisition	
Land Costs	18,140,286
Utilities (water & electricity for house) & maintenance	5,613
Property Taxes	110,158
Gulf Support Costs related to Land Acquisition	301,487
Gulf Labor Overheads	10,098
Legal fees related to Land Acquisition	78,411
Environmental Assessments & clean up	272,719
Total Site Acquisition	18,918,771
Site Investigation	
Transmission Study	99,630
1st Round Geotechnical Analysis	-
Geotech Inv-SCS Earth Science & Env Engineering	448,193
E&CS Resource Pool Billings	396,751
Retail Generation Development Support	140,032
Phase 1 Fatal Flaw Analysis (Bechtel site conceptual engineering)	1,117,237
Phase 1 Fatal Flaw Analysis (Mactec/survey clearing work)	1,167,721
Hydrogeological Study	561,887
Southern Nuclear labor / travel expenses (Site Inv Support)	79,072
Gulf Support Costs related to Site Investigation	19,988
Legal fees related to Site Investigation	9,170
Meterological tower installation	503,090
Meterological tower maintenance	6,000
Total Site Investigation	4,548,772
Need Determination Filing	
Legal fees	187,238
Project Support Costs	
Southern Nuclear labor / travel expenses (General Support)	261,328
SCS Support (Resource Planning & Financial Planning)	39,114
Gulf Labor & Travel	132,533
Gulf Labor Overheads	221
Legal Fees	217,545
Total Project Support Costs	650,742
UWF Generation Study/Economic Analysis	
UWF Costs	32,500
Legal fees	1,120
UWF Generation Study/Economic Analysis	33,620
Project Frank	370,460
TOTAL COSTS EXCLUDING CARRYING COSTS	24,709,603
CARRYING COSTS (through Dec 2011)	2,977,838
TOTAL CHARGES	27,687,440

STATE OF FLORIDA

OFFICE OF THE GOVERNOR
EXECUTIVE ORDER NUMBER 07-127

Establishing Immediate Actions to Reduce Greenhouse Gas Emissions within Florida

WHEREAS, with nearly 1,350 miles of coastline and a majority of citizens living near that coastline, Florida is more vulnerable to rising ocean levels and violent weather than any other state; and

WHEREAS, global climate change is one of the most important issues facing the State of Florida this century; and

WHEREAS, Florida is the second fastest growing state in the union with respect to the annual increase of new greenhouse gas emissions; and

WHEREAS, immediate actions are available and required to reduce emissions of greenhouse gases within Florida; and

WHEREAS, efforts are underway at the national level to begin addressing greenhouse gas emissions; and

WHEREAS, Florida has committed to becoming a leader in reducing emissions of greenhouse gases which are causing changing Earth's climate; and

WHEREAS, Florida, together with international leaders and experts, is hosting the Serve to Conserve Climate Change Summit on July 12 and 13, 2007 in Miami, Florida;

NOW, THEREFORE, I, CHARLIE CRIST, as Governor of Florida, in obedience to my solemn constitutional duty to take care that the laws be faithfully executed, and pursuant to the Constitution and laws of the State of Florida, do hereby promulgate the following Executive Order, to take immediate effect:

Section 1. I hereby establish greenhouse gas emission reduction targets for the State of Florida as follows: by 2017, reduce greenhouse gas emissions to 2000 levels; by 2025, reduce greenhouse gas emissions to 1990 levels; by 2050, reduce greenhouse gas emissions by 80% of 1990 levels.

Section 2. I hereby direct the following actions by members of my Administration in order to produce immediate reductions in greenhouse gas emissions within Florida;

1. The Secretary of Environmental Protection shall immediately develop rules as authorized under Chapter 403, Florida Statutes, to achieve the following:
    - Adoption of a maximum allowable emissions level of greenhouse gases for electric utilities in the State of Florida. The standard will

require at minimum, three reduction milestones as follows: by 2017, emissions not greater than Year 2000 utility sector emissions; by 2025, emissions not greater than Year 1990 utility sector emissions; by 2050, emissions not greater than 20% of Year 1990 utility sector emissions (i.e., 80% reduction of 1990 emissions by 2050):

- Adoption of the California motor vehicle emission standards in Title 13 of the California Code of Regulations, effective January 1, 2005, upon approval by the U.S. Environmental Protection Agency of the pending waiver, which includes emission standards for greenhouse gases, submitted by the California Air Resources Board; and
- Adoption of a statewide diesel engine idle reduction standard.

2. The Secretary of Community Affairs shall immediately:
   - Convene the Florida Building Commission for the purpose of revising the Florida Energy Code for Building Construction to increase the energy performance of new construction in Florida by at least 15% from the 2007 Energy Code. The Commission should consider incorporating standards for appliances and standard lighting in the Florida Energy Code. Target implementation date for the revised Florida Energy Code for Building Construction is January 1, 2009;
   - Initiate rulemaking of the Florida Energy Conservation Standards, Chapter 9B-44, Florida Administrative Code, with an objective to increase the efficiency of applicable consumer products authorized

under s. 553.957, Florida Statutes, by 15% from current standards for implementation by July 1, 2009.

Section 3. I hereby request the Florida Public Service Commission to take the following actions for the electric utility sector in order to open the market to clean, renewable energy technologies, thus avoiding future greenhouse gas emissions:

- Not later than September 1, 2007, initiate rulemaking to require that utilities produce at least 20% of their electricity from renewable sources (Renewable Portfolio Standard) with a strong focus on solar and wind energy;
- Not later than September 1, 2007, initiate rulemaking to reduce the cost of connecting solar and other renewable energy technologies to Florida's power grid by adopting the Institute of Electrical and Electronics Engineers (IEEE) Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems as the uniform statewide interconnection standard for all utilities; and
- Not later than September 1, 2007, initiate rulemaking to authorize a uniform, statewide method to enable residential and commercial customers who generate electricity from on-site renewable technologies of up to 1 megawatt in capacity to offset their consumption over a billing period by allowing their electric meters to turn backwards when they generate electricity (net metering).

Section 4. All state agencies departments under the direction of the Governor are hereby directed, and all other state agencies are hereby requested, to assist those carrying out the directions in this Executive Order.

IN TESTIMONY WHEREOF, I have hereunto set my hand and have caused the Great Seal of the State of Florida to be affixed at Tallahassee, The Capitol, this 13th day of July, 2007.

GOVERNOR

ATTEST:

SECRETARY OF STATE

Expansion Plan – Case 4/5

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
2008 IRP Plan	172	235	810	882	928	1011	1138	1239	1292	1377	1465	1552	1598	1753
Scholz RPS	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46	-46
Retire Smith 1&2						357	357	357	357	357	357	357	357	357
Retire Crist 4-5						150	150	150	150	150	150	150	150	150
Retire Crist 6-7									760	760	760	760	760	760
Add CC 1			-600	-600	-600	-600	-600	-600	-600	-600	-600	-600	-600	-600
Add CC 2						-600	-600	-600	-600	-600	-600	-600	-600	-600
Add Nuclear 1									-1200	-1200	-1200	-1200	-1200	-1200
Revised PPA or System Purchase	(126)	(189)	(164)	(236)	(282)	(272)	(399)	(500)	(113)	(198)	(286)	(373)	(419)	(496)

Case 4 force burned generation in order to meet the transmission restrictions outlined by Gulf

- Blue highlighting indicates years in which units were forced to run at least at minimum operation in order to meet the transmission restrictions as well as the CO_2 limits
- Red highlighting indicated years in which units were forced to run at more than minimum operation in order to meet the transmission requirements as well as the CO_2 limits
  - This includes running Crist 6&7 at more than minimum operation in order to meet the transmissions and CO_2 requirements
- Smith 3 was also designated a "must-run" unit in the same manner and time frame as the expansion CCs

CASE 4 & 5 Assumptions

CO_2 penalty applied based on the McCain-Liebermann legislation,
Case 4 (free CO_2 allocations) & Case 5 (no free CO_2 allocations)
RPS plan as outlined by Gulf Power

10/08/2007

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The capacity resource needs set forth in the SES IRP are driven by the demand forecast that includes projected demand-side measures embedded into the forecast prior to entering the generation mix process. The generation mix process uses PROVIEW® to screen the available technologies in order to produce a listing of preferred capacity resources from which to select the most cost-effective plan for the system. The resulting SES resource needs are then allocated among the operating companies based on reserve requirements, and each company then determines the resources that will best meet its capacity and reliability needs. The generation technologies screened in the latest SES IRP include gas-fired combustion turbine, gas-fired combined cycle, pulverized coal, and nuclear.

For the 2007 TYSP cycle, the timing of Gulf's next capacity need has changed from 2009, as shown in the previous TYSP, to 2014 due to Gulf's successful negotiation and subsequent execution of purchased power agreements (PPAs) for a total of 487 MW that will serve Gulf customers' electrical needs from June 1, 2009 until May 31, 2014. The PPAs contain the terms and conditions for the supply of peaking power from two existing regional market facilities located outside Gulf's service territory. These PPAs were filed with the FPSC in December 2006, and approvals are currently pending.

With the inclusion of this PPA capacity as committed capacity, Gulf's allocated resource needs for this planning cycle are shown to begin in 2010, and increase annually to 1006 megawatts by the summer of 2016. The magnitude of the need has decreased slightly frompreviously anticipated levels due primarily to

a decrease in expected summer peak demand projections for the 2007 TYSP cycle.

In order to determine its next proposed capacity resource, Gulf has continued to evaluate the construction of generating capacity, or the acquisition of equivalent capacity resources in coordination with other SES operating companies. Gulf's current generation expansion plan calls for the addition of a 600 megawatt gas-fired combined cycle unit in Gulf's service territory in 2014. In addition, short-term reliability purchases from the market are proposed for the summer of 2016. When combined with the proposed capacity additions of the other Southern electric system operating companies, Gulf's proposed additions will result in the SES having a planning reserve margin of 15% through 2016.

If Gulf ultimately commits to the construction of this new combined cycle generating capacity, the installation is anticipated to coincide with the expiration of its firm market capacity purchases in May 2014. Locations for this potential combined cycle generating facility are currently being studied, with the primary focus being on Gulf's existing generating facility sites. Schedules 8 and 9 of this TYSP document contain more detailed information on this potential combined cycle addition.

The capacity resource needs set forth in the SES IRP are driven by the demand forecast that includes projected demand-side measures embedded into the forecast prior to entering the generation mix process. The generation mix process uses PROVIEW® to screen the available technologies in order to produce a listing of preferred capacity resources from which to select the most cost-effective plan for the system. The resulting SES resource needs are then allocated among the operating companies based on reserve requirements, and each company then determines the resources that will best meet its capacity and reliability needs. The generation technologies screened in the latest SES IRP include gas-fired combustion turbine, gas-fired combined cycle, pulverized coal, and nuclear.

During the 2008 TYSP cycle, Gulf has two purchased power agreements (PPAs) that will supply 487 megawatts of peaking power from two existing regional market facilities to serve Gulf customers' electrical needs from June 1, 2009 until May 31, 2014. Gulf filed its petition for approval of these PPAs with the FPSC in December 2006, and they were approved by the Commission in Order No. PSC-07-0329-PAA EI dated April 16, 2007.

With the inclusion of this PPA capacity as committed capacity, Gulf's additional resource needs for this planning cycle begin in 2010 and increase annually to 1162 megawatts by the summer of 2017. The magnitude of the need has increased slightly from previously anticipated levels due primarily to an increase in expected summer peak demand projections for the 2008 TYSP cycle.

Gulf has continued to evaluate the construction of generating facilities or the acquisition of equivalent capacity resources in coordination with other SES operating companies in order to determine its next proposed capacity resource addition. These evaluations have resulted in Gulf's current generation expansion plan, which calls for the addition of an 840 megawatt gas-fired combined cycle unit in Northwest Florida in 2014. This proposed addition is subject to certification under Florida's Power Plant Siting Act (PPSA) and will, therefore, require the issuance of a Request for Proposals (RFP) for possible alternatives to Gulf's own construction. Gulf is currently planning to issue this RFP in the fall of 2008 and to make the "build or buy" decision by the fall of 2009. When combined with the proposed capacity additions of the other Southern electric system operating companies, Gulf's proposed additions will result in an SES planning reserve margin of approximately 15% through 2017.

If Gulf ultimately commits to the construction of this new combined cycle generating capacity, the installation is anticipated to coincide with the expiration of its firm market capacity purchases in May 2014. Studies to determine the best location for this potential combined cycle generating facility are underway, including efforts to determine what effect, if any, the recently adopted reductions in the Environmental Protection Agency's eight hour ozone standards will have on siting this proposed unit in Northwest Florida. The primary sites under study continue to be Gulf's existing generating facility sites in Northwest Florida. Schedules 8 and 9 of this TYSP document contain more detailed information on this potential combined cycle addition.

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Sites Reviewed

SITE COMPARISON
DRAFT

Area	Criteria	Weighting Score	Celia	McDavid	Celia 24.45	McDavid 21.15
Land	EAB (3400 ft)	5	15 owners / 3 homestead / 6 bldg -	36 owners / 20 homestead / 25 bldg $ to $$	5	
Emergency Planning	LPZ (2 mi)	5	Hwy 29 > 2 mi	US Hwy 29 <2 mi	5	
	EPZ (10 mi)	5	Century Correctional Facility 4.7 mi	Century Correctional Facility 3.6 mi	5	
		5	City of Atmore <10mi	-		5
Environmental	Wetlands & Mitigation	3.35	Wetlands & creeks at footprint $ to $$	Minimal wetlands on site -		3.35
Security	Accessibility	2.75	US Hwy 29 3 mi to site center	US Hwy 29 0.8 mi to site center	2.75	
Health & Safety	Hazards	2.7	Railroad 3.6 mi US Hwy 29 3 mi to site center petroleum pipeline <1 mi	Railroad 1.5 mi to site ctr US Hwy 29 0.8 mi to site center petroleum pipeline <2 mi	2.7	
		3.3	PMF v Site EL 235	PMF v Site EL 250		3.3
Engineering	Foundation Conditions	5	Initial Testing Indicates Suitable	Conditions Suitable		5
	Excavation Depth	2.5	70 ft backfill projected $ to $$	55 ft backfill projected		2.5
	Footprint Land	2	3 owner / 0 hmstd / 0 bldg	16 owner / 11 hmstd / 13 bldg	2	
	Pumping Head	2.0	-	$	2	
	Piping Distance	2.0	5 mi to Escambia River $	3 mi to Escambia River -		2

Key
Rank — Preferred — Less preferred or cautionary
Potential Cost Differential — $ = millions greater — $$ = tens of millions greater

Southern Company Generation

Cost Impacts 17 Year NPV (k$)

	Case 1	Case 2	Case 3
Incremental Variable Production Cost and Pool Energy Costs Excluding CO_2 Emission Cost (k$)	$(183,983)	$321,524	$321,524
CO_2 Emission Cost (k$)	$ 0	$(780,228)	$882,188
Net Change in Capacity Pymts (k$)	$(19,379)	$(8,075)	$(8,075)
Total Renewable Transaction Incremental Costs (k$)	$928,328	$928,309	$928,309
Incremental O&M & RevReq on Capital (k$)	$926,400	$1,174,925	$1,174,925
Total Incremental Cost (k$)	***$1,651,366***	***$1,636,455***	***$3,298,871***

SOUTHERN COMPANY
Energy to Serve Your World℠

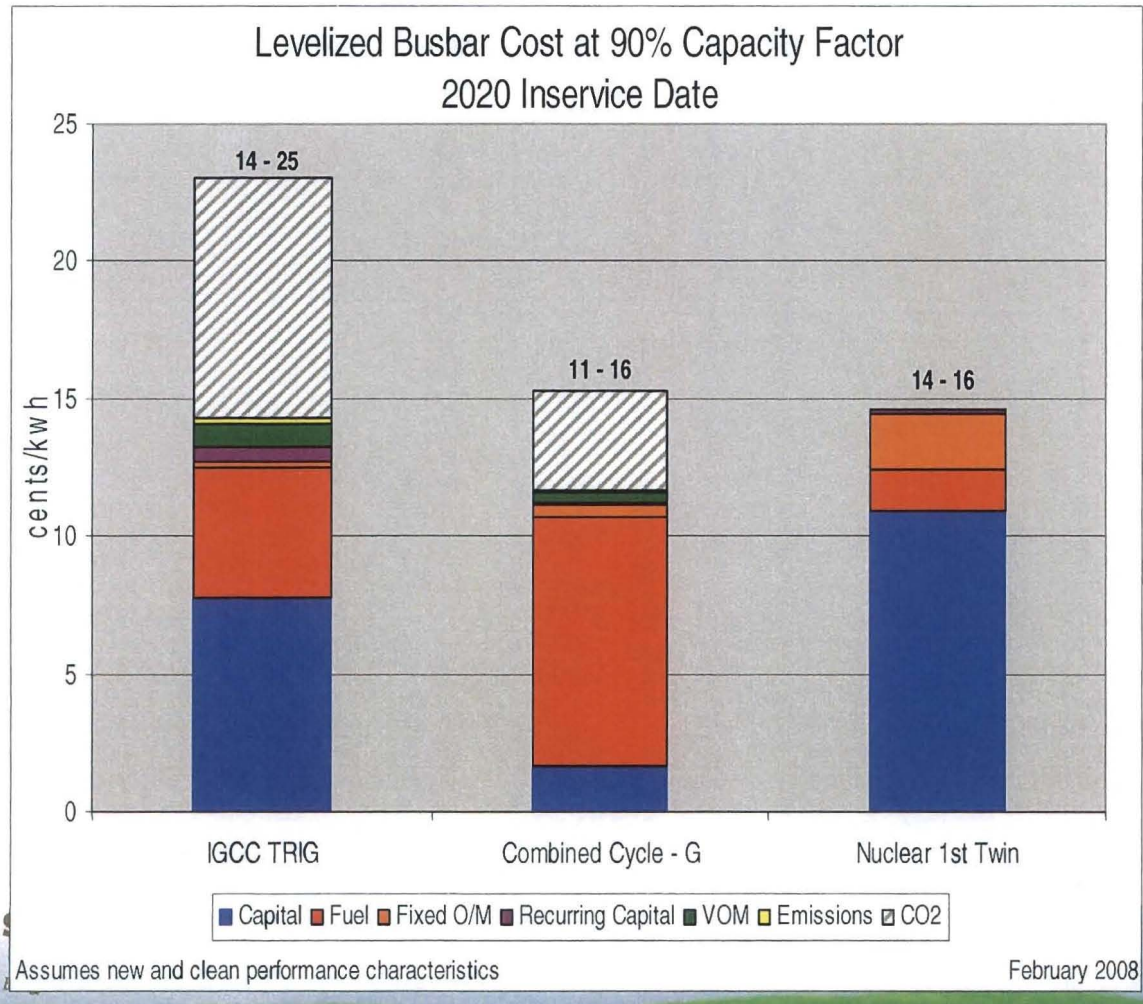
9/21/2007

Case 1 – No CO_2 cost – Gulf must meet emissions targets, but no production cost associated with CO_2 emissions

Case 2 – Free Allocations – CO_2 price captured as production cost based on projected allowance value, but Gulf receives free allocations based on historical emissions

Case 3 – No free allocations – each ton of CO_2 that is emitted must be purchased at market price

Generation Mix Implications



Overnight capital assumptions: IGCC TRIG $2,645/kW CC-G $573/kW Nuclear $3,500kW

Nuclear vs Nat Gas CC 2-Unit Site

Cost Savings (or loss) of Nuclear vs Gas

CC-G versus Nuclear

Gulf - 2020 60yr + or - $/kw Break Even Inservice Cost
(Negative indicates Nuclear not cost effective)

	Carbon		
Fuel	**$10**	**$20**	**$30**
High	4,577	5,596	6,630
SCS	1,014	2,039	3,076
Mid	551	1,560	2,663
Low	XXX	XXX	XXX

-- Installed cost $7,188/kw based on $3,885/kw ON cost, esc 4% adjusted for life cycle financing savings to customer from early cash recovery of $689/kw
-- Operational cost parameters based on Vogtle (2-unit nuclear site 2,200 MW)
-- Gulf Cost of Capital

Carbon Assumptions:
2008-2015 Inflation
2016-2037 Inflation + 5%
2038 & Beyond Inflation

10-27-2008

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Nuclear vs Nat Gas CC 2-Unit Site

Cost Savings (or loss) of Nuclear vs Gas

CC-G versus Nuclear

Gulf - 2020 60yr + or - $/kw Break Even Inservice Cost
(Negative indicates Nuclear not cost effective)

	Carbon		
Fuel	**$10**	**$20**	**$30**
High	3,947	4,966	6,000
SCS	384	1,409	2,446
Mid	-79	930	2,033

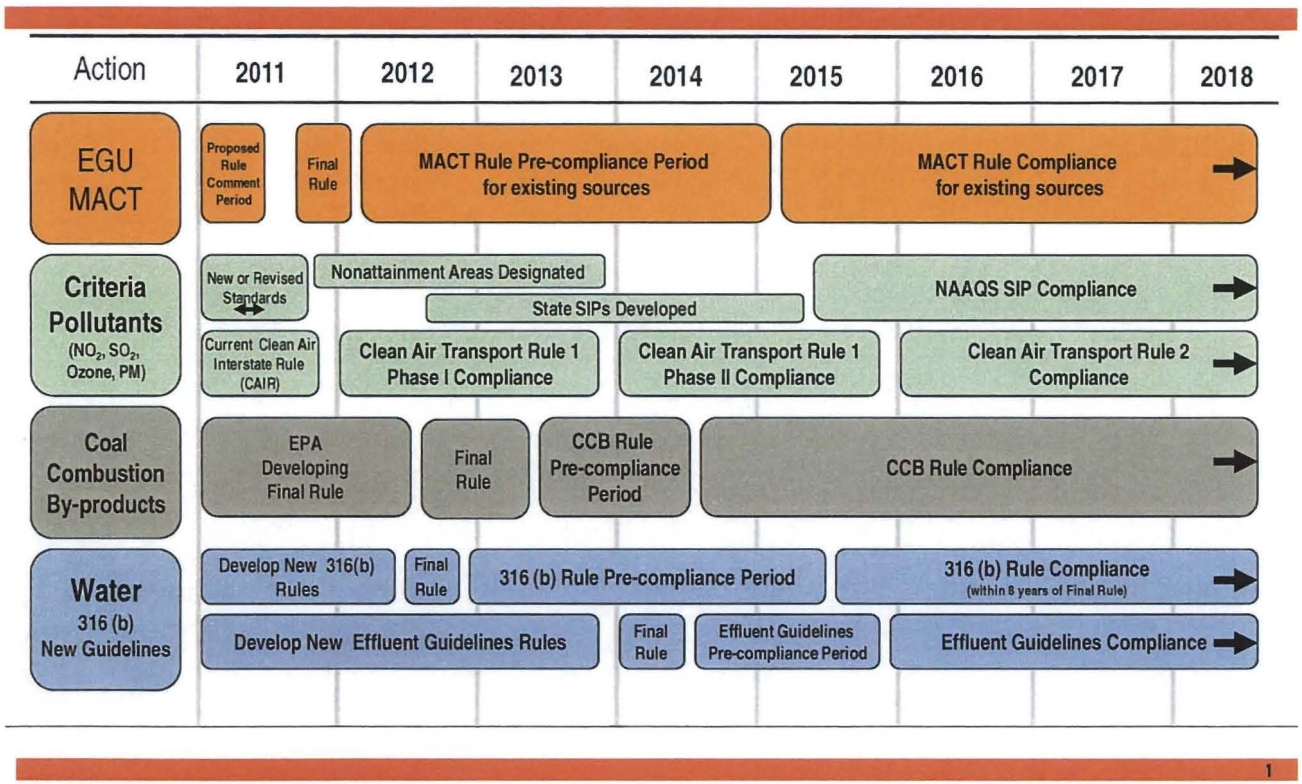
-- Installed cost $7,818/kw based on $3,906/kw ON cost, esc 4%
-- Excludes transmission costs
-- Operational cost parameters based on Vogtle (2-unit nuclear site 2,200 MW)
-- Gulf Cost of Capital

Carbon Assumptions:
2008-2015 Inflation
2016-2037 Inflation + 5%
2038 & Beyond Inflation

02-10-2009

EPA New Regulatory Actions Timeline

(updated 4/11/2011)



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