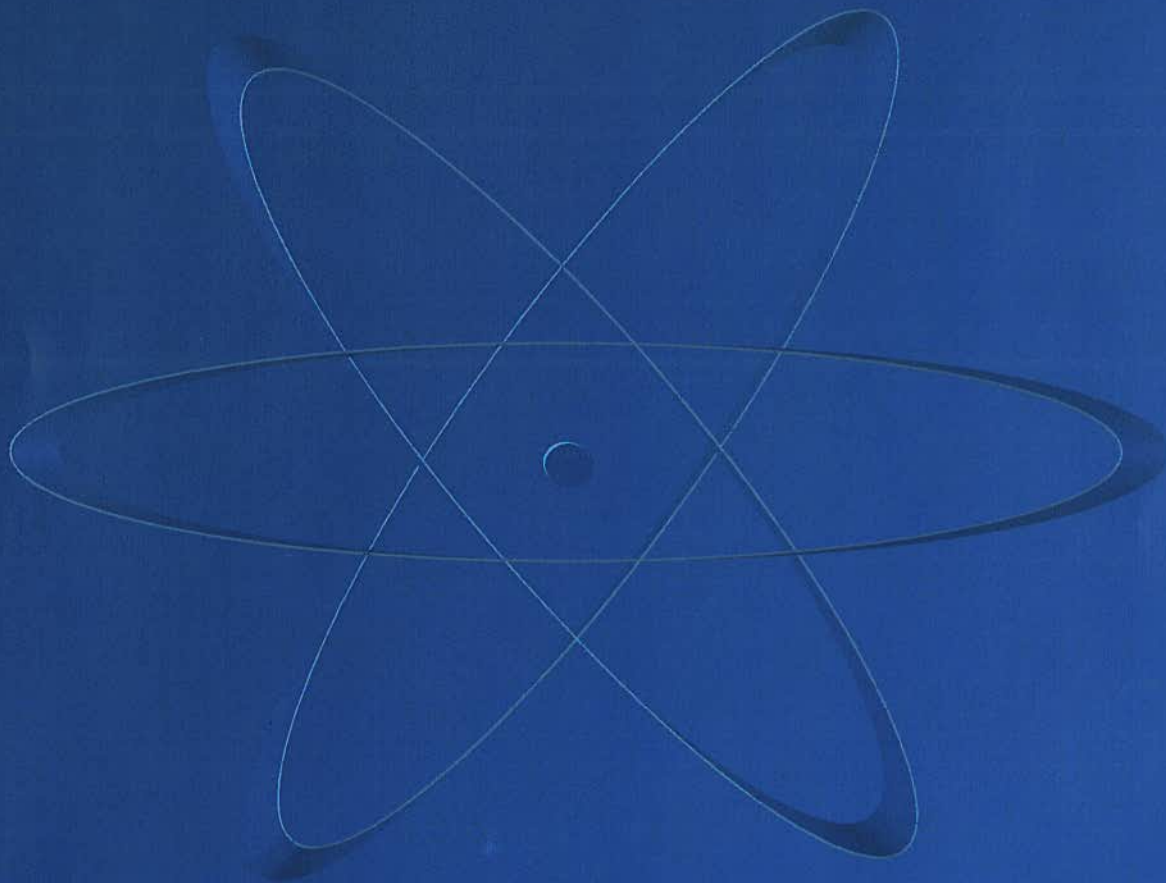


South Carolina Office of Regulatory Staff
Review of South Carolina Electric & Gas Company's
2014 2nd Quarter Report on
V. C. Summer Units 2 & 3
Status of Construction



September 22, 2014



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Executive Summary

On August 14, 2014, SCE&G submitted its 2014 2nd Quarter Report related to construction of V.C. Summer Units 2 & 3. The Quarterly Report is filed in Commission Docket No. 2008-196-E and covers the quarter ending June 30, 2014. With reference to the Base Load Review Act (or BLRA), ORS's review of SCE&G's Quarterly Report focuses on SCE&G's ability to adhere to the approved schedule and approved budget.

Approved Schedule Review

As previously reported by ORS, SCE&G has announced that its Engineering, Procurement and Construction contract partners, Westinghouse Electric Company and Chicago Bridge and Iron, indicated to SCE&G that the substantial completion date of Unit 2 is expected to be delayed until the 4th quarter of 2017 or the 1st quarter of 2018, with the substantial completion date of Unit 3 expected to be delayed similarly¹. This expected delay is primarily attributed to submodule fabrication and delivery. SCE&G's Milestone Schedule reflects a delay in the Unit 2 substantial completion date from March 15, 2017 to December 15, 2017, and a delay in the Unit 3 substantial completion date from May 15, 2018 to December 15, 2018. Per the Base Load Review Order, overall construction is considered to be on schedule if the substantial completion dates are not accelerated more than 24 months or delayed more than 18 months. While delayed, the substantial completion dates reflected in SCE&G's Quarterly Report fall within the parameters allowed by the Base Load Review Order.

Subsequent to the 2nd quarter (in August), SCE&G received a preliminary revised fully-integrated construction schedule which shows the Unit 2 substantial completion date to be delayed until late 2018 or the first half of 2019, and the Unit 3 substantial completion date to be delayed by approximately one year, thereafter. SCE&G reports that the revised schedule shows several projected BLRA milestones that fall outside the 18 month boundary; and that, this schedule has not been finalized and does not reflect possible changes in construction to mitigate delays. The Company intends to file a petition requesting the Commission approve the updated schedule and cost estimates. Additional information regarding this matter can be found in "Notable Activities Occurring after June 30, 2014" on page 16 of this report.

Until the revised fully-integrated schedule is finalized, ORS will not have the ability to monitor and provide updates on the status of milestone activities. Therefore, ORS's review of SCE&G's 2014 2nd Quarter Report does not include a BLRA milestone status update. See Appendix 1 of SCE&G's Quarterly Report for its status of BLRA milestones.

¹ SCE&G has not agreed to any contractual change to the Guaranteed Substantial Completion Dates for Units 2 & 3.

During the 2nd quarter, SCE&G completed several major project milestones. Unit 2 CA04 (Reactor Vessel structural support module), CA20 (Auxiliary Building Module), Containment Vessel Ring 1, and Unit 3 Containment Vessel Bottom Head were formally set in place. Also, Layer C concrete was poured in Unit 2 Nuclear Island basemat to support the Shield Building foundation work. However, several ongoing construction concerns create risk to the on-time completion of the Units, particularly, the continued delay in the delivery of the structural submodules. ORS continues to monitor this closely.

Approved Budget Review

The current approved base project cost in 2007 dollars is \$4.548 billion. There has been no increase in the total base project cost (in 2007 dollars). The approved gross construction cost of the project is \$5.755 billion. As of June 30, 2014, due to current escalation rates, the forecasted gross construction cost of the plant is \$5.607 billion, which represents a decrease of approximately \$148 million.

The cumulative amount projected to be spent on the project by December 31, 2014 is \$3.116 billion. At the end of 2014, the cumulative project cash flow is projected to be approximately \$604 million below the capital cost schedule approved in Order No. 2012-884, updated for current escalation rates. Due to escalation, an increased project cash flow of approximately \$147.164 million is necessary to complete the project in 2018. SCE&G has previously estimated the costs associated with the delay in the substantial completion dates for Unit 2 and Unit 3 to be approximately \$200 million in future dollars (or \$115 million in 2007 dollars). SCE&G has not updated this estimate to reflect the preliminary revised-fully integrated schedule it received in August. Since SCE&G has not accepted responsibility for delay related costs, this report includes no increases to the cash flow attributable to the delay in the substantial completion dates.

Introduction and Background

On March 2, 2009, the Public Service Commission of South Carolina (“Commission”) approved South Carolina Electric & Gas Company’s (“SCE&G” or the “Company”) request for the construction of V.C. Summer Nuclear Station Units 2 & 3 (the “Units”) and the Engineering, Procurement and Construction (“EPC”) Contract with Westinghouse Electric Company (“WEC”) and CB&I Stone & Webster, Inc. (“CB&I”) (collectively “the Consortium”). The Commission’s approval of the Units can be found in the Base Load Review Order No. 2009-104(A) filed in Docket No. 2008-196-E.

Subsequent to the Base Load Review Order, the Commission has held three (3) hearings regarding the Units and issued the following Orders:

- **Order No. 2010-12**: Issued on January 21, 2010 and filed in Docket No. 2009-293-E. The Commission approved the Company’s request to update milestones and capital cost schedules.
- **Order No. 2011-345**: Issued on May 16, 2011 and filed in Docket No. 2010-376-E. The Commission approved SCE&G’s petition for updates and revisions to schedules related to the construction of the Units which included an increase to the base project cost of approximately \$174 million.
- **Order No. 2012-884**: Issued on November 15, 2012 and filed in Docket No. 2012-203-E. The Commission approved SCE&G’s petition for updates and revisions to schedules related to the construction of the Units which included an increase to the base project cost of approximately \$278 million.¹

The anticipated dependable capacity from the Units is approximately 2,234 megawatts (“MW”), of which 55% (1,228 MW) will be available to serve SCE&G customers. South Carolina Public Service Authority (“Santee Cooper”) is currently contracted to receive the remaining 45% (1,006 MW) of the electric output when the Units are in operation and is paying 45% of the costs of the construction of the Units. As discussed below, this 45% is under agreement to be reduced to 40%. In October 2011, SCE&G and Santee Cooper executed the permanent construction and operating agreements for the project. The agreements grant SCE&G primary responsibility for oversight of the construction process and operation of the Units as they come online. On March 30, 2012, the Nuclear Regulatory Commission (“NRC”) voted to issue SCE&G a Combined Construction and Operating License (“COL”) for the construction and operation of the Units.

¹Petitions for Rehearing or Reconsideration were filed on behalf of the Sierra Club and the South Carolina Energy Users Committee. Both petitions were denied via Commission Order No. 2013-5 issued on February 14, 2013. The Sierra Club and the South Carolina Energy Users Committee subsequently filed appeals with the Supreme Court of South Carolina. Those appeals were heard on April 16, 2014. No opinion has been issued by the Supreme Court regarding this matter.

In 2010, SCE&G reported that Santee Cooper began reviewing its level of ownership participation in the Units. Since then, Santee Cooper has sought partners in its 45% ownership. Santee Cooper signed a Letter of Intent with Duke Energy Carolinas, LLC in 2011. On January 27, 2014, Santee Cooper and Duke Energy Carolinas, LLC concluded their negotiations which resulted in no change in ownership of the Units. On January 27, 2014, SCE&G announced that it had reached an agreement to acquire from Santee Cooper an additional 5% (110 MWs) ownership in the Units. The agreement is contingent upon the Commercial Operation Date of Unit 2. Ultimately, under the new agreement, SCE&G would own 60% and Santee Cooper would own 40% of the Units. The new agreement and the specific terms are subject to Commission approval. The project continues to be governed by the ownership responsibilities as established in the approved EPC Contract.

On August 14, 2014, SCE&G submitted its 2014 2nd Quarter Report (“Quarterly Report”) related to construction of the Units. The Quarterly Report is filed in Commission Docket No. 2008-196-E and covers the quarter ending June 30, 2014 (“Review Period”). The Company’s Quarterly Report is submitted pursuant to S.C. Code Ann. § 58-33-277 (Supp. 2013) of the Base Load Review Act (“BLRA”), which requires the Quarterly Report to include the following information:

1. Progress of construction of the plant;
2. Updated construction schedules;
3. Schedules of the capital costs incurred including updates to the information required in Section 58-33-270(B)(5);
4. Updated schedules of the anticipated capital costs; and
5. Other information as the Office of Regulatory Staff may require.

With reference to Section 58-33-275(A) of the BLRA, the review by the Office of Regulatory Staff (“ORS”) of the Company’s Quarterly Report focuses on SCE&G’s ability to adhere to the approved construction schedule and the approved capital cost schedule.

Approved Schedule Review

Milestone Schedule

SCE&G's Milestone Schedule, attached to its Quarterly Report as Appendix 1, indicates that overall construction supports a substantial completion date of December 15, 2017 for Unit 2 and December 15, 2018 for Unit 3. The substantial completion dates for the Units reflect a delay from the substantial completion dates approved by the Commission in Order No. 2012-884 of March 15, 2017 and May 15, 2018, respectively.

Unit 2 Substantial Completion Date

Order No. 2012-884	Q2 2014	Change
3/15/2017	12/15/2017	+9 Months

Unit 3 Substantial Completion Date

Order No. 2012-884	Q2 2014	Change
5/15/2018	12/15/2018	+7 Months

Per the Base Load Review Order, construction is considered to be on schedule if the substantial completion dates and each milestone date are not accelerated more than 24 months or delayed more than 18 months. While delayed, the substantial completion dates reflected in SCE&G's Quarterly Report fall within the boundary allowed by the Base Load Review Order.

Subsequent to the 2nd quarter (in August), SCE&G received a preliminary revised fully-integrated construction schedule ("Revised Schedule") which shows the Unit 2 substantial completion date to be delayed until late 2018 or the first half of 2019, and the Unit 3 substantial completion date to be delayed by approximately one year, thereafter. SCE&G reports that the revised schedule shows several projected BLRA milestones that fall outside the 18 month boundary; and that, this schedule has not been finalized and does not reflect possible changes in construction to mitigate delays. The Company intends to file a petition requesting the Commission approve the updated schedule and cost estimates. Additional information regarding this matter can be found in "Notable Activities Occurring after June 30, 2014" on page 16 of this report.

Until the Revised Schedule is finalized, ORS will not have the ability to monitor and provide updates on the status of milestone activities. Therefore, ORS's review of SCE&G's 2014 2nd Quarter Report does not include a BLRA milestone status update. See Appendix 1 of SCE&G's Quarterly Report for its status of BLRA milestones.

Specific Construction Activities

During the 2nd quarter, SCE&G completed several major project milestones. Unit 2 CA04 (Reactor Vessel structural support module), CA20 (Auxiliary Building Module), Containment Vessel (“CV”) Ring 1, and the Containment Vessel Bottom Head (“CVBH”) for Unit 3 were formally set in place. Also, Layer C concrete was poured in Unit 2 Nuclear Island basemat to support the Shield Building foundation work.

During the Review Period, the Preliminary Amendment Request (“PAR”) associated with License Amendment Request (“LAR”) 14-01 dealing with changes to the interior walls and floors of the Auxiliary Building was accepted by the NRC in April 2014. This PAR is unique in that the Company requested to pour concrete which is considered an irreversible construction practice. The PAR approval allowed the work on the Auxiliary Building to continue at the Company’s and the Consortium’s risk. Subsequent to the Review Period, the NRC approved LAR 14-01 in July 2014.

Approximately 2900 Consortium (including subcontractors) and 480 SCE&G personnel are currently on site. Major construction activities during the Review Period are listed below:

Unit 2

The critical path for Unit 2 continues to run through the final, in-place fabrication work on the CA20 module, the concrete work that supports the Shield Building and the completion of the CA01 submodule assembly and installation.

- Weld out and mechanical module installations continue as part of completion of CA20.
- Progress continues in the Turbine Building with the setting of several pieces of equipment: the auxiliary boiler, heat exchangers, feed water heaters and heater drain coolers. Internal welding of the condensers was completed. Work continued in this area with the addition of component piping and pipe supports.
- Cooling Tower 2A is structurally substantially complete, with work continuing on the electrical and mechanical systems. Concrete work is continuing on Cooling Tower 2B and the Cooling Tower Pump structure.
- The PRHR Heat Exchanger was transferred from the Port of Charleston to the Carolina Energy Solutions in Rock Hill, South Carolina. This equipment will be held at this location pending a decision to implement a design modification.
- The Configuration Management Information System, which will be used by the plant to store documents and data continues to progress, with the installation of a software upgrade.
- Work continued on CA04 (Reactor Vessel structural support module) to resolve issues with final upper alignment of the module.

Unit 3

The critical path for Unit 3 continues to run through the completion of CA20 followed by the completion of CA01, CA03 and the Shield Building.

- Construction on the Nuclear Island continued with the placement of concrete used to form the pedestal for the CVBH. Also, the CVBH was set in place on the Nuclear Island basemat.
- Work continued on the CV Ring 1 with the welding of the 2nd of four rows of plates that make up CV Ring 1.
- Cooling Tower 3A is structurally substantially complete, with work continuing on the electrical and mechanical systems.
- The Consortium lifted the Stop Work Order on the fabricator of the Cooling Towers which allowed structural work on Cooling Tower 3B to resume.
- The first sections of Auxiliary Building walls were poured and work continued on installing rebar for the Auxiliary Building exterior wall.

Photographs of construction activities during the Review Period are shown in Appendix A.

Transmission

In 2011, SCE&G entered into a contract with Pike Electric, LLC for the permitting, engineering and design, procurement of material, and construction of multiple transmission lines and associated facilities related to the Units.

Map 1 shows the new transmission lines and facilities supporting the Units. The transmission lines are represented by the corresponding line color indicated below:

Green Line:

VCS1-Killian Line is complete and energized.

Red Line:

VCS2- Lake Murray Line No. 2 is complete and energized.

VCS2-St George Line No. 1 will be energized when the remaining St. George segment (Purple Line) is complete.

Purple Line:

VCS2-St. George Lines Nos. 1 and 2 are currently under construction between Lake Murray and St. George. This work will progress through the build out of the Saluda River Substation which is scheduled to be complete in June 2015, and the St. George switching station which is scheduled to be complete in June 2016.

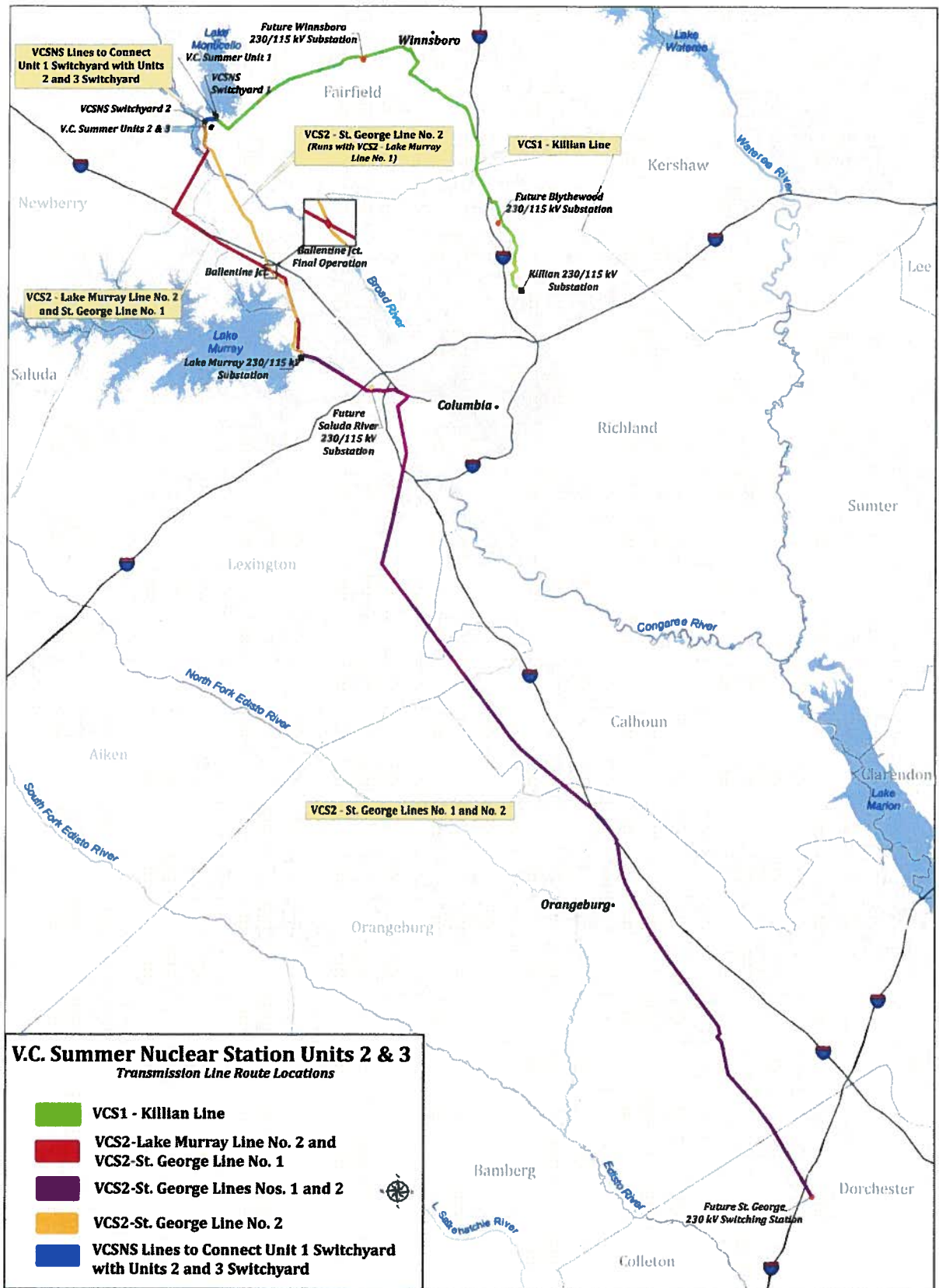
Yellow Line:

This portion of the VCS2-St. George Line No. 2 is currently under construction and is scheduled to be completed by the end of 2014.

Blue Line:

VCNS Lines to connect Unit 1 Switchyard with Units 2 and 3 Switchyard are complete and energized.

Map 1: New SCE&G Transmission Lines and Facilities Supporting V.C. Summer Units 2 & 3



Licensing and Inspection Activities

Federal Activities

SCE&G has identified the need to submit numerous LARs to the NRC. A LAR is the process by which a licensee requests changes to the COL issued by the NRC. The licensee may seek a PAR to accompany an LAR. PARs allow the licensee to continue with construction at its own risk while awaiting final dispensation of the LAR. During the review period, the Company filed four new LARs with the NRC. A table of LARs submitted to the NRC, and accompanying PARs, if also submitted, is attached as Appendix B.

Status of LARs

Total	Approved	Under Review
31	13	18

The NRC conducts routine site inspections to monitor construction progress. On April 29, 2014, the NRC issued its first quarter inspection report that resulted in no reportable significant findings or violations.

State Activities

There were no state licensing activities during the Review Period.

Approved Budget Review

ORS's budget review includes an analysis of the 2nd quarter 2014 capital costs, project cash flow, escalation and Allowance for Funds Used During Construction ("AFUDC").

Capital Costs

To determine how consistently the Company adheres to the budget approved by the Commission in Order No. 2012-884, ORS evaluates 9 major cost categories for variances. These cost categories are:

1. Fixed with No Adjustment
2. Firm with Fixed Adjustment A
3. Firm with Fixed Adjustment B
4. Firm with Indexed Adjustment
5. Actual Craft Wages
6. Non-Labor Cost
7. Time & Materials
8. Owners Costs
9. Transmission Projects

ORS monitors variances due to project changes (e.g., shifts in work scopes, payment timetables, construction schedule adjustments, Change Orders). The current approved base project cost (in 2007 dollars) is \$4.548 billion. There has been no increase in the total base project cost (in 2007 dollars). The approved gross construction cost of the project is \$5.755 billion. As of June 30, 2014, due to current escalation rates, the forecasted gross construction cost of the plant is \$5.607 billion, which represents a decrease of approximately \$148 million.

**Budget in 2007 Dollars (“000”)
{Base Project Cost}**

Order No. 2012-884	Q2 2014	Change
\$4,548,405	\$4,548,405	\$0

**Budget in Future Dollars (“000”)
{Gross Construction Cost}**

Order No. 2012-884	Q2 2014	Change
\$5,754,565	\$5,606,679	(\$147,886)

Budget in 2007 Dollars

Change Orders may impact the base project base cost and may result in a filing before the Commission to increase the budget (in 2007 dollars). During the Review Period, no Change Orders or Amendments were executed. (See Appendix C for approved Change Orders and Amendments). However, the Company is currently negotiating the following Change Orders:

Change Order #16: The Commission approved the components of Change Order #16 in Order 2012-844. However, final execution of this Change Order has been delayed pending the resolution of a question regarding the application of the Handy-Whitman inflation indices. SCE&G and the Consortium have reached an agreement on this matter and are working to finalizing this Change Order.

Commercial Issues: This Change Order incorporates design changes to the offsite water treatment system for the removal of bromide from the raw water intake source. It also addresses the transfer of certain scopes of work from the Time and Materials cost category to the Target Price and Firm Price cost categories. SCE&G reports to ORS that this Change Order will not increase the budget.

Cyber Security: Phase II of the cyber security changes previously catalogued in Change Order #14 will be addressed by this Change Order. SCE&G is continuing to evaluate the technical scope of work and negotiate the terms of this Change Order. The impact to the budget has yet to be determined.

Health Care: WEC's costs associated with the federal health care legislation are the basis for this Change Order. The Company is continuing to review the information provided by WEC. SCE&G expects to issue a Change Order regarding this matter. The impact to the budget has yet to be determined.

Site Layout Changes: This Change Order addresses reconfiguring the construction site to meet nuclear security requirements. SCE&G expects to issue a Change Order regarding this matter. The impact to the budget has yet to be determined.

Plant Reference Simulator: The Simulator for the Units will require hardware and software upgrades. SCE&G expects to issue a Change Order regarding this matter. The impact to the budget has yet to be determined.

Structural Module Fabrication Delays: The Company continues to discuss this matter with the Consortium. SCE&G has estimated the costs associated with the delay in the substantial completion dates for Unit 2 and Unit 3 to be approximately \$200 million in future dollars (or \$115 million in 2007 dollars)². SCE&G has not updated this estimate to reflect the Revised Schedule it received in August.

Budget in Future Dollars

The Handy-Whitman escalator indices may increase or decrease the gross construction cost of the Units. As of June 30, 2014, due to current escalation rates, the forecasted gross construction cost of the Units is approximately \$148 million below the approved budget. Since the Base Load Review Order issued by the Commission allows for escalation, the impact of escalation cost on the project will not result in a filing to increase the budget.

²Since SCE&G has not accepted responsibility for these costs, this report includes no increases to the project cash flow attributable to the delay in the substantial completion dates.

Project Cash Flow

As shown in Appendix 2 of the Company's Quarterly Report, the cumulative amount projected to be spent on the project by December 31, 2014 is \$3.116 billion. With reference to Appendix 2, ORS compared the total revised project cash flow (Line 37) to the annual project cash flow, adjusted for changes in escalation (Line 16). This evaluation provides a comparison of the Company's current project cash flow to the cash flow schedule approved by the Commission in Order No. 2012-884. To produce a common basis for the comparison, Line 16 adjusts the approved cash flow schedule to reflect the current escalation rates.

Table 1 shows the cumulative variance from the approved cash flow schedule through the life of the project. The comparison shows that by the end of 2014, the cumulative project cash flow is forecasted to be approximately \$604 million below the capital cost schedule approved in Order No. 2012-884, updated for current escalation rates. However, due to escalation, an increased project cash flow of approximately \$147.164 million is necessary to complete the project in 2018.

Table 1:

Project Cash Flow Comparison			
<i>\$'s in Thousands³</i>			
		Annual Over/(Under)	Cumulative Over/(Under)
Actual	2007	-	-
	2008	\$0	\$0
	2009	\$0	\$0
	2010	\$0	\$0
	2011	\$0	\$0
	2012	(\$142,003)	(\$142,003)
	2013	(\$397,667)	(\$539,670)
Projected	2014	(\$64,797)	(\$604,467)
	2015	\$191,175	(\$413,292)
	2016	\$219,574	(\$193,178)
	2017	\$222,616	\$28,898
	2018	\$118,266	\$147,164

³Slight variances may occur due to rounding.

AFUDC and Escalation

The forecasted AFUDC for the total project as of June 30, 2014 is approximately \$266 million and is currently based on a forecasted 7.27% AFUDC rate.

Changes in the AFUDC rate, timing changes in project spending due to construction schedule shifts, and five-year average escalation rates are all factors that impact the projected project cash flow. Due to changes in escalation rates, as well as changes to the timing of payments due to construction delays, the overall project cost has decreased.

Annual Request for Revised Rates

Pursuant to the BLRA, SCE&G may request revised rates no earlier than one year after the request of a Base Load Review Order or any prior revised rates request. On May 30, 2014, the anniversary of its previous revised rates filing, SCE&G filed its Annual Request for Revised Rates with the Commission requesting a retail revenue increase of approximately \$70 million (or 2.99%). Subsequent to the Review Period, ORS filed its examination of the Company's request. Additional information regarding this filing can be found in "Notable Activities Occurring after June 30, 2014" on page 16 of this report.

Table 2 shows a summary of SCE&G's Revised Rate Filings with the Commission.

Table 2:

<i>SCE&G Revised Rate Filings</i>					
Docket No.	Order No.	Requested Increase	ORS Examination	Approved Increase	Retail Increase
2008-196-E	2009-104(A)	\$8,986,000	(\$1,183,509)	\$7,802,491	0.43%
2009-211-E	2009-696	\$22,533,000	\$0	\$22,533,000	1.10%
2010-157-E	2010-625	\$54,561,000	(\$7,260,000)	\$47,301,000	2.31%
2011-207-E	2011-738	\$58,537,000	(\$5,753,658)	\$52,783,342	2.43%
2012-186-E	2012-761	\$56,747,000	(\$4,598,087)	\$52,148,913	2.33%
2013-150-E	2013-680(A)	\$69,671,000	(\$2,430,768)	\$67,240,232	2.87%
2014-187-E	TBD	\$70,038,000	(\$3,800,546)	TBD	TBD

Additional ORS Monitoring Activities

ORS continually performs the following activities, as well as other monitoring activities as deemed necessary:

- Audits capital cost expenditures and resulting AFUDC in Construction Work in Progress
- Reviews invoices associated with the Milestone Schedule
- Participates in monthly on-site observations of construction activities and progress
- Performs weekly on-site review of construction documents
- Holds monthly update meetings with SCE&G
- Meets quarterly with representatives of the Consortium
- Attends NRC Public Meetings regarding SCE&G COL and other construction activities
- Visits vendor fabrication facilities

On February 26, 2014, ORS conducted an allowable ex parte communication briefing before the Commission to provide an update on its monitoring activities regarding the construction of the Units. The presentation is posted on ORS's website.

Construction Challenges

Based upon the information provided by the Company in its Quarterly Report, as well as information obtained via additional monitoring activities, ORS identifies several ongoing construction concerns that create risk to the on-time completion of the Units. ORS continues to monitor these areas closely.

Structural Modules

As identified in previous ORS reviews, the most significant issue related to the construction of the Units remains the continued inability of Chicago Bridge & Iron - Lake Charles ("CB&I-LC") to reliably and predictably meet the quality and schedule requirements for fabricating and delivering the submodules. This same concern is also developing among the

additional subcontractors who were reassigned the fabrication of submodules in an attempt to mitigate the impact of the late delivery of the submodules from CB&I-LC. Of immediate concern is the performance of SMCI in Lakeland, Florida who was assigned the fabrication of Unit 2 submodules for CA03 and Unit 3 module CA04. SMCI has yet to deliver a submodule to the site as of the end of August 2014. As stated later in this report, ORS visited this facility on September 11, 2014 in an effort to better understand the nature of the delays.

Although, as reported by SCE&G, the project achieved a significant milestone with the setting of module CA20 during this Review Period, the critical path for the Units still runs through the successful completion of the in-place work on module CA20 and the fabrication, delivery, assembly and setting of the CA01 module, and is dependent upon timely delivery of the submodules from CB&I-LC. Assembly work of CA01 has now begun in the Module Assembly Building; however, deliveries from CB&I-LC are still not meeting the required schedule and quality problems persist.

There also must be improvement on schedule adherence from SMCI for the Unit 2 CA03 submodules or this module will soon infringe on the critical path of VCS Unit 2. SCE&G recognizes this as an important issue and is working with the Consortium and SMCI to improve their performance.

Shield Building Modules

As previously reported, Shield Building module fabrication has been reassigned to Newport News Industrial ("NNI"). NNI's sustained, reliable performance has not yet been demonstrated, and a delivery schedule has not been provided to ORS. However, there have been 19 panels delivered to the site as of the end of August 2014, and NNI has demonstrated steady improvement in schedule adherence.

ORS remains concerned about the significant fabrication and erection challenges presented by the complex configurations of the Shield Building panels. A delivery and erection schedule for all 167 Shield Building modules should be established as part of the Revised Schedule, and NNI needs to demonstrate sustained delivery of high quality modules to the site.

Engineering Completion Status and Design Compliance

The reported numbers of the plant design packages issued for construction (IFC) and those remaining to be issued have been fluctuating unreliably for several reporting periods, and have been a concern to ORS and SCE&G for some time. It is planned that the reported values should stabilize and the accuracy should improve with the issuance of the Revised Schedule.

Instrumentation and Control Design

No further delays have been identified regarding the design and procurement schedule, but the completion schedule is aggressive and remains an area of focus.

Overlapping Unit 2 and Unit 3 Construction Schedules

This matter will be addressed in the Revised Schedule to be provided later this year.

Manufacturing of Major Equipment

The thrust bearing anomalies and loss of cooling test results for the Reactor Coolant Pumps, as well as, the leakage identified during the squib valves qualification testing remain the equipment issues of most concern and will be monitored by ORS.

Also, equipment storage facilities are becoming an issue because of the project delays and the large quantity of equipment that must be stored until it is ready to be installed in the plant. ORS will follow this issue also.

License Amendment Reviews

As of the end of August 2014, the Company has identified that at least 100 LARs will be required for the Units, and this number continues to increase each month. The identification and processing of these LARs remains an area of focus by ORS.

Main Switchyard Capacitor Issues

There have been three recent capacitor failures in the main switchyard and several other instances where overheating has been identified. SCE&G is working with the equipment manufacturer to identify the root cause and correct these failures and anomalies. ORS will follow this issue.

Notable Activities Occurring after June 30, 2014

The BLRA allows SCE&G 45 days from the end of the current quarter to file its Quarterly Report. Items of importance that occurred subsequent to the Review Period are reported below.

Annual Request for Revised Rates

On May 30, 2014, the anniversary date of SCE&G's previous request for revised rates, SCE&G filed its Annual Request for Revised Rates with the Commission in Docket No. 2014-187-E. SCE&G requested approximately \$70 million (or 2.99%) in increased retail revenues to support the financing cost of the Units. On July 30, 2014, ORS filed its report in response to SCE&G's request. ORS's examination reduced the Company's request by approximately \$3.8 million. SCE&G's request would increase an average residential customer's monthly bill (using 1,000 kWhs) by approximately \$4.15. A decision by the Commission is anticipated by the end of September 2014.

Revised Schedule

In August, SCE&G received the Revised Schedule which shows the Unit 2 substantial completion date to be delayed until late 2018 or the first half of 2019, and the Unit 3 substantial completion date to be delayed by approximately one year, thereafter.

According to SCE&G, the Consortium has continued to experience delays in schedule for fabrication and delivery of submodules for the Units; and that, these schedule delays are the primary purpose for issuing a Revised Schedule. SCE&G has not agreed to the Revised Schedule or accepted responsibility for any delay-related costs, and expects to have discussions with the Consortium regarding such responsibility.

The EPC Contract incorporates price protections for ratepayers via the Fixed/Firm cost category. The underlying costs in this cost category are pre-defined and subject only to cost increases associated with escalation. That is, the Consortium (not SCE&G) bears the principal price risk and responsibility of providing items in the Fixed/Firm cost category. The fabrication, delivery, onsite assembly and transportation to the lifting point of the major structural modules CA01 through CA05 and CA20 are items addressed in the Fixed/Firm cost category. In Order 2011-345, the Commission approved SCE&G to make a \$10 million risk compensation payment by which the Consortium would assume the principal price risk and responsibility for 11 scopes of work which, specifically, included these structural modules. Similarly, all costs for Shield Building material, fabrication, shop assembly and final delivery to the site are also items addressed in the Fixed/Firm cost category.

The Consortium has not yet provided SCE&G with any updated cost estimates. The Company anticipates that the Revised Schedule and updated cost estimates will be finalized by the latter half of 2014. SCE&G will then update its owners cost estimates accordingly. Also, SCE&G reports that the revised schedule shows several projected BLRA milestones that fall outside the 18 month boundary; and that, this schedule has not been finalized and does not reflect possible changes in construction to mitigate delays. The Company intends to file a petition requesting the Commission approve the updated schedule and cost estimates.

SCE&G's Rating Outlook Revised

Subsequent to the release of the Revised Schedule, Fitch revised SCE&G's rating outlook on August 15, 2014 from stable to negative. Fitch notes that the negative rating outlook reflects the heightened regulatory and financial risk of SCE&G's nuclear construction program following the announcement of a longer than expected delay in the construction schedule and the uncertain cost impact. Fitch expects to resolve the negative rating outlook once the new cost estimate and construction schedule are known and the Commission determines if the costs are recoverable and the schedule acceptable. See Appendix D for Fitch's press release.

ORS Visit to SMCI Facility

On September 11, 2014, ORS visited the SMCI (a subsidiary of MetalTek International) facility in Lakeland, Florida to review the status of various structural and mechanical submodules under fabrication at the facility for the Units. Representatives of SCE&G and CB&I also attended. The visit consisted of a presentation by MetalTek and SMCI senior staff and a shop tour of the various SMCI fabrication facilities. The presentation addressed: the history and organization of MetalTek and SMCI (including MetalTek's acquisition of SMCI in December 2012); the SMCI quality program; the scope of work of SMCI for VCS 2 & 3; a description of SMCI's fabrication and inspection processes; and, the short-term delivery schedule for the submodules for Unit 2 CA03. MetalTek's Chief Executive Officer emphasized its company's commitment to produce high quality submodules in a timely manner to support the Units. ORS learned that over 100 staff have been added to the plant since January 2014 in order to meet the production schedule. This brings SMCI's current staff to over 300 which are currently working two-shifts, six days a week. SMCI is making several improvements to increase productivity and capability, including converting to an electronic documentation system, additional shop space and the addition of a high-pressure water cutting machine.

ORS observed several Unit 2 CA03 submodules on the shop floor in various stages of completion. Two of the submodules are essentially complete and are being readied for shipment pending the finalization of the required documentation, inspection and final coating. SMCI's production of the submodules appeared to be adequately organized, staffed and equipped. ORS also observed the progress being made on the Unit 3 module CA04, which is in process on the shop floor.

SMCI appears to be committed to, and capable of, achieving the quality and production goals for the Units; however, SMCI will need to demonstrate a sustained level of high quality and on-time delivery before a performance assessment can be made.

Appendix A

Construction Site Photographs

Unit 2 Module CA04



Unit 2 Module CA20



Unit 2 Module CA20 Lift



Unit 2 Ring 1 Lift near Turbine Building



Unit 2 Ring 1 and Module CA20



Unit 3 CVBH on Transporter



Unit 3 CVBH Lift



Unit 3 CVBH on Module CR10



Appendix B

License Amendment Requests

License Amendment Requests

Appendix B

¹ NRC LAR No.	Summary	LAR Submittal Date	LAR Status	LAR Approval Date	PAR Submittal Date	PAR Status	PAR Approval Date
12-01	Stud Spacing around Electrical Penetrations	8/29/2012	Approved	7/1/2013			
12-02	Definition of Wall Thickness in Table 3.3.1 (PAR Requested)	9/26/2012	Approved	5/30/2013	12/6/2012	Approved	1/16/2013
13-01	Basemat Shear Reinforcement Design Spacing (PAR Requested)	1/15/2013	Approved	2/26/2013	1/24/2013	Approved	1/29/2013
13-02	Basemat Shear Reinforcement Design Details (PAR Requested)	1/18/2013	Approved	3/1/2013	1/22/2013	Approved	1/29/2013
13-03	Turbine Building Eccentric and Concentric Bracing	2/7/2013	Approved	7/1/2013			
13-04	Reconciliation of Tier 1 Value Differences	2/7/2013	Under Review				
13-05	Structural Module Shear Stud Size and Spacing	2/14/2013	Approved	5/23/2013			
13-06	Primary Sampling System Changes	2/7/2013	Approved	8/22/2013			
13-07	Changes to Chemical and Volume Control System	3/13/2013	Approved	2/24/2014			
13-08	Module Obstructions and Details <i>Superseded by LAR 13-20</i>	2/28/2013	Withdrawn				
13-09	Annex/Radwaste Building Layout Changes	2/27/2014	Under Review				
13-10	Human Factors Engineering Integrated Plan	3/13/2013	Under Review				
13-11	Nuclear Island Walls Reinforcement Criteria (PAR Requested)	3/26/2013	Approved	6/6/2013	4/2/2013	Approved	4/10/2013
13-12	Fire Area Boundary Changes	7/17/2013	Under Review				
13-13	Turbine Building Layout Changes	7/30/2013	Under Review	5/12/2014			
13-14	Turbine Building Battery Room Electrical Changes	10/2/2013	Under Review				
13-15	Operator Break Room Configuration <i>LAR not required</i>		Withdrawn	Changed to a Non-LAR Departure			
13-16	Revision to Human Factors Engineering Design Verification Plan	9/25/2013	Under Review				

¹Numbering may not be in sequence

License Amendment Requests

Appendix B

¹ NRC LAR No.	Summary	LAR Submittal Date	LAR Status	LAR Approval Date	PAR Submittal Date	PAR Status	PAR Approval Date
13-17	Revision to Human Factors Engineering Task Support Verification Plan	9/25/2013	Under Review				
13-18	Revision to Human Factors Engineering Issue Resolution Plan	10/3/2013	Under Review				
13-19	Revise to Human Factors Engineering Plan	10/3/2013	Under Review				
13-20	Module/Stud Channel Obstructions Revisions	7/17/2013	Approved	11/19/2013			
13-21	CA03 Module Design Differences	2/2/2014	Under Review				
13-25	Tier 1 Editorial and Consistency Changes	7/2/2013	Under Review				
13-26	Emergency Plan Rule Changes	12/17/2013	Under Review	6/20/2014			
13-32	Liquid Waste System Changes	8/30/2013	Approved	1/8/2014			
13-34	Clarification of Tier 2* Material in Human Factors Engineering Documents	3/19/2014	Under Review				
13-37	VCSNS Units 2&3 Tech Spec Upgrade	12/4/2013	Under Review				
13-38	ACI Code Compliance With Crical Sections Higher Elevations - <i>LAR not required</i>	11/7/2013	Withdrawn				
13-41	Coating Thermal Conductivity- Revise DCD Tier 2 Document	11/26/2013	Under Review				
13-42	Tier 1 Editorial and Consistency Changes #2	5/20/2014	Under Review				
14-01	Auxiliary Building Roof and Floor Details (PAR Requested)	4/3/2014	Under Review	7/18/2014	4/9/2014	Approved	4/15/2014
14-03	Tier 2* Editorial and Clarification Changes	6/12/2014	Under Review				
14-06	Enclosures for Class 1E Electrical Penetrations in Middle Annulus	6/20/2014	Under Review				

¹Numbering may not be in sequence

Appendix C

Change Orders and Amendments

Change Orders and Amendments

No.	Summary	Cost Categories Involved	Type of Change	Date Approved	Status
1	Operator training for WEC Reactor Vessel Systems and Simulator training	Fixed Price with 0% escalation ¹	Owner Directed	7/22/2009	Approved
2	Limited Scope Simulator	Firm Price	Owner Directed	9/11/2009	Approved
3	Repair of Parr Road	Time and Materials	Owner Directed	1/21/2010	Approved
4	Transfer of Erection of CA20 Module from WEC to Shaw	Target Price work shifting to Firm Price	Contractor Convenience	N/A	Superseded by Change Order No. 8
5	<i>*Supplements Change Order No. 1*</i> Increased training by two (2) weeks	Fixed Price with 0% escalation	Owner Directed	5/4/2010	Approved
6	Hydraulic Nuts	Fixed Price	Owner Directed	7/13/2010	Approved
7	St. George Lines #1 & 2	Firm and Target Price Categories	Entitlement	7/13/2010	Approved
8	Target to Firm/Fixed Shift	Target, Firm and Fixed Price Categories	Owner Directed	4/29/2011	Approved
9	Switchyard Lines Reconfiguration	Firm and Target Price Categories	Owner Directed	11/30/2010	Approved
10	Primavera	Fixed Price with 0% escalation	Owner Directed	12/16/2010	Approved
11	COL Delay Study	Fixed Price, but would be applied to T&M Work Allowances	Owner Directed	2/28/2011	Approved
12	2010 Health Care Act Costs	Firm	Entitlement	11/14/2011	Approved
13	Ovation Workstations	No Cost	Owner Directed	3/12/2012	Approved
14	Cyber Security Phase 1	Firm Price and T&M Price	Entitlement	3/15/2012	Approved
15	Liquid Waste System Discharge Piping	Firm Price	Owner Directed	3/15/2012	Approved

Amendment #1	Includes Change Orders 1 and 2	Executed on 8/2/2010
Amendment #2	Incorporates Change Orders 3, 5-11	Executed on 11/15/2011
Amendment #3	Includes modified insurance wording	Executed on 4/30/12

¹Fixed Price with 0% escalation, but would be applied to Time and Materials Work Allowances by adding a new category for Simulator Instructor training and reducing Startup Support by a commensurate amount.

Appendix C

A list of definitions for each type of Change Order is found below:

- **Contractor Convenience:** These changes are requested by the contractor. They are undertaken at the contractor's own expense, and are both generally consistent with the contract and reasonably necessary to meet the terms of the contract.
- **Entitlement:** The contractor is entitled to a Change Order in the event certain actions occur, including changes in law, uncontrollable circumstances, and other actions as defined in the contract.
- **Owner Directed:** These changes are requested by the Company.

Appendix D

SCE&G's Rating Outlook Revised

FitchRatings

Fitch Revises SCG and SCE&G Rating Outlook to Negative [Ratings](#) [Endorsement Policy](#)

15 Aug 2014 10:34 AM (EDT)

Fitch Ratings-New York-15 August 2014: Fitch Ratings has affirmed at 'BBB+' the Issuer Default Ratings (IDR) and instrument ratings for SCANA Corp. (SCG) and its largest subsidiary, South Carolina Electric and Gas Co. (SCE&G). Fitch has also revised the Rating Outlook for each entity to Negative from Stable.

In addition, Fitch has affirmed at 'BBB+' the IDR and instrument ratings for the Public Service Company of North Carolina (PSNC) with a Stable Rating Outlook, and affirmed the 'F2' commercial paper rating for South Carolina Fuel Company. A full list of the rating actions follows at the end of this release.

The Negative Rating Outlook for SCG and SCE&G reflects the heightened regulatory and financial risk of SCE&G's nuclear construction program following the announcement of a longer than expected delay in the construction schedule and the uncertain cost impact. With the most recent delay, SCE&G will most likely exceed the cost and 18-month schedule contingency previously approved by the South Carolina Public Service Commission (PSC), making full cost recovery less certain.

Fitch is particularly concerned about the extent of the potential cost increase and the PSC's willingness to have rate payers shoulder the entire burden. Favorably, the Base Load Review Act (BLRA), which established the regulatory treatment of the nuclear project, provides for recovery of cost increases that are not the result of imprudence on the part of SCE&G. Also, the PSC has previously approved revisions to the capital costs and construction schedule. In addition, SCE&G's latest cost estimate (prior to the delay) of \$5.36 billion (excluding AFUDC) is approximately \$157 million below the cost most recently approved by the PSC of \$5.52 billion, providing some headroom.

The Negative Outlook also reflects the delay in SCE&G's financial recovery. Fitch expects financial measures will weaken considerably in each of the next three years coincident with the peak in nuclear capex and associated debt financing plans, but anticipated improvement beginning in 2017. The turnaround is now not likely until 2018 or later.

Fitch expects to resolve the Negative Rating Outlook once the new cost estimate and construction schedule is known and the PSC determines if the costs are recoverable and the schedule acceptable.

Based on preliminary estimates provided by the construction consortium of Westinghouse Electric Co., LLC and the Chicago Bridge and Iron Co., N.V. (CBI), the substantial completion date of V.C. Summer unit 2 is being delayed to late 2018 or the first half of 2019 with the substantial completion of unit 3 expected 12-months later. A more precise schedule and revised cost estimate is expected from the consortium later this year following negotiations with SCE&G management.

The current approved schedule for substantial completion is March 2017 for unit 2 and May 2018 for unit 3. Previously, management indicated it anticipated a delay to late 2017 or early 2018 for unit 2 with unit 3 to follow 12-months later, which still fell within the 18-month contingency schedule. The revised schedule is attributable to the delay in the fabrication and delivery of sub-modules from the construction consortium.

KEY RATING DRIVERS

Sizeable Nuclear Construction Program: The ratings for both SCG and SCE&G reflect the substantial financial commitment of SCE&G's large nuclear construction program and the beneficial impact of the BLRA. SCE&G is building two units at the V.C. Summer site that will be jointly owned with the South Carolina Public Service Authority (Santee Cooper). PSC's approval of the revised capital and construction schedule is critical to

Appendix D

maintaining the existing ratings. Under the current budget peak nuclear spending occurs over the 2014 - 2016 period, aggregating \$2.4 billion (excluding AFUDC of \$131 million) with a peak of \$930 million in 2015, but is subject to change once a revised construction schedule is released.

State Law Reduces Risk: The construction and financing risk for the nuclear construction program is mitigated by the BLRA. The BLRA process provided an upfront determination that the plant is used and useful that is binding on all future proceedings and that its costs are properly included in rate base as long as the plant is constructed within the schedules and cost estimates in the approved application. The BLRA also provides for annual tariff adjustments to provide a cash return on construction work in progress (CWIP), based on an 11% return on equity (ROE), recovery of development costs for approved projects that may ultimately be abandoned and recovery of any additional cost if the changes are not the result of imprudence on the part of SCE&G. The 11% ROE remains in place throughout the construction program and is unaffected by the ROE determination in general rate case proceedings. To date, BLRA rate increases have been implemented in each of the past six years, aggregating \$249.7 million, and in each case the company received 100% of its rate request. A \$66.2 million BLRA rate request is pending with a decision expected in September and new rates to be effective November 2014.

Predictable Utility Earnings: The consolidated ratings also consider the predictable earnings and cash flow of SCG's two regulated utilities SCE&G and PSNC, which account for approximately 95% of consolidated net income. Both utilities are located in constructive regulatory jurisdictions and operate with fuel recovery adjustment mechanisms that limit commodity price exposure. In addition, SCE&G's natural gas delivery business has a weather normalization clause and PSNC full decoupling that reduces volumetric risk. SCE&G's electric weather normalization clause, originally implemented in August 2010 on a trial basis, was eliminated effective Jan. 1, 2014, which allowed SCE&G to benefit from the polar vortex in the first quarter of 2014 and warm weather in the second quarter.

Financial Measures: The current ratings recognize that financial measures for SCG and SCE&G will remain well below Fitch's guidelines over the next several years, due in large measure to the elevated nuclear capex and planned debt financing, but should rebound strongly once the units are complete and SCE&G commences recovery of depreciation and the a return on the remaining CWIP balance. Fitch estimates SCE&G's ratios of Debt/EBITDAR will average about 4.5x over the 2014 - 2016 period, FFO/adjusted debt 18% and EBITDAR/interest 4.2x. Credit ratios are expected to be weakest in 2016 following the peak spending in 2015 and then begin to improve as expenditures wind down.

Reasonable Financing Plan: Management has committed to fund the nuclear expenditures with a balanced mix of debt and equity (including internally generated cash), requiring regular equity sales by SCG. Planned equity sales are \$725 million over the 2014 - 2016 period through public common stock offerings (\$425 million) and the dividend reinvestment and 401k plans (\$300 million) and debt financing \$1.6 billion.

Increased Nuclear Ownership: SCE&G's management has agreed to purchase an additional 5% share of the two nuclear units from Santee Cooper in stages beginning with the commercial operation of the first new unit (Unit 2). The timing of the purchase coincides with an expected increase in cash flow associated with capital cost recovery for the nuclear investments. Consequently, the purchase is expected to be funded with internally generated cash.

PSNC: With respect to PSNC, credit metrics are strong for the rating category and low business risk assessment, but restrained by the company's relatively small size and parent rating. The company operates with a purchased gas adjustment mechanism that provides full recovery of all prudently incurred gas costs and a customer utilization tracker (CUT), which decouples the recovery of authorized margins from sales for residential and commercial customers mitigating the impact of weather and conservation on revenue.

RATING SENSITIVITIES

SCG/SCE&G

Positive Rating Action: A positive rating action is not likely for either SCG or SCE&G during the current nuclear construction cycle, although a revision of the Rating Outlook to Stable is possible in the event of PSC's approval of the revised construction budget and schedule.

Appendix D

Negative Rating Action:

–Lack of regulatory support for the revised construction schedule and full and timely recovery of any additional costs will most likely result in a ratings downgrade. Even with full cost recovery Fitch may consider a downgrade if the anticipated financial recovery is delayed beyond 2018.

–Change in Financing Plans: Management's inability or reluctance to issue the expected level of equity or an increase in debt financing due to price escalation would negatively impact ratings.

–Change in the BLRA Process: While not expected, any change in the BLRA process that affects the timeliness and amount of nuclear cost recovery would adversely affect current ratings.

Public Service Company of North Carolina

Positive Rating Action: Positive rating action is not likely given the company's relatively small size and the financial pressure at parent SCG.

Negative Rating Action: Given the headroom in current ratings a downgrade is not likely but could occur if Debt/EBITDAR exceeds 3.75x on a sustained basis or if SCG's ratings fall below 'BBB'.

Fitch affirms the following ratings with a Negative Rating Outlook:

SCANA Corporation:

- Long-term IDR at 'BBB+';
- Senior Unsecured debt at 'BBB+';
- Junior Subordinated Notes at 'BBB-';
- Short-term IDR at 'F2'.
- Commercial Paper at 'F2'

SCE&G:

- Long-term IDR at 'BBB+';
- First Mortgage bonds at 'A';
- Senior Unsecured debt at 'A-';
- Short-term IDR at 'F2'.
- Commercial Paper at 'F2'.