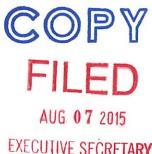
BEFORE THE GEORGIA PUBLIC SERVICE COMMISSION STATE OF GEORGIA



In Re:]	EXEC	CUTIVE SECRETARY
]		G.P.S.C.
Review of Proposed Revisions and]		
Verification of Expenditures Pursuant]		
To Georgia Power Company's Certificate]	Docket No. 29849	
of Public Convenience and Necessity for]		
Plant Vogtle Units 3 and 4,]		
Twelfth Semi-Annual Construction	Ī		
Monitoring Report	1		

Brief of the Southern Alliance for Clean Energy

COMES NOW the Southern Alliance for Clean Energy ("SACE") and submits its Post-Hearing Brief to recommend the following:

- 1. In order to protect ratepayers and help minimize the financial impact of cost overruns the Commission should reduce the Company's allowed return on equity from the current 10.95% whenever the Company begins accruing any return on equity expenses on its total capital costs.
- 2. The Company should not be allowed to over collect financing costs through the Nuclear Construction Cost Recovery tariff above the current certified cost of the Project.
- 3. The Advocacy Staff and Company should be required to provide a 40-year life expectancy economic evaluation in addition to the current 60-year evaluation.

- 4. In addition to providing the cost associated with environmental mitigation measures the Company should be directed to provide a description of what environmental mitigation measures are included, the estimated schedule for implementation and/or compliance and the total estimated costs of such requirements.
- 5. The Staff should be directed to determine a reasonable projected cost at which it is clearly uneconomical for the Vogtle Project to continue, and report it in all subsequent Project reviews.

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Argument and Citation of Authority

I. The Current Projected Commercial Operation Dates of June 2019 and June 2020 Are Completely Unreliable Based on the Project History and Any Rational Analysis of the Current Construction Schedule Indicates that the Project's Commercial Operation Dates will be Pushed Back Further

This Project has had several commercial operation date ("COD") revisions beginning with the original CODs of April 1, 2016 for Unit 3 and April 1, 2017 for Unit 4. The next CODs were November 1, 2016 and November 1, 2017 for Units 3

and 4 respectively. Then the CODs were pushed back to December 31, 2017 for Unit 3 and December 31, 2018 for Unit 4. Those CODs did not last long before June 1, 2019 and June 1, 2020 were selected as the most recent "hoped for" completion dates. The current CODs reflect a 72% increase in construction schedule duration.

With three major Project COD revisions since certification and numerous persistent construction problems plaguing the Project it is highly unlikely that the June 2019 and June 2020 CODs will last either, especially given recent testimony suggesting an additional 3-month delay. (Roetger and Jacobs 12th VCM Direct Testimony, p. 10) Unfortunately the magnitude and complexity of the Project utilizing untested construction techniques, the lack of a fully trained and experienced work force and multiple new subcontractors being brought into the module fabrication process have all combined to make any accurate projection of hard and fast commercial operation dates for both Units impossible.

Only 23.7% of the construction for both Units is complete as of May 20, 2015.

(Id.) And as was pointed out by the Advocacy Staff Witness when questioned about the status of engineering work only being 87.7% complete on the Project he said, "... that's not necessarily a good position to be in, to have engineering incomplete in 2015, so that you can't procure and you can't construct." (Tr. 385)

Commission Staff witness Roetger probably said it the best when he responded to a question about the cause of the Project construction delays when he answered, "I

think a good way of looking at it is that they've had problems with E, the P and the C." (Tr. 296) If the Project is having problems with engineering, procurement and construction how could any rational person assume more construction delays are not predictable and inevitable? According to Staff witnesses Roetger and Jacobs, ". . .the March 2015 IPS reflects 3 additional months delay showing CODs in September 2019 and 2020." (Roetger and Jacobs 12th VCM Direct Testimony, p. 10; Tr. 268)

It's especially telling when Georgia Power's witnesses express grave concerns about their Contractor's performance. When the Company's pre-filed testimony states, "In general, the Company, like the other Owners, has been disappointed with the Contractor's performance under the revised IPS. The Contractor has missed several key milestones since the publication of the revised IPS in January 2015, including several milestones relating to critical-path or near-critical-path activities such as the assembly of CA01, the delivery of shield building panels, and work on concrete outside containment. The Contractor has also encountered difficulties in ensuring that new vendors produce high-quality, compliant components per the Integrated Project Schedule ("IPS") projections." (Chiock, Clem and McKinney 12th VCM Direct Testimony, p. 15; Tr. 35) If the Company is pointing out all these major flaws in the Contractor's performance it goes without saying that the odds of the current CODs being met are slim to none.

A. The Current 39 Month Construction Delay has Dramatically Reduced the Current Alleged Project Benefits of \$2.7 Billion to Only \$208 Million Which Will Disappear and Go Negative if the \$522 Million in Production Tax Credits for Unit 4 are Lost

Longer and longer construction delays have virtually eliminated any claimed Project benefits according to the Advocacy Staff's expert witness. (Direct Testimony of Philip Hayet, p. 28, Table 5; Tr. 425) When the benefits are evaluated with the detriments, "...customers are clearly not better off by the \$2.7 billion identified by the Company in this 12th VCM proceeding." (Tr. 425) Instead, based on a net present value basis after considering all of the benefits and detriments only \$208 million in benefits remain. Those very meager benefits would be further eroded by \$522 million (Tr. 496) if Unit 4 does not qualify for the federal production tax credits.

From \$4 billion in claimed additional value to customers (Docket 29849, 8th Semi-Annual Construction Monitoring Report, pp. 6 and 9) down to approximately \$2.7 billion in the 12th VCM, the Project's benefits continue to diminish. Further delays beyond the current 39 months will mean additional project costs and lower benefits to customers. Mr. Hayet referenced Mr. Jeffery Burleson's 2008 testimony in the Vogtle Certification proceeding in which Mr. Burleson estimated, "...that delay in and of itself will cause loss of fuel cost savings on the order of 400 to 700 million dollars a year for customers and will result in increased capital cost of the project."(Direct Testimony of Philip Hayet, p. 21; Tr. 418 citing to Tr. 224 in Docket No. 27800)

Additionally, any fuel savings claimed by the Company will not be realized until 2076 through 2080 (Tr. 474-475), and the cost of any future fuel savings 60 years from now will come at a tremendous cost to ratepayers' today. (Tr. 476) For every \$10.00 spent today ratepayers will only see a \$1.00 savings 60 years from now. (Tr. 475-476).

The dramatic erosion of any claimed Project benefits reduces the financial viability of the Project and completely undermines the Company's arguments regarding the long-term benefits to ratepayers. (Tr. 488) This situation also makes it more likely that Unit 4 is not needed and serious consideration should be given to analyzing whether construction of Unit 4 should proceed or be delayed.

B. The 39 Month Construction Delay Will Mean an Additional \$319.00 or \$6.26 a Month Rate Increase for the Average Residential Customer Who Uses 1,000 Kilowatt Hours per Month Beginning in April 2016 and Continuing to June 2020

Ratepayers will see the amount they pay every month for the Nuclear Construction Cost Recovery ("NCCR") Tariff increase in 2016 because of the 39 month construction delay. The average Georgia Power residential ratepayers who use only 1,000 kilowatt hours per month will see a \$319.00 or a \$6.26 per month increase in their electric bill beginning in April 2016 and continuing to June 2020. (Direct Testimony of Philip Hayet, p. 30) The \$319.00 increase in rates will be split between \$132.00 in higher fuel costs and \$187.00 in higher NCCR costs. (Tr. 455) For the

average \$6.26 per month increase that will mean an increase of \$3.67 for the NCCR tariff charge and \$2.59 for increased fuel costs. According to the Georgia PSC's Georgia Power Bill Calculator a residential ratepayer using 1,000 kilowatt hours currently pays an average of \$6.45 per month¹ and this amount will increase an additional \$3.67, or a 57% increase.

This intergenerational subsidy imposed on Georgia ratepayers today increases their costs while providing a potential windfall to future ratepayers who will not be burdened with the financing costs of Units 3 and 4. Additionally, for any residential customer that uses more than 1,000 kilowatts a month or any commercial customer, the cost to them will be greater than \$6.26 per month based on their usage.

II. The Commission Has Options Available Now that It Can Utilize to Protect Ratepayers from Unjustified Rate Increases Caused by the Construction Delays Without Having to Wait for a Prudency Review That Won't Occur Until 2020 or Later

¹ Georgia Public Service Commission Georgia Power Bill Calculator – Summer Rate for NCCR rider \$7.44 and Winter Rate for NCCR rider \$5.96 (($$7.44 \times 4$) + ($$5.96 \times 8$) / 12 = \$6.45). Bill calculator available at http://www.psc.state.ga.us/calc/electric/GPcalc.asp.

This Commission has options it can exercise today to protect consumers and minimize the financial impact of the current and future Vogtle Project cost overruns caused by construction delays. Waiting until 2020 or later to take some action leaves today's ratepayers completely exposed to the full financial impact of Project cost overruns and insulates the Company and its shareholders from those same risks. It is not necessary to conduct a full prudency review of the Project before taking some limited action to protect ratepayers.

The Commission should look to its neighboring commissions in South Carolina and Mississippi to see how they have been proactive in protecting their ratepayers from significant project cost overruns. In South Carolina the Public Service Commission entered into a stipulation that will reduce South Carolina Electric & Gas Company's return on equity ("ROE") for their new nuclear project at V.C. Summer from 11.00% to 10.50%. (SCANA press release issued June 29, 2015, "SCE&G Announces Settlement Agreement with the South Carolina Office of Regulatory Staff and South Carolina Energy Users Committee Related to the Petition to Update Construction and Capital Cost Schedules for New Nuclear Units") The Mississippi Public Service Commission defiantly stood up against the Mississippi Power Company and denied the company's request for a rate increase to cover cost overruns at the Kemper Integrated Coal Gasification Combined Cycle ("IGCC") plant.

A. Because of the Ongoing Delays in Construction and the Resulting Cost Overruns, the Commission Should Reduce the Company's Allowed Return on Equity ("ROE") from the Current 10.95% Whenever the Company Begins Accruing any ROE Expenses on its Total Capital Costs

Construction delays continue, costs rise and only Georgia Power ratepayers are directly impacted financially, as the Company is immune from any immediate financial impact. The South Carolina Public Service Commission recently entered into a stipulated agreement with South Carolina Electric & Gas Company to reduce the company's return on equity level for the new V.C. Summer nuclear project from 11.00% to 10.50% as part of the revised construction and capital cost schedules. (Id.) This Commission could reduce the return on equity level collected by Georgia Power on amounts above the \$6.113 billion certified cost of the Project. While the Company is statutorily allowed to collect its financing costs for the Project, these financing costs are different from the Company's overall financing costs. O.C.G.A. §46-2-25(c)(5) provides that, "[t]he financing costs associated with a nuclear generating plant which has been certified by the commission shall continue to be recovered between the time that the generating plant begins commercial operation and until the next general rate case filed by the utility becomes effective, . . ." The Georgia Code clearly identifies "the financing costs associated with a nuclear generating plant" which is different from the Company's overall financing costs.

On July 30, 2015, Georgia Power Company issued a press release announcing that it had "...received a total of \$1.8 billion in loans to date from the Federal

Financing Bank for the construction of the Plant Vogtle nuclear expansion." In that press release the Company stated that, "[t]he latest draw of \$600 million was secured with an interest rate set at 3.283 percent, fixed until the loan's final maturity on February 20, 2044." The Company's financing charges for the Vogtle expansion are lower than their overall financing costs and ratepayers should not be charged the higher rate.

B. The Company Should Not Be Allowed to Over Collect Financing Costs Through the Nuclear Construction Cost Recovery ("NCCR") Tariff Above the Current Certified Cost of the Project Capital and Construction Expenses

The current certified cost of the Vogtle Units 3 and 4 is \$6.113 billion of which \$4.418 billion is the certified amount for capital and construction expenses, yet in its response to Staff Data Request No. STF-4-1(a) the Company stated, "Yes, the Company's responses to STF-3-2 assumed recertification as requested in the Twelfth Vogtle Construction Monitoring Report and that financing costs above \$4,418 million [sic] would be collected via the NCCR tariff." In the 8th VCM the Company withdrew its request to revise upward the certified cost of the Project and the Commission "reserved for future review and consideration" the prudency of any project expenses. (Order on the Eighth Semi-Annual Construction Monitoring Report, Dockets 29849 and 27800, October 28, 2013)

The Company should not be allowed to ignore the Commission's Order in the Eighth Semi-Annual Construction Monitoring Report and continue to collect financing costs through the NCCR rider above the certified amount for capital and construction expenses. The Company will not be denied recovery of any prudently incurred costs above \$4.418 billion, because they will be fully recovered through the AFUDC. No harm will be done to the Company and today's ratepayers will not be further and unjustly burdened with financing costs that ought to be fairly allocated to future customers who might be served by those units.

No prudency review is scheduled until the completion of Unit 3, which is likely going to be some time in late 2019 or 2020. Until a prudency review is conducted and an adjustment is made to the current Project certified cost of \$6.113 billion, the NCCR tariff collections should not over collect any financing costs above those necessary for the current certified cost of the Project. Georgia ratepayers have already paid over \$1.2 billion since 2011 when the Company began collecting the NCCR tariff for financing costs and taxes that would normally be recovered over the normal life of the facility which both the PSC Staff and the Company optimistically assume is 60 years.

III. Relying Solely on an Economic Evaluation Using a 60-Year Life Expectancy Is Unrealistic and Biased, and the Advocacy Staff and Company Should be Required to Provide an Additional Economic Evaluation Using a 40-Year Life Expectancy

Vogtle Units 3 and 4 have a 40-year license from the U.S. Nuclear Regulatory Commission that will be effective once the units enter commercial operation. 10 C.F.R. §54.17. According to 10 C.F.R. §54.17 (c), "[a]n application for a renewal license may not be submitted to the Commission earlier than 20 years before the expiration of the operating license or combined license currently in effect." According to the Federal regulation the Company cannot file an application for license renewal before 2040 at the earliest if commercial operation occurs in 2020. For anyone to claim that they know with 100% assurance that the new Vogtle units will be operational in 20 or 40 years is at best an educated guess.

Technology continues to evolve and improve at an astounding pace as demonstrated by the computer industry where micro processers continue to get smaller and faster. Renewable energy technology, especially solar generation, is revolutionizing electric generation nationally and worldwide. While it is possible that the Vogtle units may be physically able to operate for 40 years or more, it is highly unlikely that today's nuclear technology will not be replaced by more efficient technology in twenty or thirty years. The same technological change occurred with lighting. It is possible to light our homes today with kerosene lamps, but that technology has long been replaced by safer and more efficient technology. The same

will happen with today's nuclear technology, which will either evolve or be completely replaced.

The PSC Staff's Independent Monitor, Mr. William R. Jacobs, recently filed direct testimony on behalf of the Florida Office of Public Counsel ("OPC") in the evaluation of Florida Power & Light Company's Turkey Point Unit 6 and 7 new nuclear units. (Direct Testimony of William R. Jacobs, Jr., In Re: Nuclear Cost Recovery Clause, Docket No. 150009-EI, June 22, 2015²) In his testimony Mr. Jacobs challenged Florida Power and Light's feasibility analysis for Turkey Point Units 6 and 7 as flawed because "the analysis utilizes unreasonably low costs for Turkey Point Units 6 and 7." (Id. at p. 8)

Mr. Jacobs' economic analysis of the Turkey Point units used both a 40-year and 60-year operating life case analysis for the new nuclear units. (Id. at p. 13) In his 40-year operating life analysis, "[a] project cost increase of 7.91% to the HIGH end non-binding cost estimate of \$5,589/kW in 2015 dollars results in no feasibility. . .," but when using a 60-year operating life analysis a much higher project cost increase of 36.7% was needed to get a "no feasibility" result. (Id.) The use of both a 40-year and 60-year operating life economic analysis will give a fuller and more realistic economic analysis of the Vogtle Project than just relying upon a 60-year analysis. In

² Available at http://www.psc.state.fl.us/library/FILINGS/15/03818-15/03818-15.pdf.

the 13th VCM, the Advocacy Staff and the Company should be required to provide an additional economic evaluation using a 40-year life expectancy.

IV. In Addition to Reporting the Costs of Environmental Mitigation Measures Associated with the Construction of Units 3 and 4 the Company Should Also Include a Description of the Mitigation Measures and the Status of Compliance Activities

Consequently, in Table 9.1 of the Company's 12th VCM report there was a single line item listed as, "Savannah River – Water Permit Requirement" under the broader category, "Mandated Regulatory Changes & Enhanced Compliance

³ Available at http://www.psc.state.ga.us/factsv2/Document.aspx?documentNumber=156898 or http://www.psc.state.ga.us/factsv2/Document.aspx?documentNumber=156898 or http://www.psc.state.ga.us/factsv2/Document.aspx?documentNumber=156898 or http://www.cleanenergy.org/wp-content/uploads/F SACEfinalbrief_11thVCM_013015.pdf

Activities." In the VCM 11 column \$5 million was listed with \$0 in the VCM 12 column. While it is helpful to have the costs associated with environmental mitigation measures reported in the VCM filings it would be more helpful to know what the money was spent on rather than just getting a dollar figure with absolutely no explanation. For instance, there are several required water permits that have not all been issued along with corresponding mitigation measures or compliance requirements and not all of them have yet been finalized or implemented. A cost figure alone with absolutely no explanation what it represents is of limited value. The Company should be required to provide a description of what environmental mitigation measures are included, the estimated schedule for implementation and/or compliance and the total estimated costs of such requirements.

V. There is a Cost at Which It Would Clearly be Uneconomical to Continue With the Project and Staff's Refusal to Determine that Cost Amount is an Abdication of Their Monitoring Responsibilities

There is a cost at which the Vogtle Project is uneconomical. For anyone to deny that fact is clearly unreasonable and imprudent. The number may be \$20 billion or \$25 billion, but there is some point at which the cost of the project is so excessive that it is more economical to stop construction of Unit 3 and/or Unit 4 and build, for instance a comparable sized combined cycle natural gas generation unit.

At the June 23rd hearing Staff's witnesses stated that they did not know what the cost would be before the Project becomes uneconomical (Tr. 322 and 449), and Page 16 of 20

they would not make that determination. (Tr. 322) Unless the Advocacy Staff believes the Project has an infinite value and that no cost increase – no matter how large – would justify the termination of the Project, then they ought, and should, know an approximate amount at which the Project is not economically justified to proceed.

Any discussion of terminating the Project should not be done lightly because of the magnitude of the costs involved, but the same factual scenario also requires that there be a known and monitored price point at which the Project becomes uneconomical. The Advocacy Staff should be instructed to determine a reasonable projected cost at which it is clearly uneconomical for the Vogtle Project to continue, report it in the 13th VCM and adjust that figure as the Project continues.

VI. Conclusion

Based on the forgoing facts and arguments the Southern Alliance for Clean

Energy requests that the Commission direct that the following actions be taken in its

12th VCM Order:

- 1. In order to protect ratepayers and help minimize the financial impact of cost overruns the Commission should reduce the Company's allowed return on equity from the current 10.95% whenever the Company begins accruing any return on equity expenses on its total capital costs.
- 2. The Company should not be allowed to over collect financing costs through the NCCR tariff above the current certified cost of the Project.
- 3. The Advocacy Staff and Company should be required to provide a 40-year life expectancy economic evaluation in addition to the current 60-year evaluation.
- 4. In addition to providing the cost associated with environmental mitigation measures the Company should be directed to provide a description of what environmental mitigation measures are included, the estimated schedule for implementation and/or compliance and the total estimated costs of such requirements.

5. The Staff should be directed to determine a reasonable projected cost at which it is clearly uneconomical for the Vogtle Project to continue, and report it in all subsequent Project reviews.

Respectfully submitted this 7th day of August, 2015.

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CERTIFICATE OF SERVICE

I hereby certify that the foregoing **Brief of the Southern Alliance for Clean Energy** was filed in Docket No. 29849 with the Georgia Public Service Commission's Executive Secretary by hand delivery. An electronic copy of same was served upon all parties listed below by electronic mail, unless otherwise indicated, and addressed as follows:

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This 7th day of August, 2015.

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