March 27, 2016

To: Public Service Commission of South Carolina

From: Tom Clements, Concerned Citizen and Resident in SCE&G Service Area

Re: Request for Emergency Hearing Regarding Troubling Situation with SCE&G's Nuclear Construction Project and Westinghouse Bankruptcy Impacts; Urgent Need for Action in the Public and SCE&G Interest by SC PSC, ORS

Submission for the Record: Memo and Attached Documents on Westinghouse Financial Meltdown and its Impacts to SCANA/SCE&G and the VC Summer Project to be Filed in Docket 2008-196-E (Combined Application of South Carolina Electric & Gas Company for a Certificate of Environmental Compatibility and Public Convenience and Necessity and for a Baseload Review Order for the Construction and Operation of a Nuclear Facility in Jenkinsville, South Carolina)

This memo and attached documents are being submitted for the record of Docket 2008-196-E. I request that the memo and all attachments be scanned and entered into the on-line record of the docket.

I am filing this memo both as a ratepayer of SCE&G and formal intervening party in 2008, via the public interest organization Friends of the Earth, in the initial docket (2008-196-E) seeking Public Service Commission of South Carolina (PSC) approval for the VC Summer nuclear construction project of South Carolina Electric & Gas (SCE&G).

Concerns raised in 2008 during proceeding before the PSC about potential cost overruns, schedule delays, rate impacts and challenges with the touted “modular construction” have only grown over time and been repeatedly expressed in subsequent proceedings. Unfortunately, those concerns are now at an all-time high.

The concern about the SCE&G/Santee Cooper nuclear project is compounded by the fact that the project, being paid for by captive rate payers, is shrouded in unnecessary silence and secrecy regarding recent and on-going developments. The Office of Regulatory Staff (ORS) has unfortunately done nothing public in the last period of time to warn ratepayers as to the troubling financial situation that has developed and that now looms over both the project and those commercial and regulatory entities associated with it.

Since approving the project in February 2009, the Public Service Commission has been a supportive party to the project every step of the way. The PSC has already affirmed 9 (nine) annual Baseload Review Act (BLRA) rate hikes – resulting in about 18% of the current SCE&G bill...
just being for financing costs – and approved various other cost-overrun and schedule-delay
dockets as requested by SCE&G. Thus, the PSC is “all in” and “owns” the project, come good or
bad. The time has come to view the project in a more critical manner than in the past.

Given the likelihood of a bankruptcy filing by Westinghouse and rumored poor performance of
Fluor, construction contractor, as well as continued delays and cost overruns, the overall
project could be in serious jeopardy. As the PSC is the regulatory agency overseeing this
disturbing situation, which could result in great harm to both ratepayers and the financial
viability of SCE&G and Santee Cooper, action by the PSC (and the SC Office of Regulatory Staff)
to get to the bottom of the situation and take action to protect ratepayers is called for.

Urgent Request for Hearing on VC Summer Project

Waiting for an ex parte briefing by SCE&G that may never come is not acceptable. Silence and
inaction by the PSC and ORS in the face of this situation is a disservice to commercial and
residential ratepayers in the SCE&G service area and to South Carolina citizens in general.

I thus request that you direct SCE&G and other parties to the project to appear before the
Commission in an emergency hearing to explain what is going on. As servants of the people, it
is time that you stepped forwarded and utilized the powers vested in you and not proscribed by
law. Such a hearing would be but one step to reviewing and acting on the matter.

The “settlement agreement” agreed to by parties in the most recent cost overrun docket –
2016-223-E – caps the financial exposure to ratepayers for the VC Summer construction cost
and gives some solace in the current situation. The fact that Westinghouse may declare
bankruptcy will not impact the terms of that agreement as it relates to ratepayers but it is likely
that SCE&G might claim, in an effort to limit their financial exposure, that the settlement
agreement is void in case Westinghouse declares bankruptcy. In any event, bankruptcy would
impact how SCE&G, Fluor and Westinghouse bear the costs incurred until now and into the
future (if the project continues). Exposure by SCE&G to run-away costs, which would be
partially caused when the project extends beyond 2020, may threaten the company’s viability.

It appear that there is nothing in the Baseload Review Act (BLRA) limiting the Commission’s
authority to proactively and publicly examine, in a hearing and via other means, details of the
current situation with the VC Summer construction project. Likewise, I do not see anything in
the BLRA that prohibits you from compelling the parties – mainly SCE&G and ORS – to present
themselves before the Commission to address the pressing matters at hand.

There are also other parts of public utility law which would apply in addition to the electricity
dockets before the PSC – including 2008-196-E and 2016-223-E – and which give authority for a
hearing on the VC Summer construction issues, such as:
The Commission may prescribe rules governing pleadings, practice and procedure before it not inconsistent with the provisions of this chapter or any other provisions of law.

The Commission may, in addition to the hearings specifically provided for by this chapter, conduct such other hearings as may be required in the administration of the powers and duties conferred upon it by this chapter and by other acts relating to electrical utilities. Notice of all such hearings shall be given those interested therein.

The Commission and each commissioner may issue subpoenas, subpoenas duces tecum and all other necessary processes in proceedings pending before it, and such process shall extend to all parts of the State and may be served by any person authorized by law to serve processes.

The time for the PSC and ORS to stand by and silently watch the devastating situation at the VC Summer project must end. It is time for the PSC and ORS to proactively and fully explore, and not on the terms of SCE&G, what is happening. An emergency hearing will be but one way to get to the bottom of this disturbing matter that could have negative financial impacts to the entire state. Other steps beyond and in addition to an hearing will be necessary.

Questions begging answers concerning the VC Summer project and to be addressed in an emergency hearings and any briefing before the PSC include:

Is Westinghouse set to declare bankruptcy during the week of March 27, 2017 or thereafter?
If Westinghouse declares bankruptcy, what is the impact to the project and all partners?

Is there any truth to the rumor that some construction on the VC Summer project could be halted on Tuesday, March 28, 2017?

Where is the schedule for the project and why hasn’t SCE&G delivered it to the PSC, ORS and to the public?

Will SECE&G attempt to renege on earlier legal commitments and promises and claim that “in-service” dates now stretch beyond 2020 for both new units?

Is Fluor now being paid on time to work on construction? What has been the performance of Fluor?

If any company leaves the project, such as Westinghouse and Fluor, who will pick up the reactor design and construction work, with what qualified team and at what cost?

What is the role of Bechtel given changed circumstances?

What is the impact of any Westinghouse bankruptcy on the ability of SCE&G and Santee Cooper to raise funds for the reactor projects? What is the status of credit ratings?

If Westinghouse claims its liability is capped under bankruptcy or other agreements, who will pay costs beyond that cap?

When will SCE&G agreements with Westinghouse and Fluor be made public?

Who is standing up for SCE&G and Santee Cooper residential and commercial customers?

Will a consumer-oriented analyst be engaged to analyze the host of cost, schedule and rate impacts of the project and its various options on ratepayers?

Is it prudent to continue the projects as cost overruns will likely continue to mount?

Is SCE&G able to make a prudence case if mounting cost overruns continue?

The fact that legislation was recently introduced last week by Senator Scott to amend the Production Tax Credit (PTC) legislation basically admits the 2020 dates for reactor operation are under threat and likely not to be met. When will realistic “in-service” dates be presented? (Senator Scott news release, with link to legislation: https://www.scott.senate.gov/press-release/senator-scott-congressman-rice-introduce-
bipartisan-legislation-lower-energy-prices)

If BLRA abandonment is actively being considered, what protection do ratepayers have, apart from the “settlement agreement?”

What is the status of the "settlement agreement" in case of Westinghouse bankruptcy? What is the status of the settlement agreement if Toshiba/Westinghouse refuses to take on additional debt with the VC Summer project?

Will the PSC issue subpoenas to compel presentation of documents, schedules and information pertinent to the current financial crisis?

What will be the pecking order of payment of VC Summer contractors in case of bankruptcy? Where does the new Bechtel contract (for additional employees) fall in order of payment?

When will SCE&G honestly explain to the SC PSC and the public about what is going on? Where is the ex parte briefing that SCE&G said it would present at the end of March/early April?

If SCE&G sticks to the promised April 2020 in-service date for the first new reactor, how can ~70% of construction be finished, start-up testing conducted and the unit place on line by April 2020 (unit 2), which is just 3 years from now? (SCE&G reported in its 4th quarter report 2016 that construction was 30.9% complete.)

Does the schedule to finish unit 2 and have it in service by April 2020 hold safety risks with construction? Will the PSC and ORS closely track safety and financial implications of rushed construction and project disruption caused by bankruptcy of Westinghouse? (This matter has been raised with the NRC.)

Does a push by the utilities with the NRC to roll ITAAC closures into one overall documents hold safety and financial risks?

Will SCE&G still apply for the annual BLRA rate hike in May 2017?

What is the overall cost of construction on a monthly basis and how much will a delay cost per month beyond April 2020 and December 2020?

What is the validated cost of the overall project at this point?

Is there any risk of SCE&G bankruptcy due to the nuclear project?
Under to better inform ratepayers as to the costs they are facing no matter what happens, will the PSC direct SCE&G to place on the bill a line-item with the percentage of the bill attributed to the BLRA and new-nuclear financing and capital costs?

What will be the impact to new commercial and residential customers eyeing the SCE&G service area when it is realized by them that a large and growing part of the bill is for the mismanaged nuclear project?

Are Duke Energy and/or Southern Company/Georgia Power and/or Dominion or any other companies eyeing take-over of SCE&G if the company can’t weather the financial storm that it faces?

Is SCANA/SCE&G being investigated by any legal authority in the State of South Carolina, including as related to the Richard Quinn & Associates, which evidently has done work for SCANA and the so-called “Statehouse probe”? If any investigation is taking place is it any way connected to SCANA’s pursuit of any aspect of the VC Summer project, including passage of the BLRA by the legislature in 2007?

Who in South Carolina is responsible for this situation having been allowed to develop and progress to this disturbing point? Who in the legislative and regulatory community will fully explain to the public what's happening and accept responsibility for having allowed this situation to develop and come to a potential breaking point?

The following articles and documents are attached and submitted for the record. They merit full analysis and response by the PSC, SCANA/SCE&G, ORS and other parties:

1. Toshiba’s Westinghouse may file bankruptcy Tuesday, seeks Kepco aid: Nikkei, CNBC, March 27, 1 page

2. Toshiba bankruptcy filing for Toshiba’s Westinghouse ideal option: source, Reuters, March 27, 2017, 2 pages

3. Toshiba Reportedly Plans to File Westinghouse Bankruptcy on March 31, Reuters article in Fortune magazine on line, March 24, 2017, 1 page

4. Toshiba decides on Westinghouse bankruptcy, see $9 billion in charges: sources, Reuters, March 24, 2017, 2 pages

5. Toshiba troubles drive credit downgrades for reactor builders, EE News, March 24, 2017, 2 pages

7. *Statehouse corruption investigators seek information from BlueCross BlueShield of South Carolina,* Charleston (SC) Post and Courier, March 23, 2017, 3 pages


10. *Toshiba Nuclear Woes Has Moody’s Warning of Scana Credit Risks,* March 20, 2017

11. *Santee Cooper to study rate increase tied to nuclear plant construction,* Charleston (SC) Post & Courier, March 20, 2017, 2 pages


13. *Bechtel staff join AP1000 construction projects,* Nucleonics Week, March 9, 2017, 2 pages

Thank you for consideration of the concerns expressed in this memo and attached articles and documents. This filing is but an initial response to the troubling situation facing SCE&G and its nuclear construction project. I will anticipate PSC action to address this most pressing matter, including a response to the request for an emergency hearing.

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Toshiba's Westinghouse may file bankruptcy Tuesday, seeks Kepco aid: Nikkei

13 Hours Ago

Westinghouse Electric, the U.S. nuclear unit of Japan's Toshiba, could file for bankruptcy protection as early as Tuesday and is seeking support from South Korea's Korea Electric Power, the Nikkei said on Monday.

A Chapter 11 filing could help Toshiba limit damage from losses at Westinghouse, the report by the Japanese business daily said, without citing sources for its information.

Sources told Reuters on Friday that Toshiba had told its main banks it planned to have Westinghouse file for bankruptcy on Friday, expanding charges related to the U.S. unit this business year to around 1 trillion yen ($9 billion) from its publicly flagged estimate of 712.5 billion yen.

Nikkei said the Westinghouse board would meet as early as Tuesday to decide on a Chapter 11 petition, which it could file the same day. It said the U.S. firm had asked Korea Electric Power Corp, also known as Kepco, to be its sponsor in its bankruptcy reorganization.
Tuesday bankruptcy filing for Toshiba's Westinghouse ideal option: source

FILE PHOTO - A logo of Toshiba Corp is seen outside an electronics retail store in Tokyo, Japan, February 14, 2017. REUTERS/Toru Hanai/File Photo
Tuesday bankruptcy filing for Toshiba’s Westinghouse

Toshiba Corp’s (6502.T) U.S nuclear unit could file for Chapter 11 protection from creditors as early as Tuesday, according to a source with direct knowledge of the matter, hoping to ring fence losses ahead of the end of its financial year.

But whether the complex bankruptcy filing, which threatens to involve both the Japanese and U.S. governments, can be achieved this week, remains to be seen.

Separate sources with knowledge of the matter said last Friday Toshiba had informed its main banks that it was planning a March 31 filing for Westinghouse - the center of its multibillion dollar crisis.

“A March 28 filing is one proposal. The thinking is that it would great if we could pull that off but whether it goes that well or not, is another issue,” the source with direct knowledge said.

Sources declined to be identified as they were not authorized to speak publicly about the matter. Toshiba reiterated a previous statement that it was premature to comment on a potential bankruptcy.

Westinghouse has been plagued by huge cost overruns and the financial maelstrom has already caused Toshiba to put up its prized memory chip unit for sale, consider a sale of a majority stake in the U.S. nuclear unit and miss deadlines to file earnings that have put it at risk of a delisting.

At Thursday’s shareholder meeting, Toshiba will seek approval for the sale of the chip unit.

While a Chapter 11 filing for Westinghouse would be done by the U.S. unit’s board and would not require approval by Toshiba’s shareholders, a filing on the same day or directly before or after will increase the chances of contentious shareholder gathering.

For that reason, Toshiba’s main banks would prefer the Chapter 11 filing not come before the shareholder meeting, a financial source with knowledge of the matter said.

A Chapter 11 filing for Westinghouse is set to increase charges related to the unit to 1 trillion yen ($9 billion) from a publicly flagged 712.5 billion yen estimate, sources have said.

While that would be a much bigger-than-expected hit in the short-term, the TVs-to-construction conglomerate wants to prioritize limiting the risk of future losses at two U.S. nuclear projects in Georgia and South Carolina.

The power plants Westinghouse is building are called the Virgil C. Summer Nuclear Generating Station in Fairfield County, South Carolina and the Vogtle Electric Generating Plant in Burke County, Georgia. Scana Corp (SCG.N) and Santee Cooper own the plants in South Carolina, and Georgia Power leads a consortium that commissioned the Georgia plants.

In any Westinghouse bankruptcy, the utility companies would be among the largest creditors of the developer, owed the work that has yet to be completed and potential penalties, sources have said.

The Nikkei business daily reported on Monday that Toshiba has asked South Korea’s Korea Electric Power Corp (KEPCO) (017260.KS) to sponsor its Westinghouse
Japan's Toshiba Corp has informed its main lenders it is planning for its U.S. nuclear unit Westinghouse Electric to file for bankruptcy on March 31, people briefed on the matter said on Friday.

Toshiba (TOSBF, +4.66%) expects a Chapter 11 filing for Westinghouse would expand charges related to the U.S. unit in the current financial year to around 1 trillion yen ($9 billion) from publicly flagged estimates of 712.5 billion yen, the sources told Reuters.

The sources declined to be identified as they were not authorized to speak to media on the matter.

Toshiba said on Friday it was not appropriate to comment prematurely.

"Whether or not Westinghouse files for Chapter 11 is ultimately a decision for its board, and must take into account the various interests of all of its stakeholders, including Toshiba and its creditors," it said in a statement.

Toshiba is seeking to limit future losses at Westinghouse with a Chapter 11 filing. Westinghouse has been plagued by huge cost overruns at two U.S. nuclear projects.
Toshiba decides on Westinghouse bankruptcy, sees $9 billion in charges... http://www.reuters.com/article/us-toshiba-accounting-idUSKBH6V04G
By Taro Fuse | TOKYO

Japan's Toshiba Corp has informed its main lenders it is planning for U.S. nuclear unit Westinghouse Electric Co LLC to file for bankruptcy on March 31, people briefed on the matter said on Friday.

Toshiba expects a Chapter 11 filing for Westinghouse would expand charges related to the U.S. unit in the current financial year to around 1 trillion yen ($9 billion) from its publicly flagged estimate of 712.5 billion yen, the people also said.

A move to file, however, allows the TVs-to-construction conglomerate to limit risks from future losses at Westinghouse, which has been plagued by huge cost overruns at two U.S. nuclear projects. The decision comes only three months after Toshiba first warned of multibillion dollar charges for Westinghouse.

The ensuing financial maelstrom has already caused Toshiba to put up its prized memory chip unit for sale, consider a sale of a majority stake in Westinghouse and miss deadlines to file earnings that have put it at risk of a delisting.

Toshiba is now in discussions with the lenders over financing after Westinghouse's potential Chapter 11 filing, said the people, who declined to be identified as they were not authorized to speak to media on the matter.

Toshiba said on Friday it was not appropriate to comment prematurely.

FILE PHOTO: The logo of Toshiba Corp. is seen at the company's facility in Kawasaki, Japan February 13, 2017.
REUTERS/Issel Kato/File Photo

"Whether or not Westinghouse files for Chapter 11 is ultimately a decision for its board, and must take into account the various interests of all of its stakeholders, including Toshiba and its creditors," it said in a statement.

Toshiba's main creditor banks include Sumitomo Mitsui Banking Corp and Mizuho Bank Ltd. Representatives for the bank were not immediately available for comment outside regular business hours.

Reuters reported earlier this week that Westinghouse was reviewing proposals for a debtor-in-possession loan exceeding $500 million to help finance a potential bankruptcy.
Toshiba troubles drive credit downgrades for reactor builders

Kristi E. Swartz, E&E News reporter

Published: Friday, March 24, 2017

The main contractor building V.C. Summer's nuclear expansion (above) could file for bankruptcy. Photo by South Carolina Electric & Gas, courtesy of Flickr.

The nation's first nuclear projects in nearly 30 years face lawsuits, cost increases and more delays if the main contractor building them files for bankruptcy.

This is because the fixed-price contracts to build the reactors in Georgia and South Carolina may not be worth much more than the paper they are printed on, according to a number of recently filed research notes. Executives from financially struggling Toshiba Corp. recently confirmed that bankruptcy is an option for its Westinghouse Electric Co. unit, the main contractor building reactors for Southern Co. and Scana Corp. Analysts say they expect the utilities to sue for damages for any cost increases but note that there's an increased likelihood they will be footing the bill for those cost overruns.

Officials from Southern's Georgia Power Co. and Scana's South Carolina Electric & Gas Co. say they continue to monitor the situation and are prepared for any outcome.

Georgia Power spokesman Jacob Hawkins said the company will continue to hold Toshiba and Westinghouse accountable for their responsibilities under their agreement.

Much of the information is speculative, because there are few details from all of the companies involved. Such uncertainty has led ratings agencies to issue credit downgrades and for analysts to have to fill in the gaps. S&P Global Ratings last week downgraded Toshiba's long-term corporate credit rating on the growing possibility that the company cannot meet financial obligations. Moody's changed Georgia Power's ratings outlook to negative as the company faces increased credit and regulatory risks because of Westinghouse's uncertain future.
Fitch Ratings again raised concerns over whether the public power co-owners can recover their portion of project costs. Those utilities already are on "negative watch" or "outlook," Fitch said.

Morgan Stanley issued a detailed report Wednesday saying Southern and Scana face three issues if Westinghouse files for bankruptcy. These include a modification of the fixed price contracts, lawsuits over who must pay for cost overruns, and Toshiba not having enough assets to pay the utilities' claims.

What's more, Morgan Stanley analysts said each project could see billions of dollars in cost increases: $3.3 billion for Southern and $5.2 billion for Scana. This is because the projects already have a history of cost overruns, and it's not clear that the issues behind those have changed.

The saga started years ago with lawsuits between Georgia Power, SCE&G and the contractors building their respective projects. Westinghouse, which is using its AP1000 reactor design at both sites, agreed to buy the nuclear construction business of Chicago Bridge & Iron Co. as part of a wide-ranging legal settlement in 2015.

It's that deal that has helped place the company and Toshiba in financial turmoil. The issue came to a head in February when Toshiba said it would book a $6.3 billion write-down from the nuclear construction business.

Toshiba has delayed reporting its earnings twice and now must do so by April 11.

Under advisement

Meanwhile, a Westinghouse spokeswoman confirmed that the company has hired a chief transition and development officer from AP Services LLC, an affiliate of turnaround consultancy AlixPartners.

Southern and Scana also have hired their own advisers, according to Reuters.

Neither the utilities nor the firms listed would independently confirm such information to E&E News.

Southern and Scana executives have said they are exploring options on how to finish their projects if Westinghouse cannot. Morgan Stanley analysts take that one step further, saying the utilities would have to reassess project costs to determine whether it is still prudent to finish them.

Both projects have significant sunk costs, so even the idea of stopping them — which both companies have said they would not do — would still leave customers on the hook for paying for what's been done to date.

Moody's said Georgia Power would have to have some additional discussions because its project received billions of dollars in loan guarantees from the Energy Department.

"In the event certain mandatory prepayment events occur under the DOE loan agreement, including the termination of the Vogtle EPC contract, Georgia Power could be required to prepay the outstanding amount over five years with level principal amortization," the Moody's report said.

http://www.eenews.net/energywire/2017/03/24/stories/1060052020
Toshiba financial issues may hurt credit of US AP1000 owners, Moody’s says

The outlook for the credit ratings of five companies that own four AP1000 units being built in Georgia and South Carolina has changed to negative because of the financial problems affecting contractor Westinghouse and its parent company Toshiba, Moody’s Investors Service said in reports March 20.

Moody’s said the credit rating outlooks for Georgia Power, the Municipal Electric Authority of Georgia, Oglethorpe Power, South Carolina Electric & Gas and Santee Cooper were changed to negative from stable.

The consideration by Toshiba of a possible sale or bankruptcy reorganization for Westinghouse following increasing costs at the two construction projects, SCE&G’s Summer and Georgia Power’s Vogtle, could force the owners of the units to shoulder additional risk, Moody’s said in the reports. The two plant expansion projects have estimated costs of between $12 billion and $15 billion each.

Toshiba owns 87% of Westinghouse, but has said it wants to reduce that stake.

Toshiba has hired US bankruptcy lawyers to explore options for Westinghouse, Moody’s said. That raises questions about Toshiba and Westinghouse’s “ability and willingness to complete the projects,” Moody’s said.

Westinghouse has signed contracts to build the four units with the utility owners that effectively promise to complete them for a fixed price. All four units are behind schedule and over budget, with additional delays possible, credit agencies have said this year.

Toshiba, which guaranteed the obligations of Westinghouse under the contracts, took a charge against profits of more than $6 billion earlier this year, saying the projects would be more expensive to complete than expected.

Toshiba’s chairman left post and the company has delayed filing its financial results while it investigates undue management pressure exercised by unnamed company executives in connection with the acquisition at the end of 2015 of the Stone & Webster nuclear engineering and construction company from Chicago Bridge & Iron (NW, 16 Mar, 1). Toshiba has not provided details of the pressure and said it is continuing to investigate the matter.

The Toshiba guarantee is the main reason for the charge the company took, Moody's said. However, it said in the report on SCE&G and Scana “the value of the guarantee is arguably diminished by Toshiba’s weakened financial condition.”

New US nuclear plant construction

The change in the credit rating outlook affects Vogtle co-owners Georgia Power, MEAG and Oglethorpe Power and Summer co-owners SCE&G and South Carolina Public Service Authority, also known as Santee Cooper. It also applies to SCE&G parent company Scana, Moody’s said.

The credit rating of those companies was not changed, and the ratings outlook for Georgia Power parent company Southern Co. remains stable because of its size and the diversity of its businesses, Moody’s said.
Officials of Southern Co. and Scana have said they are prepared to take over construction of the projects if Toshiba and Westinghouse are unable to complete them. This could include hiring a new engineering, procurement and construction contractor, or taking on some of the engineering and construction management itself, executives of the two companies said during earnings calls in February.

This, however, could lead to disruptions of construction and might trigger regulatory reviews by state public service commissions, Moody's said. Such a scenario would likely result in "additional costs or delays," the credit rating agency said.

Georgia Power, which owns 45.7% of the two 1,150-MW units being built at Vogtle, "exhibits a somewhat constrained liquidity position" compared to other A-rated utilities, Moody's said.

Oglethorpe Power, owner of 30% of the Vogtle plant expansion, would have to discuss alternatives for completing the project with its members, partners and DOE, which provided $8.3 billion in federal loan guarantees for three of the Vogtle project partners.

Under the DOE loan guarantee agreement, if the Vogtle EPC contract is cancelled the recipients of the guarantees would have to repay the money borrowed on an accelerated five-year schedule, Moody's said.

MEAG owns 22.7% of the Vogtle expansion.

SCE&G did not receive a loan guarantee for the Summer station expansion, also of two 1,150-MW units.

The biggest chance for a downgrade in the credit rating of the utilities would be if Toshiba itself filed for bankruptcy, Moody's said.

**Toshiba credit rating lowered**

Separately, S&P Global Ratings last week lowered Toshiba's credit rating two steps to a level considered to reflect substantial risk by market participants. S&P Ratings said March 17 it is increasingly likely Toshiba might not be able to meet its financial obligations.

The rating was cut to CCC-, from CCC+, S&P Ratings said in a report. The CCC- level is two steps above C, which is a rating given to companies in danger of imminent default, according to S&P Ratings. Like Platts, S&P Ratings is part of S&P Global.

Unless something unexpected happens, "there is a growing likelihood that Toshiba will become unable to fulfill its financial obligations in a timely manner or will undertake a debt restructuring we classify as distressed in the next six months," S&P Ratings said.

There is a growing chance that additional losses will be announced in connection with Summer and Vogtle, threatening bank support for parent company Toshiba, which has guaranteed the contracts, S&P Ratings said.

Banks that have been lending to Toshiba might find it less attractive to do so, especially if the stock is de-listed from the Tokyo Stock Exchange, which has placed the listing under review because of accounting irregularities dating to 2015, S&P Ratings said.

William Freebairn, Washington
COLUMBIA — BlueCross BlueShield of South Carolina acknowledged Thursday it has responded to a request for information from the grand jury investigating corruption at the S.C. Statehouse.

The state's largest health insurer did not provide details regarding the request.

"Like many other organizations in South Carolina, BlueCross BlueShield of South Carolina received a grand jury subpoena on this issue, to which it responded," the company said in a
Statehouse corruption investigators seek information from BlueCross ...

BlueCross joins the State Ports Authority and the University of South Carolina in confirming that investigators have sought information in the probe that has led to the guilty plea of one top lawmaker and indictments against two others.

The investigation led by special prosecutor David Pascoe has centered recently on the dealings by powerful political consultant Richard Quinn, whose clients include four of the seven elected officials in the order of succession for governor, including Gov. Henry McMaster.

One of Quinn's clients, state Sen. John Courson, was indicted last week for taking about $130,000 in campaign cash funneled through Quinn's firm for personal use. Quinn has said all the allegations against him are false. He has not been charged in the probe.

Quinn's reach in the state is broad. In addition to politicians, he and his firm, Richard Quinn & Associates, has done work for state agencies, nonprofits and businesses, including Cayce-based power utility SCANA.

A SCANA spokesman would not comment Thursday if the company received a request for information in the Statehouse probe.

"It is not our practice to comment publicly regarding pending or ongoing legal matters," spokesman Eric Boomhower said in a statement. "SCANA has had a contractual relationship with Richard Quinn & Associates that dates back to the mid-1990s. It's an annual retainer relationship through which we can seek their counsel regarding public policy strategies."

AT&T, another company identified by sources with knowledge as receiving an information request, declined comment on Monday, though the communications giant noted it "respond requests for information in compliance with applicable law."

The three companies — AT&T, BlueCross and SCANA — have contributed nearly $425,000 combined to statewide political races over the past two decades, according to the National Institute on Money in State Politics.

Meanwhile, Friends of the Hunley, a Charleston nonprofit that supports the restoration and
Statehouse corruption investigators seek information from BlueCross ...


Clemson University, which has partnered with Friends of the Hunley, "is unaware of any employee involvement or document production associated with the ongoing investigation initiated by Solicitor Pascoe," the school said. Clemson also found no records, dating back to 2000, of any contracts or payment to Richard Quinn & Associates.

But other state agencies have produced documents for Statehouse investigators.

The Post and Courier first reported this week the Ports Authority handed over records regarding invoices and correspondence with Quinn's Columbia-based political consulting firm.

USC has not said what information was requested. Quinn has been a consultant at the state's flagship university, while McMaster received more than $450,000 over four years to raise money to build a new law school before he became lieutenant governor in 2015.

McMaster's chief of staff in the governor's office, Trey Walker, is a former employee at Quinn's firm and was a lobbyist for USC and BlueCross.

Last month, probe investigators traveled to Pawleys Island to retrieve a long-buried Republican Party audit from 2004 that showed Quinn and his son, Rick, a state lawmaker, aided McMaster's political rise by running a financial shell game in 2000 that masked debt in the state Republican Party while he was running for re-election as chairman.

Tony Bartelme contributed to this report.

Andy Shain

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Westinghouse Bankruptcy May Limit Toshiba's Looming Losses

by Pavel Alpeyev and Chris Martin

March 22, 2017, 11:37 PM EDT

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→ Westinghouse’s U.S. customers hired advisers, Reuters reports

→ Toshiba is considering a sale of controlling stake in the unit

Toshiba Corp. <https://www.bloomberg.com/quote/6502:JP>, reeling from an impending multibillion-dollar writedown in its Westinghouse Electric unit, has been battered to the point where a possible bankruptcy of the nuclear equipment business is being cheered by investors.

Shares in the electronics conglomerate rose 6.9 percent in Tokyo, the most in a
month, after Toshiba said Westinghouse’s board will decide whether to file for
bankruptcy, suggesting that it’s one of the options under consideration. Reuters
reported earlier that Westinghouse’s utility customers have hired advisers in
preparation for its possible bankruptcy.

Toshiba has been grappling with construction delays at Westinghouse projects
that could result in a writedown of 712.5 billion yen ($6.2 billion), though it
hasn’t been able to get auditors to sign off on the final figures. The company
said earlier this month that it’s reevaluating Westinghouse’s position within the group and it may deconsolidate
the subsidiary by selling a controlling equity stake.

"Westinghouse’s bankruptcy is really the only way for Toshiba to limit the risks
of further losses in the business," said Kazunori Ito, an analyst at Morningstar
Investment Services. "If there is a reason for the shares to be up today, it may be
because some believe that the Chapter 11 process is coming along."

Westinghouse also appears to be already assembling a team of lawyers and
advisers to help with the restructuring. The company has hired PJT Partners
Inc., people with knowledge of the matter have said. Lisa Donahue of AP
Services, LLC, an affiliate of AlixPartners, is leading the Pittsburgh-based
company’s operational restructuring efforts.

Scana Corp. and Southern Co., the utilities involved in the construction delays,
have hired advisers in preparation for its possible bankruptcy, Reuters reported,
citing unidentified people familiar with the matter. Westinghouse has also
brought in bankruptcy attorneys from Weil Gotshal & Manges LLP, according to
Reuters.

"Whether or not Westinghouse files for Chapter 11 is ultimately a decision for its
board, and must take into account the various interests of all of its stakeholders,
including Toshiba and its creditors. It is not appropriate for Toshiba to comment prematurely,” the Tokyo-based company said in an emailed statement.


“We will continue to hold Westinghouse and Toshiba accountable for their responsibilities under our agreement,” Jacob Hawkins, a Southern spokesman, said in an email. “We are monitoring the situation and prepared for any potential outcome.”

Sarah Cassella, a Westinghouse spokeswoman, declined to comment. Southern and Scana didn’t immediately respond to requests for comment on the Reuters report.

Toshiba has delayed its earnings announcement twice, saying it needed more time to examine reports of “inappropriate pressure” internally to push through the acquisition of a U.S. construction firm specializing in building atomic plants. Toshiba now has until April 11 to report earnings, though it can request another extension.

“It’s not at all clear what the loss would be in case of a Westinghouse
bankruptcy,” said Tomoaki Kawasaki, an analyst at Iwai Cosmo Securities Co. “The shares are very sensitive to newsflow and the prices is driven largely by individual investors.”

In order to make up for a potentially large writedown, Toshiba has put its prized memory chip business **up for sale** [https://www.bloomberg.com/news/articles/2017-03-17/toshiba-said-to-attract-10-potential-bidders-for-chips-business](https://www.bloomberg.com/news/articles/2017-03-17/toshiba-said-to-attract-10-potential-bidders-for-chips-business), with bids due by the end of this month. Western Digital Corp., SK Hynix Inc., Foxconn Technology Group, Micron Technology Inc. and Kingston Technology Co. are among those interested, people with knowledge of the matter have said.

Chief Cabinet Secretary Yoshihide Suga played down the possibility of a sale to a foreign entity on Thursday, saying that the Japanese government is closely watching the process because the technology is important.
Regulated Utilities

Implications of Potential Westinghouse Bankruptcy Filing

Media reports indicate nuclear contractor Westinghouse is taking exploratory steps around a possible bankruptcy filing. We see a number of risks for both SCG and SO if Westinghouse is unable to honor its obligations, with further downside in SCG shares.

Recent media reports, including Reuters, have indicated that Toshiba subsidiary Westinghouse (which is constructing nuclear plants for SO and SCG) is currently taking offers for a debtor-in-possession financing package to provide funds through a bankruptcy proceeding, and that the company has hired bankruptcy attorneys. Toshiba has said that no decision about a bankruptcy filing has been made, but we consider it an important exercise to consider the potential ramifications if Westinghouse is unable to honor its obligations to SO and SCG.

In the event of a bankruptcy filing for Westinghouse, SCANA and Southern would in our view face three issues: (1) the potential for nuclear contracts to be modified by a bankruptcy filing, potentially limiting liability of Westinghouse and Toshiba for current and/or future overruns, (2) the risk of protracted litigation regarding liability for cost overruns, and (3) potential for lack of assets at Toshiba with which to satisfy SCANA’s and Southern’s claims. As a result, we think the fixed price nuclear construction contracts could be at risk, and believe SO and SCG shareholders would have a greater likelihood of bearing nuclear cost overruns.

We see the potential for further cost overruns given the amount of construction remaining and lack of productivity improvements. Cost estimates for both nuclear projects are now 20-25% ($1.0-1.3b) above initial forecasts, before including Toshiba’s latest cost disclosure. Given the history of cost overruns for these projects, the ~3 years remaining for construction, historical precedent of nuclear construction cost overruns in the US, and the lack of productivity improvements thus far, we believe it is likely that further cost overruns and delays will emerge. We estimate $5.2b in additional construction and delay-related cost overruns for SCG and $3.3b for SO.

If SO and SCG were to abandon the projects, we believe there could still be some risk to earnings. There may be some discretion by the commissions as to the approach taken to allow a recovery of investments in plants that are abandoned, such as limiting the time horizon of recovery or lowering the rate of return. Based on our estimates, SCG will be collecting $2.00 in EPS in 2018 (45% of total 2018 EPS) from the investments made in its nuclear project; SO will be collecting about $0.25 (8%), and may face an incremental ~$0.03 drag due to a

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related loan repayment. We believe these earnings could be at risk if the companies abandon the plants and were unable to fully earn a return on the investments made to date.

**What are the stocks pricing in?** By our estimates, SCG stock prices in a $1.8b cost overrun borne by shareholders, while SO prices in a $2.2b overrun. For SCG, cost overruns could reach $5.2b by our estimates, and we estimate $3.3b for SO. There are offsetting factors to these potential liabilities (such as the Toshiba letters of credit and parent guarantee, tax writeoffs, and regulatory recovery), but most are highly uncertain in our view. We give credit only for the letters of credit and tax writeoffs in our valuations, and apply a 50% probability to the construction cost overruns. For SCG we see further downside to shares, with our $65 PT implying -5% downside at current levels. For SO, our $52 PT implies a modest +2% upside to the current stock price.
Implications of a Potential Westinghouse Bankruptcy Filing

Recent media reports have indicated that Westinghouse is currently taking offers for a debtor-in-possession financing package to provide funds through a bankruptcy proceeding (article). Press reports have also indicated that the company had hired bankruptcy attorneys from law firm Weil, Gotshal & Manges (article). We note no decisions have been made about a bankruptcy filing according to these reports, and these steps were only exploratory in nature. Toshiba has noted that no decisions have yet been made regarding a potential bankruptcy filing for Westinghouse, and the company is currently trying to sell the business. However, we consider it an important exercise for investors to consider the potential ramifications if Westinghouse is unable to honor its obligations to SO’s and SCG’s nuclear projects.

**In the event of a bankruptcy filing for Westinghouse, SCANA and Southern would in our view face three issues:** (1) the potential for nuclear contracts to be modified in bankruptcy, potentially limiting liability for current and/or future overruns, (2) the risk of protracted litigation regarding liability for cost overruns, and (3) potential for lack of assets at Toshiba with which to satisfy SCANA’s and Southern’s claims. As a result, we think the fixed price nuclear construction contracts could be at risk, and believe SO and SCG shareholders would have a greater likelihood of bearing nuclear cost overruns in this scenario.

**The path forward under a Westinghouse bankruptcy scenario is highly uncertain in our view.** If the company is able to secure debtor-in-possession financing, construction could continue and payments may still be made by SO and SCG as long as Westinghouse is hitting construction milestones and is able to pay its subcontractors. However, we think the fixed price nuclear contracts could potentially be modified in a bankruptcy proceeding, and could remove the fixed price agreements that are in place for SO and SCG. If this is the case we think SO and SCG would likely seek damages from Westinghouse for breaking the original contract. In this scenario any recovery of damages from Westinghouse would be highly uncertain in our view, given the extensive litigation likely to be required and other financial obligations that would need to be settled by Westinghouse. To the extent Westinghouse were unable to honor its obligations to complete the nuclear projects or pay damages, SO and SCG could then seek payments from Toshiba. The companies could seek payments up to the maximum amount of Toshiba’s parental guarantee, which Toshiba estimated to be $6.3b across the two nuclear projects. The ability of SCG and SO to receive payments from Toshiba, though, would also depend on Toshiba’s financial health and might require litigation to secure. Given the financial uncertainty faced by Toshiba, including potential stock delisting, asset sales, and lender discussions underway, we think recovery of damages through this route is uncertain as well.

**Impact of Potential Project Abandonment**

In the event that Westinghouse is unable to complete the plants and a new contractor is required, we believe SO and SCG would reassess the costs of the projects to determine whether it is still prudent to continue with construction. Given the potential
for significant cost overruns we think there is a chance that the companies find the impact to consumers would be too great, or they are unable to come to an agreement with regulators to recover future costs, and decide to abandon the projects. At risk in this scenario in our view is the current stream of earnings from the capital that has already been spent on the units.

If SO and SCG were to abandon the projects, there is some legal protection for the utilities to recover their costs to date (including a return on their capital deployed to date), but we believe there is still some risk in terms of the duration over which there will be a return of and on capital, as well as the rate of return on capital. Both GA and SC have laws in place that define a utility’s ability to recover costs made in a plant that is later abandoned. There may be some discretion, though, as to the approach under which the commissions allow a return on these investments. For example, if the return on and of capital is realized over a short time horizon, or if the rate of return allowed is relatively low (which we have seen in other situations involving stranded assets), the long-term earnings power of SO and SCG could in our view be materially impeded. Based on our estimates, SCG is collecting $1.60 in EPS from the investments made in the VC Summer project in 2017 (38% of 2017 EPS) and $2.00 in 2018, and SO is collecting about $0.21 (7%) in 2017 and $0.25-0.26 in 2018. We believe these earnings could be at risk if the companies were unable to fully earn a return on the investments made to date in the plants over a long period of time.

Are SCG’s current nuclear earnings at risk? The Base Load Review Act (BLRA) allows SCG to collect a cash return on capital through customer rates while the plant is under construction. In 2017, we estimate that SCG will be collecting ~$230m in net income, or $1.60 in EPS, attributable to the VC Summer plant, and $290m or $2.00 in 2018. We believe these earnings would potentially be at risk in the event that the company abandons the project and is not allowed to recover its return on the capital spent to date. We have highlighted the abandonment language from the BLRA below.

"Where a plant is abandoned after a base load review order approving rate recovery has been issued, the capital costs and AFUDC related to the plant shall nonetheless be recoverable under this article provided that the utility shall bear the burden of proving by a preponderance of the evidence that the decision to abandon the construction of the plant was prudent. Without limiting the effect of Section 58-33-275(A), recovery of capital costs and the utility’s cost of capital associated with them may be disallowed only to the extent that the failure by the utility to anticipate or avoid the allegedly imprudent costs, or to minimize the magnitude of the costs, was imprudent considering the information available at the time that the utility could have acted to avoid or minimize the costs. The
commission shall order the amortization and recovery through rates of the investment in the abandoned plant as part of an order adjusting rates under this article."

**Risk to Southern's current nuclear earnings.** In 2017, we estimate SO will be collecting ~$210m in net income, or $0.21 in EPS, attributable to the Vogtle plant, and about $0.25-0.26 in 2018. We believe these earnings would potentially be at risk in the event that the company abandons the project and is not allowed to recover its return on the capital spent to date, and have highlighted the abandonment language in GA below. The language appears to allow SO to recover costs as long as they were not deemed imprudent (among other considerations). If the commission were to disallow SO’s return on equity for the portion spent thus far, and only allow the recovery of depreciation and debt financing costs through securitization of the asset, we believe the $0.21 in 2017 EPS and $0.25-0.26 in 2018 related to nuclear construction would be at risk.

If the commission disapproves of all or part of the proposed revisions and the utility cancels construction of some or all of the facility as a result of the disapproval, the utility may recover through any rate-making vehicle over a reasonable period of time, absent fraud, concealment, failure to disclose a material fact, imprudence, or criminal misconduct, the amount of its actual investment, net of actual salvage value, in the partially completed portion of the facility along with the cost of carrying the unamortized balance of that investment to the extent such investment is verified as made pursuant to the certificate.

**Another potential risk for SO: Repayment of debt backed by DOE loan guarantees.** At the end of 2016, SO had borrowed $2.6b under a loan guarantee facility with the US Department of Energy. Borrowings established under the loan guarantee agreement have an interest rate of T+0.375% and maturity in 2044. According to SO’s 10-K, the company would be required to prepay the borrowings over a five year period if the Vogtle agreement is terminated:

In the event certain mandatory prepayment events occur, the FFB’s commitment to make further advances under the FFB Credit Facility will terminate and Georgia Power will be required to prepay the outstanding principal amount of all borrowings under the FFB Credit Facility over a period of five years (with level principal amortization). Among other things, these mandatory prepayment events include (i) the termination of the Vogtle 3 and 4 Agreement; (ii) cancellation of Plant Vogtle Units 3 and 4 by the Georgia PSC, or by Georgia Power if authorized by the Georgia PSC; and (iii) cost disallowances by the Georgia PSC that could have a material adverse effect on completion of Plant Vogtle Units 3 and 4 or Georgia Power's ability to repay the outstanding borrowings under the FFB Credit Facility.

The weighted average interest rate on SO's borrowings under the loan guarantee program is 3.3%. If SO were to refinance this debt at a rate similar to its current bonds due in the 2040 timeframe, which average roughly 5.0%, the difference in interest expense would amount to $45m or $0.03 in EPS.

**Nuclear Construction Cost Estimates**

**VC Summer project.** As of SCG's latest Base Load Review Act (BLRA) filing for 4Q16, construction costs for the project (before financing costs) are estimated to total $7.3b for the portion of the plant owned by SCANA. This compares to the company's original
2009 cost forecast of $6.05b, and represents an increase of $1.3b or 21% thus far. On top of this, SCG’s portion of Toshiba’s recently disclosed additional nuclear cost overruns, assuming an even split between the two US nuclear projects, totals another ~$1.7b. In our base case, we further assume that from today, costs increase proportionately with the overruns identified thus far. The project is about 60% complete based on the capital spent to date, while overruns have totaled ~$3b ($1.3b plus the assumed $1.7b cost increase announced by Toshiba). If cost overruns continue to be recognized proportionately, this would lead to an additional $2b of overruns. Finally, we also expect SCG to face increased costs due to potential delays in the project, with a 2-year delay leading to $1.5b in owner’s costs, lost Production Tax Credits (PTCs), and financing cost by our estimates. Our total estimate for SCG’s project cost is $12.6b, about $6.5b or 108% above the original construction cost estimate.

Vogtle project. As of SO’s latest Vogtle Construction Monitoring (VCM) report for 2H16, construction costs for the project (before financing costs) are estimated to total $5.44b. This compares to the company’s original 2009 cost forecast of $4.4b, and represents an increase of $1b or 23% thus far. On top of this, SO’s portion of Toshiba’s recently disclosed additional nuclear cost overruns, assuming an even split between the two US nuclear projects, totals another ~$1.4b. In our base case, we further assume that from today, costs increase proportionately with the overruns identified thus far. The project is about 70% complete based on the capital spent to date, while overruns have totaled ~$2.4b ($1b plus the assumed $1.4b cost increase announced by Toshiba). If cost overruns continue to be recognized proportionately with the completion of the project, this would lead to an additional $950m of overruns. Finally, we also expect SO to face increased costs due to potential delays in the project, with a 2-year delay leading to $940m in owner’s costs, lost PTCs, and financing cost by our estimates. Our total estimate for SO’s project cost is $8.7b, about $4.3b or ~100% above the original construction cost estimate.
What are the stocks pricing in?

**SCG stock prices in $1.8b of cost overruns by our estimates.**

Using consensus 2018 EPS of $4.51 and the utility average PE multiple of 18.0x, we estimate the consensus utility value of $81/share for SCG. With the stock currently trading at $68, this implies $13/share or $1.8b of nuclear-related costs borne by shareholders. We believe the total cost overruns could be much higher: We estimate $1.7b of potential overruns from Toshiba’s recent disclosure, assume an incremental $2b of construction cost overruns are possible through the completion of the project, and estimate $1.5b of costs related to a 2-year delay in the project (including financing cost, owner’s costs, and reimbursement of lost production tax credits). Potential offsets to these cost overruns would include Toshiba’s letter of credit (LOC, $55m), the rest of Toshiba’s parent guarantee of Westinghouse (we estimate $1.7b based on Toshiba’s disclosures and assuming an even split between SO and SCG), the value of tax writeoffs from unrecovered costs, and potential regulatory recovery. We believe all but the letter of credit and potential tax writeoffs in this scenario are highly uncertain. We give credit only for the LOC and tax writeoffs in our valuation, and apply a 50% probability to the construction cost overruns.

**SO stock prices in $2.2b of cost overruns by our estimates.**

As an indicative analysis if we assume the core SO earnings are valued at a 5% PE discount due to below-average utility growth and greater risk at SO Power, using consensus 2018 EPS of $3.12 and an utility average PE multiple of 18.0x we estimate a core value of $53/share for SO. With the stock currently trading at $51, this implies ~$2/share or $2.2b of costs borne by shareholders (either attributable to nuclear cost overruns or Kemper disallowance, in our view). We believe the total cost overruns could $3.3b: We estimate $1.4b of potential overruns from Toshiba’s recent disclosure, assume an incremental $950m of construction cost overruns are possible through the completion of the project, and estimate $940m of costs related to a 2-year delay in the project (including financing cost, owner’s costs, and reimbursement of lost production tax credits). Potential offsets to these cost overruns would include Toshiba’s letter of credit ($420m), the rest of Toshiba’s parent guarantee of Westinghouse (we estimate $1.0b based on Toshiba’s disclosures and assuming an even split between SO and SCG), tax writeoffs from unrecovered costs, and potential regulatory recovery (including $240m in contingency already approved by the commission). We believe all but the letter of credit and approved contingency are highly uncertain. We give credit for the LOC, contingency, and tax writeoffs in our valuation, and apply a 50% probability to the construction cost overruns.

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**Exhibit 3: SCANA Valuation Analysis**

<table>
<thead>
<tr>
<th>Utility Valuation</th>
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</thead>
<tbody>
<tr>
<td>2018 Consensus EPS</td>
<td>$4.51</td>
</tr>
<tr>
<td>Group average PE multiple</td>
<td>18.0</td>
</tr>
<tr>
<td>Assumed premium/discount</td>
<td>9%</td>
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<tr>
<td>Utility valuation ($/shr)</td>
<td>$81</td>
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<tr>
<td>Shares outstanding (m)</td>
<td>143</td>
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<tr>
<td>Utility market value ($m)</td>
<td>$11,602</td>
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<table>
<thead>
<tr>
<th>Implied nuclear construction cost borne by shareholders</th>
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<tbody>
<tr>
<td>Current stock price</td>
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<tr>
<td>Current market cap</td>
<td>$9,757</td>
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<tr>
<td>Implied nuclear construction cost borne by shareholders ($/shr)</td>
<td>$13</td>
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<tr>
<td><strong>Implied nuclear construction cost borne by shareholders ($m)</strong></td>
<td><strong>$1,845</strong></td>
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<table>
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<tr>
<th>Potential incremental costs</th>
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<tr>
<td>Potential cost overrun - Toshiba disclosure</td>
<td>$1,678</td>
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<tr>
<td>MSE further construction cost overrun</td>
<td>$2,055</td>
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<tr>
<td>Delay costs (financing, owner’s costs, PTC) - 2yrs</td>
<td>$1,502</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$5,235</strong></td>
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*Source: Morgan Stanley Research*

**Exhibit 4: SO Valuation Analysis**

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<th>Utility Valuation</th>
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<tbody>
<tr>
<td>2018 Consensus EPS</td>
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<td>Group average PE multiple</td>
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<td>Assumed premium/discount</td>
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<td>Utility valuation ($/shr)</td>
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<td>Shares outstanding (m)</td>
<td>990</td>
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<td>MSE Utility market value ($m)</td>
<td>$52,840</td>
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<thead>
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<th>Implied nuclear construction cost borne by shareholders</th>
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<tr>
<td>Current stock price</td>
<td>$51</td>
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<tr>
<td>Current market cap</td>
<td>$50,599</td>
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<td>Implied nuclear construction cost borne by shareholders ($/shr)</td>
<td>$2.3</td>
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<td><strong>Implied nuclear construction cost borne by shareholders ($m)</strong></td>
<td><strong>$2,240</strong></td>
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<td>Potential cost overrun - Toshiba disclosure</td>
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<td>MSE further construction cost overrun</td>
<td>$952</td>
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<td>Delay costs (financing, owner’s costs, PTC) - 2yrs</td>
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<td><strong>Total</strong></td>
<td><strong>$3,287</strong></td>
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*Source: Morgan Stanley Research*
Valuation Methodology and Risks

Exhibit 5: Valuation Methodology and Risks

<table>
<thead>
<tr>
<th>Company</th>
<th>Methodology</th>
<th>Valuation Methodology</th>
<th>Risk</th>
<th>Note</th>
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<tr>
<td>SCG.N</td>
<td>We value the regulated utility by applying the regulated group P/E to our 2017 Utility EPS.</td>
<td>Nuclear cost overruns or delays</td>
<td>Nuclear cost overruns or delays</td>
<td>Changes to nuclear regulations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Changes to nuclear regulations</td>
<td>Nuclear cost overruns or delays</td>
<td>Weak load growth</td>
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<tr>
<td></td>
<td></td>
<td>Weak load growth</td>
<td>Nuclear cost overruns or delays</td>
<td>Supplier or contractor delays, defaults, or mistakes on new nuclear construction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier or contractor delays, defaults, or mistakes on new nuclear construction</td>
<td>Nuclear cost overruns or delays</td>
<td>Competition in retail business</td>
</tr>
</tbody>
</table>

SO.N

Valuation Methodology (PT $52):

- We value the regulated utility by applying the regulated group P/E multiple to our 2017 Utility EPS and subtract our estimate of dilution due to nuclear cost overruns.

Risks:

- Nuclear / IGCC cost overruns or delays
- Changes to nuclear regulations
- Weak load growth
- Supplier or contractor delays, defaults, or mistakes on new nuclear construction
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Global Stock Ratings Distribution

(as of February 28, 2017)

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Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months.

**Analyst Stock Ratings**

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months. Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

**Analyst Industry Views**

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.

Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

**Stock Price, Price Target and Rating History (See Rating Definitions)**
SCANA Corp (SCG.N) - As of 3/21/17 in USD
Industry: Regulated Utilities

Price Target History: 2/10/14 : 52; 3/6/14 : 54; 4/7/14 : 56; 5/7/14 : 57; 6/16/14 : 55; 7/7/14 : 58;
12/14/15 : 64; 1/12/16 : 62; 2/9/16 : 65; 3/11/16 : 66; 4/12/16 : 68; 5/14/16 : 69; 6/15/16 : 67; 7/13/16 : 72;

Source: Morgan Stanley Research
Date Format: MM/DD/YY
Price Target — No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst) — Stock Price (Covered by Current Analyst)
Stock and Industry Ratings (abbreviations below) appear as a Stock Ratings/Industry View
Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NR)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 13, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 13, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.
Southern Company (SO/N) - As of 3/21/17 in USD
Industry: Regulated Utilities


Price Target History: 2/18/14: 43; 3/6/14: 44; 4/7/14: 46; 5/7/14: 47; 6/18/14: 44; 7/7/14: 46;
12/14/15: 43; 1/12/16: 45; 2/9/16: 46; 3/11/16: 50; 4/12/16: 51; 5/12/16: 54; 6/10/16: 52; 6/15/16: 56;
7/13/16: E/I; 9/11/16: 40; 10/18/16: 47; 1/9/17: 49; 2/9/17: 52;

Sources: Morgan Stanley Research

Date Format: MM/DD/YY

Price Target — No Price Target Assigned (NR)

Stock Price (Not Covered by Current Analyst) — Stock Price (Covered by Current Analyst) —

Stock and Industry Ratings (abbreviations below) appear as a Stock Rating/Industry View

Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NR)

Industry Views: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 15, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 15, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.
Toshiba (6502.T) - As of 3/21/17 in JPY
Industry: Japan Semiconductors

Stock Rating History: 3/1/14: O/1; 5/9/15: NA/I; 3/9/16: NA/I

Source: Morgan Stanley Research Date Format: MM/DD/YY Price Target: No Price Target Assigned (NA)
Stock Price (Not Covered by Current Analyst): Stock Price (Covered by Current Analyst):
Stock and Industry Ratings (abbreviations below) appear as: Stock Rating/Industry View
Stock Rating: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)
Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

Effective January 15, 2014, the stocks covered by Morgan Stanley Asia Pacific will be rated relative to the analyst's industry (or industry team's) coverage.

Effective January 15, 2014, the industry view benchmarks for Morgan Stanley Asia Pacific are as follows: relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

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INDUSTRY COVERAGE: Regulated Utilities

<table>
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<th>COMPANY (TICKER)</th>
<th>RATING (AS OF)</th>
<th>PRICE (03/21/2017)</th>
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<tr>
<td>Devin McDermott</td>
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<td>Consolidated Edison Inc (EDN)</td>
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Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.

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Toshiba Nuclear Woes Has Moody's Warning of Scana Credit Risks

by Stephen Cunningham
March 20, 2017, 5:50 PM EDT

U.S. utility owner Scana Corp. is facing increased credit and regulatory risks with Toshiba Corp. ’s Westinghouse, the nuclear power-plant builder contracted to install two of its nuclear reactors, potentially restructuring, according to Moody’s Investors Service.

Moody’s lowered Scana’s outlook to “negative” because of the “uncertain future” of Westinghouse, which is building the two nuclear units at Scana’s V.C. Summer plant in South Carolina.

Toshiba is still reeling from an estimated $6.2 billion writedown associated with its nuclear division, and Westinghouse has hired an adviser to help restructure its business, people familiar with the situation said earlier this month. The company’s financial troubles have weighed on the shares of Scana, which said last month it could seek a new contractor to complete the reactors — or even step in to do the work itself — if Westinghouse were forced to drop out.
Toshiba’s situation raises questions about its “ability and willingness to physically complete the projects, which would ultimately shift some of the risks of nuclear construction, and the potential for future cost increases, back to” Scana’s South Carolina Electric & Gas Co. utility, Moody’s said Monday.

Moody’s lowered the outlook of Southern Co. ’s Georgia Power utility to negative from stable, also citing Westinghouse. Westinghouse is contracted to build two reactors at the utility’s Vogtle plant in Georgia. Moody’s affirmed Southern’s own ratings with a stable outlook.

Southern and Scana didn’t immediately respond to requests for comment.
Santee Cooper to study rate increase tied to nuclear plant construction

By David Wren dwren@postandcourier.com   Mar 20, 2017 Updated 8 hrs ago

A huge derrick crane prepares to place the first steam generator within one of two Westinghouse reactors being added to V.C. Summer Nuclear Station in Jenkinsville. The 80-foot-long component weighs about 1.5 million pounds, measures 20 feet in diameter and is more than 80 feet long. File/Provided/SCANA Corp.

Santee Cooper will study its current rate structure to see if customers must pay more money to help fund the construction of two new reactors at the V.C. Summer Nuclear Station.

The state-owned utility's board of directors voted Monday to authorize a rate study related to the $14 billion Midlands project, which is over budget and behind schedule. Santee Cooper c
45 percent of the expansion in Jenkinsville, with South Carolina Electric & Gas owning the res

Higher rates also might be needed to help Moncks Corner-based Santee Cooper pay for more stringent environmental regulations.

The rate study will be presented to Santee Cooper's board in June. If the board ultimately vote to raise rates, the higher costs would take effect in 2018.

"Santee Cooper understands the impact that a rate adjustment can have on our customers," CEO Lonnie Carter said in a statement. "We are working hard to minimize rate changes by controlling those costs that we can control and reducing debt cost when interest rates are favorable."

SCE&G — a division of Cayce-based SCANA Corp. — has raised its customers' rates nearly 20 percent since 2009 to pay for its share of the new reactors. Santee Cooper increased rates by percent in both 2016 and 2017 to help pay for the units.

The nuclear project has been beset by financial and construction problems. The current cost estimate for the reactors is 21.6 percent higher than an original $11.4 billion price tag.

Construction also is years behind schedule, with the latest estimate putting the first reactor online in April 2020 and completion of the second unit delayed to December 2020.

In addition, a key contractor in the project — Toshiba Corp. subsidiary Westinghouse Electric — is in serious financial trouble. Toshiba last month reported $6.3 billion in losses from its nuclear energy business, raising concerns about its role at V.C. Summer. Westinghouse is the engineering, procurement and construction contractor at the nuclear plant.

SCE&G has said it has a plan to complete the project if necessary, adding that Toshiba has pledged its commitment to finishing the work.

Reach David Wren at 843-937-5550 or on Twitter at @David_Wren_

David Wren
Rating Action: Moody’s changes Georgia Power outlook to negative, affirms Southern with stable outlook

Global Credit Research - 20 Mar 2017

Approximately $8 billion of debt securities affected

New York, March 20, 2017 – Moody’s Investor Service changed the rating outlook of Georgia Power Company to negative from stable while affirming the utility’s ratings, including its A3 senior unsecured and Issuer Rating. Moody’s affirmed the ratings of its parent company, The Southern Company (Southern), including its Baa2 senior unsecured rating and Prime-2 short-term rating for commercial paper, with a stable outlook. Moody’s also affirmed the ratings of Southern Electric Generating Company, including its A1 senior unsecured rating, with a stable outlook.

RATINGS RATIONALE

"The negative outlook on Georgia Power reflects the increased credit and regulatory risk facing the company due to the uncertain future of Westinghouse, the construction contractor building the new Vogtle nuclear units, and its parent company Toshiba ", said Michael G. Haggarty, Associate Managing Director.

Toshiba Corporation (Toshiba, Caa1, ratings on review), is actively considering a sale or other strategic options for its US nuclear unit Westinghouse Electric Company LLC (Westinghouse, unrated), and has recently hired US bankruptcy lawyers to explore these options. In our opinion, these developments raise questions regarding the companies’ ability and willingness to physically complete the Vogtle project under the current arrangements, which could ultimately shift some of the risks of nuclear construction, and the potential for further cost increases, back to Georgia Power.

The Vogtle units are being constructed for Georgia Power and its municipal and cooperative utility partners under a fixed price engineering procurement construction (EPC) contract, with guaranteed completion dates and associated liquidated damage provisions that materially place the risks of future cost overruns and delays on Westinghouse. Westinghouse’s obligations have been guaranteed by its parent, Toshiba, but the value of the guarantee could be diminished by Toshiba’s weakened financial condition.

Last week, Toshiba delayed the release of its third quarter financial results for the second time while it further investigates accounting issues relating to Westinghouse’s 2015 acquisition of CB&I Stone & Webster. The acquisition, and the related assumption of obligations to complete the Vogtle and VC Summer nuclear units in the US, is believed to be the primary determinant of Toshiba’s forecasted full year impairment loss of more than $6 billion.

In the event Westinghouse were to become unable or unwilling to complete the projects as currently contracted, including the potential for a bankruptcy filing, we anticipate Georgia Power would evaluate alternatives. These may include completing the project itself, or engaging other contractors, which could result in additional costs or delays for Georgia Power and its rate payers. Georgia Power is currently in the process of reviewing the detail supporting Westinghouse’s recently revised forecasted in-service dates of December 2019 and September 2020 for the two Vogtle units, in part to assess the potential for additional delays or cost increases.

We expect Georgia Power to review these alternatives with its utility partners on the project, the Georgia Public Service Commission (GPSC), and the US Department of Energy (DOE), which guarantees $2.6 billion of loans from the US Federal Financing Bank. In the event certain mandatory prepayment events occur under the DOE loan agreement, including the termination of the Vogtle EPC contract, Georgia Power could be required to prepay the outstanding amount over five years with level principal amortization.

The rating affirmation considers that the obligations under Westinghouse’s fixed price EPC contract are currently guaranteed by Toshiba, which could mitigate additional project costs that might arise in the event Westinghouse was rendered unable or unwilling to fulfill its obligations. The affirmation assumes the guarantee from Toshiba remains in place and that Toshiba continues as a going concern. The ratings affirmation also reflects the credit supportive regulatory environment in Georgia and the state’s support of nuclear construction.
as evidenced by the recent regulatory settlement on Vogtle costs, which we viewed as credit positive.

The negative outlook also considers cash flow coverage metrics that have declined as the Vogtle project has proceeded, with Georgia Power's CFO pre-working capital to debt falling from the 26%-27% range from 2011-2013 to 23% on average from 2014-2016 and 21% at 31 December 2016. This ratio is now slightly below our methodology rating guidelines of between 22% and 30% for the A rating category, a significant credit weakness considering the higher risk entailed in the new nuclear construction project. Georgia Power also exhibits a somewhat constrained liquidity position, particularly considering its large construction program, with approximately half of its $1.75 billion of bank credit facilities dedicated to providing liquidity support for variable rate demand bonds.

The affirmation of Southern's ratings with a stable outlook considers the increased size, scale, and diversity of the company's business following the acquisition of a natural gas local distribution company and other natural gas assets last year, and the continued growth of subsidiary Southern Power Company's (Baa1 stable) largely contracted renewable energy business. Although Georgia Power remains Southern's largest subsidiary and the biggest source of dividends, the credit strength and overall growth of the company's other businesses has reduced the relative impact of Georgia Power and the Vogtle new nuclear construction project on the parent. Although parent company debt increased significantly following the natural gas acquisitions in 2016, Southern is appropriately positioned at its current Baa2 rating level considering our projection of a CFO pre-working capital to debt ratio of above 15%.

The affirmation of the ratings Southern Electric Generating Company (A1 senior unsecured, A2 issuer Rating), which is 50% owned by Georgia Power and 50% owned by Alabama Power Company (A1 senior unsecured, stable), reflects the unconditional guaranty of its debt by Alabama Power.

Rating Outlook

The negative rating outlook incorporates a view that Toshiba could file Westinghouse into a chapter 11 bankruptcy proceeding, thereby calling into question the ability to complete the Vogtle project under the current arrangements. This will, in turn create disruptions to the construction progress and result in additional costs to complete the project, which will trigger a higher level of regulatory scrutiny. The negative outlook also assumes that Georgia Power will maintain a financial profile consistent with its existing metrics, including the steady production of CFO pre-working capital to debt in the low 20% range, and that the GPSC will continue to provide transparent and timely recovery of its Vogtle costs.

Factors that Could Lead to an Upgrade

An upgrade of Georgia Power is unlikely considering the negative rating outlook, the higher uncertainty associated with the Vogtle new nuclear project and the utility's declining metrics. The outlook could be revised to stable if the financial situation at Westinghouse and Toshiba improves while their commitments to the Vogtle project were maintained.

Southern's rating could be upgraded if there is a substantial reduction of parent company debt levels; if the Vogtle project and Mississippi Power Company's (Ba1, negative) Kemper plant reach commercial operation without significant additional delays or cost increases; if one or more of its major utilities is upgraded (Alabama Power, Georgia Power, Southern Power Company, or Southern Company Gas Capital); or if consolidated credit metrics return to level more appropriate for a Baa1 rating, including CFO pre-working capital to debt in the 20% range.

Factors that Could Lead to a Downgrade

Georgia Power's rating could be downgraded if Toshiba files for bankruptcy; if there are further delays or cost increases on the project; if there is a decrease in the level of regulatory, political, public, or partner support for the project; or if we expect the utility's CFO pre-working capital to debt ratio to remain below 22% for a sustained period.

Southern's rating could be downgraded if there are material additional debt financed acquisitions; if parent company debt increases materially above the current 25% of consolidated debt level; if one or more of its larger subsidiaries is downgraded (Alabama Power, Georgia Power, Southern Power Company, or Southern Company Gas Capital); or if consolidated coverage metrics show a decline below the levels incorporated in our current projections, including cash flow from operations pre-working capital to debt below 15% for an extended period.
Outlook Actions:
..Issuer: Georgia Power Company
....Outlook, Changed To Negative From Stable
..Issuer: Southern Company (The)
....Outlook, Remains Stable
..Issuer: Southern Electric Generating Co
....Outlook, Remains Stable

Affirmations:
..Issuer: Appling County Development Authority, GA
....Senior Unsecured Revenue Bonds, Affirmed A3
....Senior Unsecured Revenue Bonds, Affirmed VMIG 2
..Issuer: Bartow County Development Authority, GA
....Senior Unsecured Revenue Bonds, Affirmed A3
....Senior Unsecured Revenue Bonds, Affirmed VMIG 2
..Issuer: Burke County Development Authority, GA
....Senior Unsecured Revenue Bonds, Affirmed A3
....Senior Unsecured Revenue Bonds, Affirmed VMIG 2
..Issuer: Coweta County Development Authority, GA
....Senior Unsecured Revenue Bonds, Affirmed A3
....Senior Unsecured Revenue Bonds, Affirmed VMIG 2
..Issuer: EFFINGHAM COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY,
....Senior Unsecured Revenue Bonds, Affirmed A3
....Senior Unsecured Revenue Bonds, Affirmed VMIG 2
..Issuer: Floyd County Development Authority, GA
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....Senior Unsecured Revenue Bonds, Affirmed VMIG 2
..Issuer: Georgia Power Company
....Issuer Rating, Affirmed A3
....Senior Unsecured Shelf, Affirmed (P)A3
....Junior Subordinate Shelf, Affirmed (P)Baa1
....Preferred Shelf, Affirmed (P)Baa2
....Preference Shelf, Affirmed (P)Baa2
....Preference Stock Preference Stock, Affirmed Baa2
....Pref. Stock Non-cumulative Preferred Stock, Affirmed Baa2
....Senior Unsecured Bank Credit Facility, Affirmed A3
....Senior Unsecured Regular Bond/Debenture, Affirmed A3
...Issuer: Heard County Development Authority, GA
....Senior Unsecured Revenue Bonds, Affirmed A3
....Senior Unsecured Revenue Bonds, Affirmed VMIG 2
...Issuer: Monroe County Development Authority, GA
....Senior Unsecured Revenue Bonds, Affirmed A3
....Senior Unsecured Revenue Bonds, Affirmed VMIG 2
...Issuer: Southern Company (The)
....Commercial Paper, Affirmed P-2
....Junior Subordinated Regular Bond/Debenture, Affirmed Baa3
....Junior Subordinate Shelf, Affirmed (P)Baa3
....Senior Unsecured Shelf, Affirmed (P)Baa2
....Senior Unsecured Bank Credit Facility, Affirmed Baa2
....Senior Unsecured Regular Bond/Debenture, Affirmed Baa2
...Issuer: Southern Elect Generating Co
....Issuer Rating, Affirmed A2
....Senior Unsecured Regular Bond/Debenture, Affirmed A1
...Issuer: Wilsonville (Town of) AL, I.D.B.
....Senior Unsecured Revenue Bonds, Affirmed A1

The principal methodology used in these ratings was Regulated Electric and Gas Utilities published in December 2013. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.


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Bechtel staff join AP1000 construction projects

Contractor Bechtel has been brought in to add workers with nuclear construction experience to the Vogtle and Summer nuclear plant projects in an effort to speed completion of the delayed AP1000 units being built at those sites.

As many as 300 Bechtel employees, mostly managers and field engineers, will join the two projects as part of a plan to supplement an existing contingent of staff marshaled by main contractor Westinghouse and construction subcontractor Fluor, a nuclear industry source said March 8. The source spoke on condition of anonymity to discuss confidential contractual issues.

The additional workers being provided to the projects are focused on the nuclear island construction, and some have been onsite since earlier in the year, the source said.

The projects are behind schedule and concerns about continuing delays prompted Toshiba to take a write-down against earnings in the final months of 2018. The company’s chairman resigned after it announced a $8.3 billion charge last month related to higher-than-expected costs to complete the Vogtle and Summer nuclear plant expansion projects in Georgia and South Carolina, respectively.

Southern Co. and Scana Corp., the parent companies of the largest utility owners of the Vogtle and Summer plant expansions, have said modified engineering, procurement and construction contracts with Westinghouse protect them from cost overruns. Those costs are largely the responsibility of Westinghouse and have been guaranteed by Toshiba, executives of Southern and Scana have said.

Efforts to control those overruns and meet revised completion dates of 2019 and 2020 have included increasing staff at the sites, Steven Byrne, chief operating officer for South Carolina Electric & Gas, a subsidiary of Scana, said during a conference call with analysts February 16.

SCE&G and Southern’s Georgia Power are adding two AP1000 units each to existing plant sites. SCE&G said February 14 that the completion date for the first new unit, Summer-2, had been delayed eight months to April 2020, while the second new unit would be completed four months later than previously announced, in December 2020. Southern Co. executives said February 22 the first new Vogtle unit would be in operation six months later than planned, in December 2019, while the second new unit would be operating three months later than previously expected, in September 2020.

Fluor, a subcontractor brought in by Westinghouse in early 2016 to manage construction of the two projects, has added 1,200 to 1,300 on-site staff to the Summer-2 and -3 project, Byrne said.

“Fluor continues to be an important member of the project team and remains Westinghouse’s constructor on both projects,” Westinghouse spokeswoman Sarah Cassella said in an email March 8.

“Nuclear construction leaders” have been added at the two projects “in a staff augmentation role,” bringing recent nuclear-grade construction experience to the nuclear island of the units, she said.

SCE&G held a meeting March 2 with supervisors at the Summer site and announced that Bechtel personnel were being added to the project, Tom Clements, a spokesman for Savannah River Site Watch, which monitors DOE and commercial nuclear projects in South Carolina and Georgia, said in an email March 6. The change could have schedule and cost implications, Clements said.
'A little light on nuclear experience'

When Westinghouse acquired Stone & Webster from Chicago Bridge & Iron in 2015, it said it expected to obtain improvements in construction efficiency of 30%, and Toshiba has indicated those gains have not been achieved, Byrne said.

Westinghouse has also sought to increase the number of managers with nuclear construction experience, Byrne said. "Heretofore we've had a lot of folks with a lot of good construction experience, but [who are] a little light on nuclear experience," he said.

Efforts are underway to increase that experience, including the potential addition to the site of Toshiba staff with experience in the construction of nuclear plants, Byrne said.

"Westinghouse is going to focus on increasing their leadership team's nuclear background, particularly on the nuclear island — the containment vessel, the shield building, annex building and auxiliary building," Byrne said.

Efforts to increase the efficiency of construction work could include a "bifurcation" of the site to separate the way work is done on the nuclear island and the non-nuclear areas, also known as the conventional or turbine island, Byrne said.

Byrne said making construction standards different between the two portions of the site could improve efficiency, he said.

In addition, Westinghouse has been performing density studies, which examine how much work can get done in areas of the plant, considering that there are limits to how many workers can fit in specific areas simultaneously to work, Byrne said.

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