ATLANTA TEA PARTY • CONSERVATIVES FOR ENERGY FREEDOM
GEORGIA CONSERVATIVES IN ACTION • GEORGIANS FOR ENERGY FREEDOM
GREEN TEA COALITION • NUCLEAR INFORMATION & RESOURCE SERVICE
SOUTHERN ALLIANCE FOR CLEAN ENERGY

August 29, 2018

The Honorable Senator David Perdue
455 Russell Office Building
Washington, DC 20510

The Honorable Representative Drew Ferguson
1032 Longworth House Office Building
Washington, DC 20515-1007

The Honorable Representative Robert Woodall
1724 Longworth House Office Building
Washington, DC 20515-1007

cc: U.S. Senate Budget Committee Members, U.S. House Budget Committee Members

RE: VOGTLE LOAN GUARANTEES

Dear Senator Perdue, Representative Woodall and Representative Ferguson,

We, the undersigned, are writing to you given, respectively, your positions on the U.S. Senate Budget Committee and U.S. House Budget Committee regarding a letter (attached) we sent last week to Energy Secretary Perry regarding critical information about the Vogtle Units 3 and 4 nuclear reactor project. It was recently announced that costs had again increased, this time an additional $2.3 billion, mere months after a previous multi-billion dollar cost increase was approved by the Georgia Public Service Commission (PSC). The original ~$14 billion cost has doubled, as has the schedule.

The implications of the cost increases are being reviewed by the Georgia PSC, as well as Georgia Power, other owners of the project,[1] and one of the project's largest customers, Jacksonville Electric Authority (JEA). In a letter from JEA to MEAG, attached, JEA Interim CEO Aaron Zahn wrote, "A decision to continue cannot be justified on any rational basis."[2] In light of this information, along with the fact that construction is only approaching 50% complete nine years into construction, the actual completion of Vogtle is increasingly uncertain, and the risk to U.S. taxpayers from the project is rising.

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[1] The co-owners of the Vogtle project are: Georgia Power (45.7%), Oglethorpe Power (30%), Municipal Electric Authority of Georgia (22.7%), and Dalton Utilities (1.6%).

[2] JEA to MEAG letter available at http://www.cleanenergy.org/wp-content/uploads/JEA-Letter-Navigant-Summary.pdf; Zahn, Aaron. "Jacksonville Electric Authority letter to Municipal Electric Authority of Georgia re: Amended and Restated Power Purchase Agreement Between MEAG and JEA – Plant Vogtle Additional Units PPA Project J." August, 17, 2018; and Monroe, Nate. "JEA issues ultimatum to Plant Vogtle co-owner: Walk away from nuclear project." *Florida Times-Union.* August 18, 2018. http://www.jacksonville.com/news/20180817/jea-issues-ultimatum-to-plant-vogtle-co-owner-walk-away-from-nuclear-project

As the letter to Secretary Perry states, we are very concerned with the risk to federal taxpayers should the Vogtle project fail. That the initial $8.3 billion in loan guarantees required $0 in credit subsidy fees was cause for concern. That this latest round of *an additional $3.7 billion* in loan guarantees – conditionally approved in September 2017, but yet to be finalized and issued – would still require $0 from Georgia Power and Oglethorpe Power is alarming, in light of all the increased risk, costs overruns, and construction delays. Credit subsidy fees are meant to capture the risk of default and protect taxpayers; instead, the proposed fees (or, rather, the lack thereof) capture nothing but unsubstantiated optimism and entirely fail to provide taxpayer protection.

We request that the Senate and House Budget Committees thoroughly investigate the Vogtle project and the risks to U.S. taxpayers ***before*** the Department of Energy (DOE) authorizes any additional loan guarantees for this troubled project.

Total cost increases over the last eight months have significantly eroded the value of the additional loan guarantees that were conditionally approved in September 2017. DOE's offer of $3.7 billion in low-risk financing may have appeared to improve the viability of the project 12 months ago – and, indeed, it featured prominently in the utilities' and Georgia PSC's decision to approve continuation of the project. However, that picture has now changed. Proceeding with the additional loan guarantees in light of these developments would only expose U.S. taxpayers to unwarranted risks in financing this increasingly troubled project.

We urge you to protect the U.S. taxpayer from further risky investment in Vogtle 3 and 4 by investigating the project and the risks to taxpayers from the existing and additional loan guarantees. To put this in perspective, the additional $3.7 billion in taxpayer loans that have yet be issued are seven times more than the Solyndra default. Surely, U.S. taxpayers deserve to be protected in light of the undeniable, mounting risks of the Vogtle project. If you have any questions, please contact Debbie Dooley at 678-761-6725 or debbie@energyfreedomusa.org.

Respectfully,

Debbie Dooley
President
Conservatives for Energy Freedom
Atlanta Tea Party
Green Tea Coalition

Timothy Judson
Executive Director
Nuclear Information and Resource Service

Kay Godwin
Georgia Conservatives in Action

Sara Barczak
Regional Advocacy Director
Southern Alliance for Clean Energy

John Hitchins
Georgians for Energy Freedom

Enclosures:

Enclosure 1 – August 22, 2018 Letter to Secretary Perry
Enclosure 2 – August 17, 2018 Letter from JEA to MEAG

CONSERVATIVES FOR ENERGY FREEDOM • GEORGIA CONSERVATIVES IN ACTION
GEORGIANS FOR ENERGY FREEDOM • GREEN TEA COALITION
NUCLEAR INFORMATION & RESOURCE SERVICE • SOUTHERN ALLIANCE FOR CLEAN ENERGY

August 22, 2018

The Honorable Secretary James Richard Perry
U.S. Department of Energy
1000 Independence Avenue SW
Washington, DC 20585

cc: Office of Management and Budget

RE: VOGTLE LOAN GUARANTEES

Dear Secretary Perry,

We, the undersigned, are writing to share critical information with you regarding the Vogtle units 3 and 4 nuclear reactor project in Georgia. Notably, on August 8, 2018, Southern Company and Georgia Power announced a nearly 10% increase in the total cost of the project, just eight months after the Georgia Public Service Commission (PSC) approved supposedly updated, ostensibly verified and durable, completion cost estimates based on Georgia Power's filings and testimony in the 17th semi-annual Vogtle Construction Monitoring (VCM) docket. The implications of the cost increases are being reviewed by the Georgia PSC, as well as Georgia Power, other owners of the project,[1] and one of the project's largest customers, Jacksonville Electric Authority (JEA). In a letter from JEA to MEAG, JEA Interim CEO Aaron Zahn wrote, "A decision to continue cannot be justified on any rational basis."[2] In light of this information, along with the fact that construction is only approaching 50% complete nine years into construction, the actual completion of Vogtle is increasingly uncertain, and the risk to U.S. taxpayers from the project is rising.

SACE, NIRS, and other signatories have long been concerned with the risk to federal taxpayers should the Vogtle project fail. That the initial loan guarantees required $0 in credit subsidy fees was cause for concern. That this latest round – in light of all the increased risk, costs overruns, and construction delays – would still require $0 from Georgia Power and Oglethorpe Power is alarming. Credit subsidy fees are meant to capture the risk of default and protect taxpayers; instead, the proposed fees (or, rather, the lack thereof) capture nothing but unsubstantiated optimism and entirely fail to provide taxpayer protection. While we strongly encourage you to withdraw consideration of the loan guarantees, should you choose to proceed, significantly higher credit subsidy fees must be assessed.

[1] The co-owners of the Vogtle project are: Georgia Power (45.7%), Oglethorpe Power (30%), Municipal Electric Authority of Georgia (22.7%), and Dalton Utilities (1.6%).

[2] Zahn, Aaron. "Jacksonville Electric Authority letter to Municipal Electric Authority of Georgia re: Amended and Restated Power Purchase Agreement Between MEAG and JEA – Plant Vogtle Additional Units PPA Project J." August, 17, 2018. https://www.nirs.org/wp-content/uploads/2018/08/JEA-Letter-Navigant-Summary.pdf
Monroe, Nate. "JEA issues ultimatum to Plant Vogtle co-owner: Walk away from nuclear project." *Florida Times-Union.* August 18, 2018. http://www.jacksonville.com/news/20180817/jea-issues-ultimatum-to-plant-vogtle-co-owner-walk-away-from-nuclear-project

In January 2014, the Department of Energy finalized $8.33 billion in loan guarantees to the various co-owners of the Vogtle project. As a condition of the guarantees, DOE required the Vogtle owners to pay no credit subsidy fees, despite the fact that construction was already more than 10% over budget ($1.6 billion) and 21 months behind schedule. The condition of the project worsened dramatically since 2014, culminating in Westinghouse's bankruptcy last year, which necessitated Southern Nuclear to assume Westinghouse's role as the project manager in 2017, recruitment of Bechtel as a new general contractor, and extensive reviews of the continuation of the project. In the midst of those reviews, on September 29, 2017, DOE offered conditional approval of an additional $3.7 billion in loan guarantees. The conditional approval was a factor in the owners' and Georgia PSC's decisions to continue the project.

Just a few months since Georgia Power provided testimony in the 18th VCM, which did not mention this latest cost increase, the Vogtle project is already in doubt once again. Just four years after the original loan guarantees were issued, Vogtle's construction delays have tripled (to 68 months[3]) and total project costs have increased by about 75%.[4] Georgia Power's recent $1.1 billion cost increase corresponds to a reported $2.3 billion increase in total project costs. During the 17th VCM last year, Georgia Power informed the Georgia PSC that its projected cost for Vogtle 3 and 4 would be $12.2 billion[5], for a total of $25 billion with the other co-owners' costs. Updated project cost estimates now appear to be over $27 billion.

This increase has triggered a number of developments that have significant implications for the project and the financial risk to U.S. taxpayers:

- As a result of the cost announcement, Moody's lowered Georgia Power's bond rating from A3 to Baa1,[6] indicating an increase from "low credit risk" to "moderate credit risk" with possible "speculative characteristics".[7] Fitch Ratings placed both Oglethorpe and MEAG's bonds on Rating Watch Negative.[8]
- Two of the co-owners, Oglethorpe Power (30%) and Municipal Electricity Authority of Georgia (MEAG, 22.7%), have not decided whether to continue with Vogtle following the August 8 cost increase announcement. Under the co-ownership agreement, parties with a cumulative ownership of at least 90% must affirmatively decide to continue the Vogtle project in the event that total project costs increase by $1 billion and/or the construction budget cost and schedule are delayed by one (1) year.[9] If either Oglethorpe

[3] Original completion projections were for Units 3 and 4 were April 2016 and April 2017 respectively. Now, the project is 68-months delayed with projected completion dates of November 2021 and November 2022.

[4] In 2009, the total project cost estimate was $14.1 billion. Georgia Power's certified cost for their share of the project was $6.113 billion, which consisted of $4.418 billion and $1.695 billion in financing costs.

[5] Ondieki, Anastaciah. "PSC staff says cancel Vogtle if project remains 'uneconomic.'" *Atlanta Journal-Constitution.* December 4, 2017. https://www.myajc.com/business/psc-staff-says-cancel-vogtle-project-remains-uneconomic/oZdUY2Z9EClGGU5jgrPwKO/

[6] Ondieki, Anastaciah. "Moody's downgrades Georgia Power's credit rating over new Plant Vogtle costs." *Atlanta Journal-Constitution.* August 9, 2019. https://www.myajc.com/business/economy/moody-downgrades-georgia-power-credit-rating-over-new-vogtle-costs/PGqCbXerkZUjZLM5pnrXYN/

[7] Moody's. "Rating Symbols and Definitions." June 2018. https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_79004

[8] Sigo, Shelly. "MEAG and Oglethorpe Power may face downgrades from nuke costs." *The Bond Buyer.* August 13, 2018. https://www.bondbuyer.com/news/meag-and-oglethorpe-power-face-downgrades-from-nuke-costs

[9] "Agreement Regarding Additional Participating Party Rights And Amendment No. 3 To Plant Alvin W. Vogtle Additional Units Ownership Participation Agreement And Amendment No. 4 To Plant Vogtle Owners Agreement Authorizing Development, Construction, Licensing And Operation Of Additional Generating Units." https://www.documentcloud.org/documents/4326807-Attachment-STF-120-21-Supplemental-to-Revised.html

or MEAG decides not to continue, the Vogtle project could be canceled. The boards of directors of both utilities[10] are not scheduled to meet and issue a decision on Vogtle until September 2018.

- MEAG's continuation of the project is subject to impacts on its customers. MEAG provides electricity to a number of municipal utilities in Georgia and neighboring states. 41.2% of MEAG's share of Vogtle 3 and 4 (9.35% of the total project) is contracted to a single utility, Jacksonville Electric Authority (JEA)[11]. JEA has expressed growing concerns about the continuation of Vogtle since Moody's changed its financial outlook in 2017 from "stable" to "negative."[12] JEA's obligations to Vogtle are under increased scrutiny by Florida officials,[13,14] and, as a result of the August 8 announcement, a Florida state legislator has requested the Florida Office of Program Policy Analysis and Government Accountability Office to conduct a formal investigation of JEA's contract with MEAG and "potential mismanagement" of the Vogtle project.[15]
- Continued Georgia PSC support for the project's continuation is uncertain. In the 18th VCM, PSC Staff testimony showed that the project was barely economic, with only a $100 million "benefit" to customers, and that if delays of 2 months or more occurred, the project would once again be uneconomic to continue.[16] With the newly announced $1.1 billion cost increase for Georgia Power's share of the Vogtle project, it is clearly uneconomic to continue. It is notable that Georgia Power's brief in the 18th VCM did not mention or allude to any of the new Vogtle cost increases, even though it was filed just days before the utility's parent company, Southern Company, announced them on its August 8 earnings call. Georgia Power files its 19th VCM report at the end of August and the final decision, based on previous VCM schedules, would not occur until February 2019.

Total cost increases over the last eight months have nearly eclipsed the value of the additional loan guarantees that were conditionally approved in September 2017. DOE's offer of $3.7 billion in low-risk financing may have appeared to improve the viability of the project 12 months ago – and, indeed, it featured prominently in the utilities' and Georgia PSC's decision to approve continuation of the project. However, that picture has now changed. According to a Fitch analyst commenting on the reasons for downgrading Oglethorpe and MEAG's credit outlook, the rapid cost increases subsequent to the December 2017 decision in the 17th VCM to continue the project

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[10] Freebairn, William. "Oglethorpe reviewing decision on finishing Vogtle nuclear plant expansion: CEO." *S&P Global Platts*. August 16, 2018. https://www.spglobal.com/platts/en/market-insights/latest-news/electric-power/081618-oglethorpe-reviewing-decision-on-finishing-vogtle-nuclear-plant-expansion-ceo

[11] American Public Power Association. "MEAG Power to receive $732 mil under agreement tied to Vogtle units." December 5, 2017. https://www.publicpower.org/periodical/article/meag-power-receive-732-mil-under-agreement-tied-vogtle-units

[12] Monroe, Nate. "JEA wants out of struggling nuclear power deal, disputes negative credit report." *Florida Times-Union.* December 12, 2017. http://www.jacksonville.com/metro/news/2017-12-12/.WjA-OiYIZag.twitter

[13] Monroe, Nate. "With contract expiring, JEA exec shares utility's nuke woes with City Council." *Florida Times-Union.* April 6, 2018. http://www.jacksonville.com/news/20180405/with-contract-expiring-jea-exec-shares-utilitys-nuke-woes-with-city-council

[14] Gankarski, A.G. "JEA CEO, Jacksonville City Council discuss Plant Vogtle obligation." Florida Politics. April 5, 2018. http://floridapolitics.com/archives/260594-jea-2

[15] Monroe, Nate. "Citing 'potential mismanagement,' state senator asks for study of JEA's nuclear power costs." *Florida Times-Union.* August 16, 2018. http://www.jacksonville.com/news/20180816/citing-potential-mismanagement-state-senator-asks-for-study-of-jeas-nuclear-power-costs

[16] Georgia Public Service Commission. "Testimony of Panel of Tom Newsome, Philip Hayet and Leah Wellborn, the panel of E. Cary Cook ad Shemetha Q. Jones and the panel of William R. Jacobs Jr., Ph.D. and Steven D. Roetger." June 6, 2018. http://www.psc.state.ga.us/factsv2/Document.aspx?documentNumber=172848

have virtually negated the value of the additional loan guarantees and other factors that appeared to stabilize the project last year:

> "The rapid timing of this cost escalation together with its magnitude, is particularly disappointing, given that the co-owners last budget was developed during summer 2017 and ostensibly reflected in-depth analysis and review," said analyst Kathy Masterson.
>
> Masterson said Fitch revised the rating outlook to stable for both MEAG and Oglethorpe earlier this year, on the "belief that the 2017 revised cost estimate was reliable."
>
> "The Negative Watch further reflects ongoing construction risk at the project and Fitch's skepticism about the resilience of the revised project estimate and the potential for continued budget and timing slippage."

Proceeding with the additional loan guarantees in light of these developments would only expose U.S. taxpayers to unwarranted risks in financing this increasingly troubled project.
In fact, it would not be unusual for a project like Vogtle to be canceled, even if a decision is made to continue construction at this stage, with construction at less than 50% complete.[17] Of fifty-three reactors that have been cancelled after commencing construction, nine were at an advanced stage of completion (50% or greater), including four which were more than 80% complete and one which was completed but never began commercial power operations. Utilities had spent a total of over $25 billion on the projects, amounting to an inflation-adjusted (2018) $62.2 billion. See the enclosed summary.

Like many such projects, including the V.C. Summer 2 and 3 reactors in South Carolina canceled last year, construction of Vogtle 3 and 4 is exorbitantly over budget and behind schedule, now by $13 billion and at least 68 months. Wall Street has downgraded partners involved in Vogtle, and they are embroiled in a number of reviews of the continuation of the project. For these reasons, we urge you to protect the U.S. taxpayer from further risky investment in Vogtle 3 and 4 by withdrawing conditional approval of the additional loan guarantees and, should the project continue, conditioning any further consideration of loan guarantees on substantial credit subsidy fees.

Respectfully,

Debbie Dooley
President
Conservatives for Energy Freedom
Green Tea Coalition

Timothy Judson
Executive Director
Nuclear Information and Resource Service

Kay Godwin
Georgia Conservatives in Action

Sara Barczak
Regional Advocacy Director
Southern Alliance for Clean Energy

John Hitchins
Georgians for Energy Freedom

[17] Sigo, Shelly. "MEAG and Oglethorpe Power may face downgrades from nuke costs." *The Bond Buyer.* August 13, 2018. https://www.bondbuyer.com/news/meag-and-oglethorpe-power-face-downgrades-from-nuke-costs

Background: Reactors Cancelled After Commencing Construction
The owners of the Vogtle project have announced construction delays and cost overruns, and more can be expected. While the utilities and Georgia PSC decided to continue with the project in 2017, Vogtle is once again under review. Based on the track record of reactor cancellations at advanced stages of construction in the U.S., it is entirely possible that the project will be canceled before the reactors begin commercial operation. The exceptional level of uncertainty that plagues nuclear reactor construction warrants a thorough evaluation of the Vogtle project. Below is a table summarizing U.S. reactor project cancellations at various stages of construction, and an enumeration of reactors that were canceled at stages of construction comparable to or more advanced than Vogtle 3 and 4.

Reactors Canceled after Start of Construction

Stage of Construction	Reactors
80%-100%	5
50%-79%	4
30%-49%	8
10%-29%	7
1%-19%	13
<1%	16
TOTAL	**53**

Reactor Cancellations at Advanced Stage of Construction (> 50%)

Reactor	Year Cancelled	% Completion	Sunk Cost	2018 $ Value
Bellefonte 1	1988	88%	$6 billion	$12.8 billion
Bellefonte 2	1988	58%	(incl. w/ Bellefonte unit 1)	
WPPS 1 (Columbia)	1983	63%	$6 billion	$15.1 billion
WPPS 3 (Satsop)	1983	76%	(incl. w/WPPS unit 1)	
Marble Hill 1	1984	60%	$2.5 billion	$6.1 billion
Midland 1	1984	85%	$4 billion	$9.7 billion
Midland 2	1984	85%	(incl. w/Unit 1)	
Shoreham 1	1985	100%	$6 billion	$14.0 billion
Zimmer 1	1983	97%	$1.8 billion	$4.5 billion
TOTAL	**--**	**--**	**$25.3 billion**	**$62.2 billion**

21 West Church Street
Jacksonville, Florida 32202-3139

August 17, 2018

ELECTRIC

WATER

SEWER

Via E-mail
Via First Class Mail

Mr. James E. Fuller
President and Chief Executive Officer
MEAG Power
1470 Riveredge Parkway, N.W.
Atlanta, GA 30328-4640

Re: Amended and Restated Power Purchase Agreement Between MEAG and JEA – *Plant Vogtle Additional Units PPA Project (Project J)*

Dear Mr. Fuller:

It was nice to briefly meet you at the LPPC event in Asheville recently. I regret that we did not speak at length. The meeting took place very early in my tenure as interim CEO of JEA. I was still working to understand the history of interactions between MEAG and JEA in order to provide better context to our long standing corporate relationship and in specific our relationship related to to Plant Vogtle. I wish our first substantive interaction was under better circumstances. As you are aware, JEA and Municipal Electric Authority of Georgia ("MEAG") are parties to an Amended and Restated Power Purchase Agreement ("PPA") relating to Plant Vogtle Units 3 & 4 ("Additional Units"). After my thorough review of all relevant documents and correspondence it is readily apparent that MEAG and JEA have a starkly different understanding of our joint business and legal relationship as well as the fundamental viability of the Additional Units at Plant Vogtle.

The addition of these Additional Units at Plant Vogtle is the only remaining nuclear project under construction in the United States. Industry experts, analysts and the Georgia Public Service Commission's own staff have all concluded that continued construction and operation of these nuclear facilities is no longer economically feasible. The most recent report by Georgia Power of an additional **$2.3 Billion** cost overrun, just a few short months after the project owners proclaimed confidence in the cost-to-completion estimates provided in testimony before the Georgia PSC, underscores what JEA, the experts and analysts concluded long ago. To summarize, in 2008 the project was expected to be a $9.5 billion project with a guaranteed maximum price ("GMP") of $14.5 billion and an expected service date of 2016. The GMP was in effect until Westinghouse's bankruptcy in March 2017, just over a year ago, and now the project budget stands at $27.5 billion with a questionable service date of 2021. At a number of points in the past year, JEA has requested, without success, that MEAG take action to safeguard the financial interests of JEA, MEAG's constituent's and Power South. Regardless of our past differences of opinion about whether the project should be abandoned, it now is beyond reasonable debate that prudent utility practices and the interests of ratepayers require that MEAG and the other owners of the Additional Units vote no on continuing construction of the Additional Units.

Based upon MEAG's EMMA filing dated August 8, 2018, "the holders of at least 90% of the ownership interests in Vogtle Units 3&4 must vote to continue construction. The co-owners are expected to conduct these votes in the third quarter of 2018, and each of GPC, OPC and MEAG Power, acting through the Vogtle Units 3&4 Project Entities, will have to affirmatively vote to continue construction. If the co-owners vote to move forward, they will also approve a revised project budget." As you evaluate this decision on whether to proceed with construction of these two economically obsolete Additional Units, please note it is JEA's position that continuation would violate MEAG's obligations and common law duties owed to JEA, other participants and ratepayers. Any vote to continue this project ignores well-documented facts and is contrary not only to the interests of JEA and its constituents, but also to the interests of MEAG's own constituents and their ratepayers. Furthermore, I trust MEAG, MEAG's Board members and you as MEAG's Chief Executive Officer will use good business judgement when deciding how to proceed and/or vote as you, collectively and individually, stand as the fiduciaries of JEA's capital vis-a-vis our PPA relationship and MEAG's ability to solely direct the project.

A decision to continue cannot be justified on any rational basis. The latest cost overruns add an estimated $10 Million annual PPA expense to JEA's ratepayers that can be replaced at a fraction of the cost for power that may never be produced. Continuing to saddle ratepayers with more debt for a project that will be subsidized by the government or the project's owners for years to come if it ever achieves COD, or worse, a project that will have to be abandoned before completion after even greater sums are invested, is inconsistent with prudent utility practices.

When JEA entered into the PPA, it justifiably relied on representations from MEAG including assurances that MEAG would not elevate its interests, or the interests of its participating members, above JEA's interests. (PPA §1014). It is not in JEA's interests for construction of the Additional Units to continue. JEA trusts that MEAG will run appropriate economic models and analysis with the latest cost projections and come to the same conclusion as JEA. Attached is a third-party independent economic analysis that was prepared for JEA in September of 2017. The latest cost projections confirm the conclusions of this analysis and make the case even stronger for a "no vote" on continuing construction. JEA requests a copy of all MEAG analyses and models during the last two years, including current analyses in light of the recently announced cost overruns.

If MEAG and 90% of the ownership interest affirmatively vote to continue with the construction of these Additional Units, JEA will demand that MEAG work cooperatively to address the changed circumstances on behalf of JEA's ratepayers and develop a commercially reasonable solution. Some of the ideas that should be explored are an assignment, either partial or in whole, of the PPA to MEAG, MEAG cities or other interested party, reevaluation of the payment schedule based upon longer useful life cycle of the Additional Units (60 years instead of 40 years) and modifications to the PPA that would provide parity to JEA with other participating members. Any solution must provide for more equitable treatment of JEA as compared to the MEAG city members.

JEA has, in the past, requested a significant amount of documentation, financial data and project audit information only to be rebuffed by MEAG staff and been told that JEA had been provided with all relevant information. Please take specific notice to the audit rights and cooperation provisions of the PPA (§310 and §1015). JEA respectfully requests the following project related documents be made available for review: all project documents, including, but not limited to, all correspondence, financial reports, analysis, projection forecasts, models and a copy of MEAG's Directors and Officers (D&O) liability insurance policy that includes the limits of available coverage. This request includes all project documents, minutes, agenda items and presentations provided to the MEAG Board or to the other Project participants – Project M, Project J – 39 Participants and Project P.

For all of the foregoing reasons, JEA demands MEAG vote not to continue the project. If MEAG votes to continue this project over JEA's objections, MEAG will have failed to meet its obligations under the PPA. In that event, this letter constitutes (1) written notice to MEAG pursuant to §310 of the PPA, of JEA's demand to examine the records of MEAG beginning promptly, and (2) a demand by JEA for and immediate meeting with MEAG to discuss terms for JEA's exit from the PPA and substitution of MEAG or its designee for JEA. If MEAG refuses to immediately produce all of the documents requested from it by JEA, and refuses to meet with and reach a commercial solution with JEA, JEA reserves the right to pursue all of the remedies available to it under the law and the applicable agreements.

Please provide response to this letter within five business days of receipt and indicate MEAG's: (1) position on continuing construction of the Plant Vogtle Additional Units; (2) process and timeline on the vote to continue the project; (3) willingness to work with JEA to find a commercial solution in the event of a vote to continue; (4) intention to compy with its obligations under the PPA to provide the requested documentation; and (5) proposed management plans and internal procedures MEAG intends to employ in light of its fiduciary obligations to JEA and ratepayers.

Sincerely,

Aaron Zahn, Interim Managing Director and CEO

Cc: MEAG Board of Directors
Peter M. Degnan, Esq., MEAG Senior VP & General Counsel
Carl F. Lyon, Esq.
Hon. Lenny Curry, Mayor, City of Jacksonville
Jacksonville City Council
JEA Board of Directors
G. Alan Howard, Esq., Chair, JEA
Allen Maines, Esq.

NAVIGANT

Privileged and Confidential
Prepared at the Request of Counsel
DRAFT – 9/12/17

CONFIDENTIAL EXECUTIVE SUMMARY

Independent Economic Analysis: Cost Comparison of Vogtle 3&4 Costs Under JEA's Power Purchase Agreement vs. Alternative Generation Resources

Bottom-Line

Navigant evaluated the economics from JEA's perspective of construction activities at Vogtle 3&4 being terminated on January 1, 2018 ("No Go" scenario) relative to completion of the plant using the latest cost-to-complete estimate ("Go" scenario). Based on this preliminary evaluation:

- Under the cases evaluated thus far, cancellation of Vogtle 3&4 is less costly to JEA than completing the facility. The savings to JEA under the No Go scenario range from $345 million to $727 million (2017 present value).
- The No Go scenario is 15% to 32% less expensive in terms of JEA's cost per MWh (based on levelized nominal costs over 20 years). The projected levelized JEA cost for the Vogtle 3&4 capacity and energy in the Go scenario – including all costs incurred to date for Vogtle 3&4 (the Sunk Costs), all costs to complete the project, and reducing the cost by expected payments from the Toshiba settlement (the Toshiba Payments) – is $119/MWh, while the projected JEA levelized cost for an equivalent amount of capacity and energy under the No Go scenario – including Sunk Costs and the Toshiba Payments – ranges from $81 to $101/MWh.

The "Go" analysis is based on the revised P80 schedule and cost-to-complete estimates for Vogtle 3&4 provided by MEAG. For a variety of reasons, the project has not met prior cost and schedule estimates.[1]

Background

JEA has a 20-year, long-term off-take power purchase agreement (PPA) with the Municipal Electric Authority of Georgia (MEAG) for 206 MW of the electric output from Vogtle 3&4 over the first 20 years of the plants' operation. Under the PPA, JEA pays a share of the Vogtle 3&4 capital and operating costs during this period. Following the bankruptcy of Westinghouse Electric Company, the EPC contractor for Vogtle 3&4, JEA and other stakeholders (including Georgia Power Company (GPC) and MEAG) have been evaluating the expected cost of completion of Vogtle 3&4.

JEA, though its counsel, Gibson Dunn & Crutcher, retained Navigant to undertake an evaluation of JEA's expected costs assuming completion of Vogtle 3&4 as compared to alternative options for the supply of an equivalent amount of power. Navigant has completed a preliminary analysis. This Executive Summary describes the analytical assumptions, the sources of data relied upon and the preliminary results. The Navigant analysis covers the period from 2018 through 2042 (the end of the 20-year PPA in

1 The revised overnight cost-to-complete Vogtle 3&4 is approximately twice the original estimate, and the revised construction schedule is approximately twice as long.

the P80 case). Other than for the assumed cost of replacement power in the No Go scenario, Navigant has largely relied on projected Vogtle 3&4 capital and operating costs provided by MEAG to JEA.

Scenarios Examined

"Go" Scenario. Vogtle 3&4 are completed and placed in service in January 2022 and January 2023, respectively, at a total incremental cost to complete of $9.6 billion (including 100% of all parties' obligations). This is in addition to the more than $15 billion of Sunk Costs (including interest through the in-service date) already incurred on the Vogtle 3&4 project. This is the "P80" scenario, which represents a 29-month delay in Vogtle 3&4 in-service dates from the prior (January 2017) estimate. MEAG provided JEA with the additional costs that JEA would incur under this P80 cost to complete, net of the expected proceeds from the Toshiba settlement. The P80 cost-to-complete was combined with the MEAG projection of JEA costs under the January 2017 Vogtle cost estimate to yield the total capital revenue requirement, including all Sunk Costs.

"No Go" Scenario. The No Go Scenario assumes that construction activities at Vogtle 3&4 are terminated on January 1, 2018. MEAG provided JEA with a projection of the annual debt service for the recovery of Vogtle 3&4 capital that JEA would incur under this scenario for all Sunk Costs incurred prior to the halt of construction, including expected payments from the Toshiba settlement that would be prepaid to the Department of Energy (DOE) under the Loan Guarantee Agreement, and an estimated $732 million lump sum true-up payment that JEA would receive from MEAG in 2035 to reflect overpayment by JEA during the term of the PPA, due primarily to prepayment of the DOE loan using expected payments from the Toshiba settlement.

Analysis – Results and Observations

The analytical results are summarized in Table 1, which shows the Present Value (PV) of the JEA revenue requirements under the Go and No Go scenarios, as well as the Levelized Nominal $/MWh of all costs, including Sunk Costs.[2] The first panel focuses on Vogtle 3&4 capital, operating and associated costs. The second panel focuses on replacement power costs under the No Go Scenario under various sensitivity cases, which are added to the Sunk Costs to provide the total cost for the No Go Scenario. The bottom panel summarizes the total present value of the Go vs. No Go case under the various replacement power sensitivity cases.

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2 An inflation rate of 2% is assumed. The discount rate applied is 4%, equivalent to JEA's debt rate. The levelized MWh is the cost in nominal dollars per MWh of the Vogtle 3&4 capacity and energy or its replacement, including all Sunk Costs. See Table for the equivalent cost in levelized 2017 real (i.e., net of inflation) dollars per MWh.

Table 1: JEA Revenue Requirement under the Go and No Go Scenarios

	PV (2017 M$)			Level Nominal $/MWh		
	Go	No Go	Change	Go	No Go	Change
Vogtle Capital, net of Toshiba Settlement	$1,404	$657	($747)	$74	$35	($39)
Vogtle Operating Costs	$853	$0	($853)	$45	$0	($45)
Termination Payments	$0	$32	$32	$0	$2	$2
Subtotal	$2,257	$689	($1,568)	$119	$36	($83)
Replacement Power Costs by Case						
Market Case	$0	$841	$841	$0	$44	$44
NCI Base Georgia	$0	$1,223	$1,223	$0	$64	$64
NCI Base Florida JEA	$0	$1,135	$1,135	$0	$60	$60
NCI Base, Florida JEA, NYMEX Hedge	$0	$1,009	$1,009	$0	$53	$53
NCI Base F-Class Toll, Florida JEA, NYMEX Hedge	$0	$1,006	$1,006	$0	$53	$53
Total by Case						
Market Case	$2,257	$1,530	($727)	$119	$81	($38)
NCI Base Georgia	$2,257	$1,912	($345)	$119	$101	($18)
NCI Base Florida JEA	$2,257	$1,824	($433)	$119	$96	($23)
NCI Base, Florida JEA, NYMEX Hedge	$2,257	$1,698	($559)	$119	$89	($29)
NCI Base F-Class Toll, Florida JEA, NYMEX Hedge	$2,257	$1,695	($562)	$119	$89	($30)

Each category in Table 1 is explained in further detail below:

Vogtle Capital Cost, net of Toshiba Settlement. As shown, there is an estimated $747 million savings to JEA in the No Go case in capital cost recovery if Vogtle 3&4 is cancelled, using the capital and Toshiba settlement assumptions provided by MEAG discussed above.[3]

Vogtle Operating Costs. In the Go scenario, JEA is projected to pay Vogtle operating costs (O&M, fuel and capital additions) of $853 million (present value), or about $45/MWh levelized (nominal$).[4] These costs are avoided in the No Go scenario. Again, these are based on assumptions provided by MEAG.

Termination Costs. In the No Go scenario, MEAG estimated JEA would incur termination costs of $32 million (present value) if Vogtle 3&4's construction activities are terminated on January 1, 2018. These costs would not be incurred in the Go scenario.

The above categories total to a positive benefit to JEA for the No Go Scenario, before consideration of replacement power, of $1,568 million (present value), or $83/MWh levelized (nominal$).

Replacement Power Costs. In the No Go scenario, JEA would need to replace the 206 MW of power provided by Vogtle 3&4 over the 20-year term of the PPA. Navigant examined a range of cases as described below. The key components of the replacement power cost forecast are natural gas prices; the heat rate for market purchases, and capacity prices. As shown, these forecasts yield a preliminary estimated cost for Vogtle 3&4 replacement power (capacity and energy) of between $44 and $64/MWh levelized (nominal$).

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3 Using some simplifying assumptions, the Toshiba Settlement is estimated to have reduced the JEA share of the Vogtle capital cost in the Go Scenario by $267 million (present value), or about $14/MWh (nominal$), including the impact on capitalized interest on new debt. A similar settlement amount is reflected in the No Go Scenario.

4 For purposes of this analysis, the projected Vogtle operating costs estimated by GPC and provided to JEA by MEAG in January 2017 for Vogtle 3&4 in-service years of 2019/2020 were simply shifted two years later. These costs conservatively were not escalated for two years of inflation from the original estimate. Updated MEAG forecasts using the P80 forecast are under development by MEAG and may modify these figures.

1. Market Case. Replacement power costs are projected based upon recent purchase power offers to JEA for energy and capacity, with energy prices increasing at 1% above inflation and capacity prices increasing at inflation in the out years. This yields a levelized cost for capacity and energy of $44/MWh over the 2022-2042 period.

2. Navigant Base Case (Georgia Market Prices). Replacement power costs are based on Navigant's forecast for natural gas, capacity, and energy market prices in Georgia, yielding a levelized cost for capacity and energy of $64/MWh over the 2022-2042 period.

3. Navigant Base Case Alternative (FRCC Market Prices). Replacement power cost are based on Navigant's forecast for natural gas, capacity, and energy market prices in the FRCC yielding a levelized cost for capacity and energy of $60/MWh over the 2022-2042 period.

4. NYMEX Gas Price Hedge + FRCC Market Prices. This forecast is based on gas prices hedged against the NYMEX index through 2029, reverting to Navigant's FRCC market price forecast thereafter. This yields a levelized cost for capacity and energy of $53/MWh over the 2022-2042 period. The use of a hedge against the NYMEX index reduces gas prices, and creates a lower forecast cost for replacement power, but in practice the hedge may not be available for that length of time.[5]

5. NYMEX Gas Price Hedge + Tolling Agreement for New Combined Cycle Plant + FRCC Market Prices. This forecast is based on gas prices hedged against the NYMEX index through 2029, reverting to Navigant's FRCC forecast thereafter, with the market heat rate based on a new combined-cycle plant, yielding a $53/MWh cost over the 2022-2042 period.

Preliminary Findings

- Across all of the replacement power sensitivity cases, cancellation of Vogtle 3&4 is less costly to JEA than completion of the facility. The present value of savings under the No Go scenario ranges from $345 million to $727 million.

- As compared to a forecasted all-in levelized cost under the Go scenario, the No Go scenario is 15% to 32% less expensive in terms of levelized nominal $/MWh. The forecasted levelized cost under the Go scenario, including all Sunk Costs and the cost to complete, offset by the Toshiba Payments, is $119/MWh (nominal$). The forecasted levelized costs under No Go scenario range, including all Sunk Costs, from $81 to $101/MWh (nominal$).

- A Production Tax Credit (PTC) may apply to the Vogtle 3&4 plants if supporting legislation is enacted to extend the date in which Vogtle 3&4 must be in service to qualify for the credit and JEA is able to recover the tax credits with respect to the tax-exempt MEAG Project J.[6] If so, the JEA costs in the Go Scenario would decrease by $85 million (present value), or about $4.5/MWh (nominal$), which would still result in the cancellation of Vogtle 3&4 being significantly less costly to JEA.

- Even these differences understate what a fully risk-adjusted analysis may indicate. Based on the history of the Vogtle 3&4 project, there are potential risks associated with completing the project. In particular, the Go scenario does not account for risks such as:

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[5] To address this issue, 75% of the gas is assumed to be hedged through 2023, declining to 50% for 2025-2029.

[6] The credit for MEAG Project J would be $18/MWh for the first 8-years of Vogtle 3&4 operation, and the MEAG Project J share would be split 50/50 between JEA and MEAG. The PTC would not apply in the No Go scenario.

- Further cost increases or construction delays for the first-of-its-kind Vogtle 3&4 beyond those incorporated in the P80 case.
- Availability of the PTC and ability to recover the tax credits for MEAG Project J
- NRC approvals/inspections/costs/time for first-of-a-kind NRC inspection and approval process

- There also are risks around the replacement power forecast in the No Go scenario. While the No Go scenario eliminates the significant construction/cost risk related to Vogtle, there is some uncertainty around the replacement power forecasts which are driven by gas prices over the 20-year period, environmental regulations, future technological advancement, and potentially carbon prices.

Additional Calculations

Table 1a below is a duplicate of Table 1, but also includes Levelized $2017/MWh.

Table 1a: JEA Revenue Requirement under the Go and No Go Scenarios including Level 2017 and Level Nominal $/MWh

	PV (2017 M$)			Level 2017 $/MWh			Level Nominal $/MWh		
	Go	No Go	Change	Go	No Go	Change	Go	No Go	Change
Vogtle Capital, net of Toshiba Settlement	$1,404	$657	($747)	$57	$30	($27)	$74	$35	($39)
Vogtle Operating Costs	$853	$0	($853)	$34	$0	($34)	$45	$0	($45)
Termination Payments	$0	$32	$32	$0	$1	$1	$0	$2	$2
Subtotal	$2,257	$689	($1,568)	$91	$31	($60)	$119	$36	($83)
Replacement Power Costs by Case									
Market Case	$0	$841	$841	$0	$34	$34	$0	$44	$44
NCI Base Georgia	$0	$1,223	$1,223	$0	$49	$49	$0	$64	$64
NCI Base Florida JEA	$0	$1,135	$1,135	$0	$46	$46	$0	$60	$60
NCI Base, Florida JEA, NYMEX Hedge	$0	$1,009	$1,009	$0	$41	$41	$0	$53	$53
NCI Base F-Class Toll, Florida JEA, NYMEX Hedge	$0	$1,006	$1,006	$0	$41	$41	$0	$53	$53
Total by Case									
Market Case	$2,257	$1,530	($727)	$91	$65	($26)	$119	$81	($38)
NCI Base Georgia	$2,257	$1,912	($345)	$91	$81	($10)	$119	$101	($18)
NCI Base Florida JEA	$2,257	$1,824	($433)	$91	$77	($14)	$119	$96	($23)
NCI Base, Florida JEA, NYMEX Hedge	$2,257	$1,698	($559)	$91	$72	($19)	$119	$89	($29)
NCI Base F-Class Toll, Florida JEA, NYMEX Hedge	$2,257	$1,695	($562)	$91	$72	($19)	$119	$89	($30)