

South Carolina Office of Regulatory Staff

Review of South Carolina Electric & Gas Company's 2017 4th Quarter Report on V. C. Summer Units 2 & 3 Status of Construction



March 26, 2018



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 AP1000 Units 2 & 3 (the “Units”) in Jenkinsville, SC and the Engineering, Procurement and Construction (“EPC”) Contract with Westinghouse Electric Company (“WEC”) and Stone & Webster, Inc. In 2013, Chicago Bridge and Iron purchased Stone & Webster, Inc. to become CB&I Stone and Webster, Inc. (CB&I) and subsequently took over Stone & Webster’s EPC responsibilities. In 2015, the EPC Contract was amended releasing CB&I, thereby leaving WEC as the primary member of the Consortium (CB&I was acquired by WEC and continues to be a member of the Consortium as a subsidiary of WEC). WEC subsequently subcontracted Fluor as the construction manager of the Units. The Commission’s approval of the Units can be found in Base Load Review Order No. 2009-104(A) filed in Docket No. 2008-196-E.

Subsequent to the Base Load Review Order, the Commission held five (5) 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 SCE&G’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 which included the removal of \$438 million in contingency costs netted against an increase of approximately \$174 million to the base project cost.
- **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 which included an increase to the base project cost of approximately \$278 million.
- **Order No. 2015-661**: Issued on September 10, 2015 and filed in Docket No. 2015-103-E. The Commission approved SCE&G’s petition for updates and revisions to schedules which included an increase to the base project cost of approximately \$698 million.
- **Order No. 2016-794**: Issued on November 28, 2016 and filed in Docket No. 2016-223-E. The Commission approved SCE&G’s petition for updates and revisions to schedules which included an increase to the base project cost of approximately \$831 million.

The anticipated dependable capacity from the Units was approximately 2,234 megawatts (“MW”), of which 55% (1,228 MW) would have been available to serve SCE&G customers. South Carolina Public Service Authority (“Santee Cooper”) was contracted to receive the remaining 45% (1,006 MW) of the electric output and is responsible for 45% of the costs of the construction of the Units.

In October 2011, SCE&G and Santee Cooper executed the permanent construction and operating agreements for the project. The agreements granted 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.

On March 29, 2017, WEC filed Chapter 11 bankruptcy. Subsequently, SCE&G, Santee Cooper and WEC entered into an Interim Assessment Agreement to allow the project to continue pending SCE&G and Santee Cooper’s evaluation to either continue or abandon the Units.

On July 31, 2017, SCE&G announced that it will cease construction of the units and file a petition with the Commission seeking approval of an abandonment plan [From 7-31-17 Press Release]. The Company instructed Fluor Corporation and WEC to cease all work activities other than efforts to safely abandon the Units. Also, on July 31, 2017, SCE&G gave WEC a five (5) day notice to terminate the Interim Assessment Agreement.

On August 1, 2017, SCE&G filed a Petition with the Commission for a prudency determination regarding abandonment of the Units. On August 15, 2017, the Company withdrew its Petition.

On January 12, 2018 a Joint Application and Petition of SCE&G and Dominion Energy, Inc. for merger and an abandonment plan was filed in Docket No. 2017-370-E.

On February 14, 2018, SCE&G submitted its 2017 4th 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 December 31, 2017 (“Review Period”). The Company’s Quarterly Report was submitted pursuant to S.C. Code Ann. § 58-33-277 of the Base Load Review Act (“BLRA”).

With reference to Section 58-33-275(A) of the BLRA, the review by the ORS in the past focused on SCE&G’s ability to adhere to the approved construction schedule and the approved capital cost schedule. However, given SCE&G’s decision to abandon the Units, ORS’s report now provides a general status of the Units regarding the approved schedule and the approved budget with reference to the Company’s Quarterly Report and with respect to July 31, 2017 (“Abandonment Date”).

Schedule Review and Site Activities

Milestone Schedule

Commission Order No. 2016-794 established new substantial completion dates of August 31, 2019 and August 31, 2020 for Units 2 & 3, respectively. Given SCE&G's decision to abandon the Units, its Quarterly Report did not provide an update to the BLRA milestones. According to SCE&G's 2017 3rd Quarter Report, as of the Abandonment Date, 119 of the 146 (or 82%) BLRA milestones were completed while 27 are shown as incomplete.

Site Activities

Due to the SCE&G's decision to abandon the Units, site activities focus on safely demobilizing the site, removing contractor temporary equipment, and restoring the site vegetation.

In its Quarterly Report, the Company proposes that Santee Cooper has the authority to determine what it wishes to do with abandoned equipment. After the Reporting Period, the Company indicated that Santee Cooper's Board of Directors met and provided direction to Santee Cooper to develop an interim preservation strategy to protect and preserve certain equipment and maintain appropriate storage requirements.

Offsite Water System

Work continues on the Offsite Water System ("OWS"). SCE&G does not intend to abandon this system but proposes it be completed and operated to support its existing nuclear unit, V.C. Summer Unit 1. The OWS is near completion and being tested for formal transfer to V.C. Summer Unit 1 operations.

Equipment and Fabrication

The Company arranged to receive payment for the sale of a Reactor Coolant Pump and to receive payment from WEC in the amount of \$14,526,534 (in 100% dollars; SCE&G's 55% share is approximately \$8 million). The net value of the payment and intended sales will reduce the balance of capital costs associated with the project. The Commission approved the Company's request for reimbursement in Order 2018-82 under Docket 2017-305-E.¹

¹ SCE&G filed a letter to the Commission on March 13, 2018 to document the completion of the transaction and SCE&G has received and accepted the \$14,526,534 (100%) in reimbursement for the V.C. Summer Unit 3 Reactor Coolant Pump.

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.

In its 2017 3rd Quarter Report, SCE&G reported that transmission structures and miles of wire were approximately 88% and 82% complete, respectively. The transmission infrastructure constructed to support Unit 2 is substantially complete.

The Company does not intend to abandon the transmission system constructed for the Units but proposes the system be completed and operated to enhance the capacity and reliability of SCE&G's transmission network. In its Quarterly Report, the Company states that its total investment in transmission assets related to the Units is approximately \$399 million. As of the end of the Review Period, \$322 million of the \$399 million has been spent. As of December 31, 2017, \$241 million of transmission assets have been completed. SCE&G removed these costs from the capital budget associated with the Units. SCE&G intends to seek regulatory approval to recover these costs.

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 Construction activities continued on the VCS2-ST. George 230 kV Lines No. 1 and No. 2 segment between the Saluda rapids and Dunbar Road and between Gaston and Orangeburg.

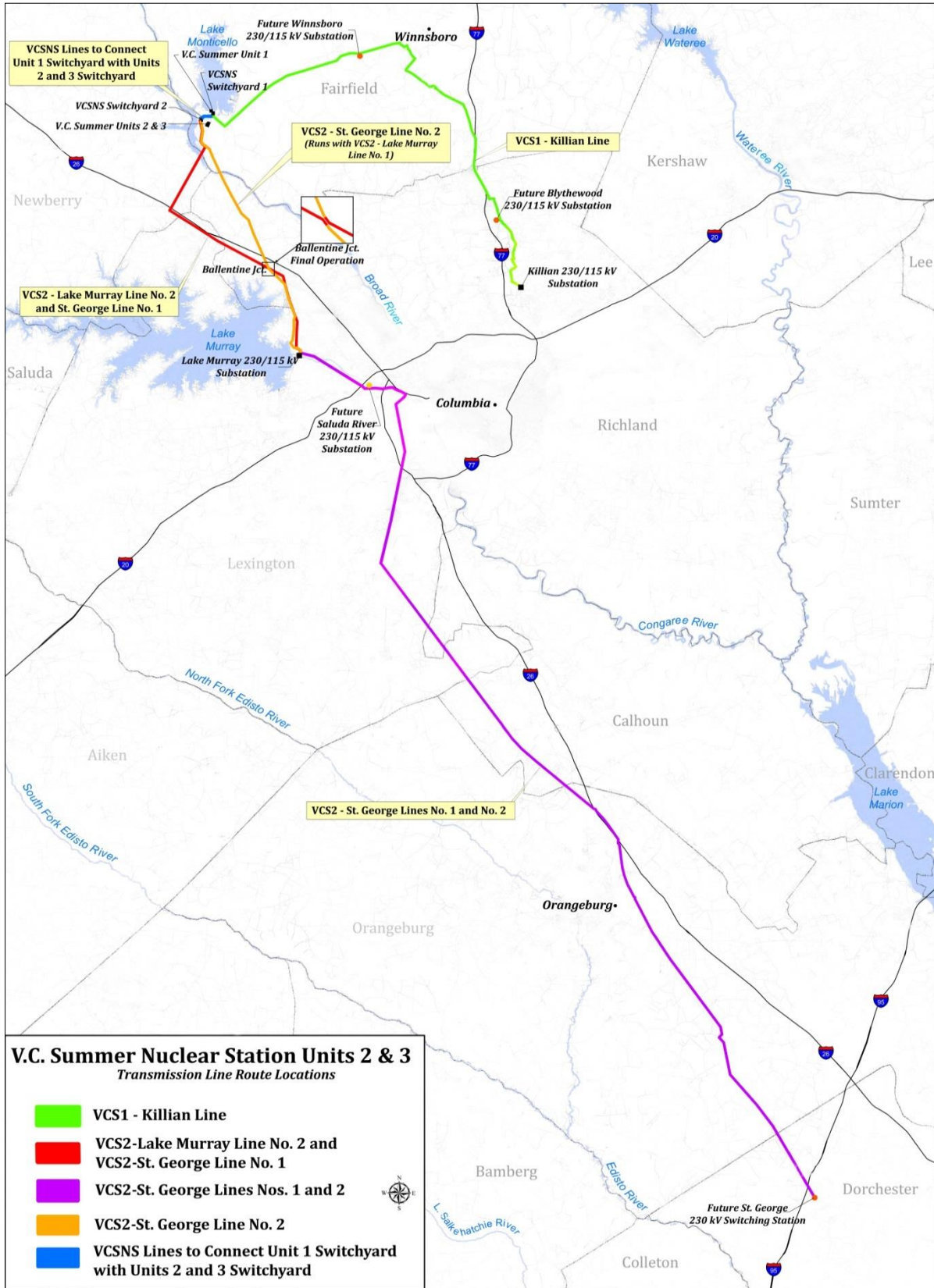
Yellow Line:

The portion of the VCS2-St. George Line No. 2 segment between VCS2 and the Lake Murray substation is complete and energized.

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

On December 27, 2017, the Company submitted letter NND-17-0503 to the NRC to request withdrawal of the COL for both Units. On January 8, 2018, Santee Cooper submitted a letter to the NRC requesting the NRC refrain from taking any actions on SCE&G's request for 180 days to allow time for Santee Cooper to determine whether a transfer to itself of SCE&G's interest in the Units 2 & 3 are in the best interest of Santee Cooper customers.²

State Activities

Given SCE&G's decision to abandon the Units, activities are primarily associated with closing environmental permits.

Commission Activity

- On June 22, 2017, in Docket 2017-207-E, Friends of the Earth and Sierra Club filed a complaint against SCE&G.
- On August 1, 2017, in Docket 2017-244-E, SCE&G filed a Petition for Prudency Determination Regarding Abandonment. On August 15, 2017, SCE&G withdrew its Petition.
- On August 1, 2017, in Docket 2017-246-E, the Company filed a Notice of Intent stating that SCE&G will file an application seeking its Annual Request for Revised Rates with the Commission. On August 15, 2017, the Company withdrew its Notice of Intent.
- On September 26, 2017, in Docket 2017-305-E, ORS filed a Request for Rate Relief. Subsequently, on October 17, 2017 and in the same Docket, ORS filed a Motion to Amend its Request asking the Commission to consider the appropriate application of the revenue received relating to the Toshiba Guarantee Payment to benefit SCE&G customers.
- On November 9, 2017, SCE&G provided the status of activities at the V.C. Summer nuclear Construction Site to the Commission during an Allowable Ex Parte Communication Briefing.
- After the Review Period, on January 12, 2018 and in Docket 2017-370-E, SCE&G filed a Joint Application and Petition of South Carolina Electric & Gas Company and Dominion Energy, Inc. for review and approval of a proposed business combination between SCANA Corporation and Dominion Energy, Inc., as may be required, and for a prudency determination regarding the abandonment of the V.C. Summer Units 2 & 3 Project and associated merger benefits and cost recovery plans.

² SCE&G is authorized by Santee Cooper to exercise responsibility and control over the physical construction, and maintenance of the facility.

Budget Review

The ORS budget review includes an analysis of the 4th Quarter 2017 capital costs, project cash flow, escalation and Allowance for Funds Used during Construction (“AFUDC”). Both the 2017 3rd and 4th Quarterly Reports reflect costs as of September 30, 2017; however, the 4th Quarterly Report utilized September 30, 2017 plus adjustments. The forecasted AFUDC for the total project as of September 30, 2017 is approximately \$172.373 million.

SCE&G’s Quarterly Report (in Appendix 2) shows actual Gross Construction cost of the Units (which includes escalation cost and AFUDC), through September 30, 2017 plus adjustments to be \$4.645 billion. This amount reflects the removal of transmission assets and other assets to support Unit 1 from the approved capital budget.

For reference purposes, the Company’s 2017 3rd Quarter Report (Appendix 3), the Gross Construction cost of the Units approved by the Commission in Order No. 2016-794 is \$7.658 billion, forecasted through the year of 2020.

Table 1 provides a list of buildings/equipment that will not be abandoned and transferred to support Unit 1. Table 1 also shows associated cost estimates.

Table 1:

Category	Amount (\$ Millions)
Switchyard	\$31
Off-Site Water System	\$23
Nuclear Operations Building	\$11
CHAMPS work management system	\$7
Nuclear Learning Center Annex	\$5
Miscellaneous *	\$9
Total	\$86

*Miscellaneous (e.g. emergency services facility, security training facility, software licenses, wastewater treatment, facility, railroad spur, and IT infrastructure.)

Annual Request for Revised Rates

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

Table 2:

SCE&G Revised Rates History					
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	(\$7,190,000)	\$47,371,000	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	2014-785	\$70,038,000	(\$3,800,000)	\$66,238,000	2.82%
2015-160-E	2015-712	\$69,648,000	(5,122,000)	\$64,526,000	2.57%
2016-224-E	2016-758	\$74,161,000	(9,733,000)	\$64,428,000	2.66%

ORS Monitoring Activities

Since the abandonment, ORS continues to perform monitoring activities. General activities are listed below:

- Reviews SCE&G's Quarterly Reports
- Issues Audit Information Requests
- Audits capital cost expenditures and resulting AFUDC in Construction Work in Progress
- Reviews invoices associated with the WEC Bankruptcy
- Attends on-site Plan of the Day meetings with on-site abandonment construction managers.
- Performs periodic site assessments

Conclusion

Commission Order No. 2016-794 established new substantial completion dates of August 31, 2019 and August 31, 2020 for Units 2 & 3, respectively. Given SCE&G's decision to abandon the Units, its Quarterly Report did not provide additional updates to the BLRA milestones. Therefore, SCE&G's 2017 3rd Quarter Report, as of the Abandonment Date, 119 of the 146 (or 82%) BLRA milestones were completed while 27 are shown as incomplete.

SCE&G's Quarterly Report shows actual Gross Construction cost of the Units through September 30, 2017 plus adjustments to be \$4.645 billion (after transfers). This amount reflects the removal of transmission assets and other assets to support Unit 1 from the approved capital budget.