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February 13, 2015

The Honorable Jocelyn Boyd
Chief Clerk and Administrator
Public Service Commission of South Carolina
101 Executive Center Drive
Columbia, South Carolina 29210

Re: Quarterly Report of SCE&G Concerning Construction of V.C. Summer Nuclear Station Units 2 and 3

Dear Ms. Boyd:

Enclosed please find informational copies of South Carolina Electric & Gas Company's (the "Company" or "SCE&G") Quarterly Report (the "Report") for the period ending December 31, 2014, related to the construction of V.C. Summer Nuclear Station Units 2 and 3 (the "Units"). This Report is being filed with the South Carolina Office of Regulatory Staff ("ORS") pursuant to the Base Load Review Act, S.C. Code Ann. § 58-33-277 (Supp. 2014) and the provisions of Order No. 2009-104(A) of the Public Service Commission of South Carolina (the "Commission").

Because this Report contains certain commercially sensitive information, SCE&G is filing both redacted (Public) and unredacted (Confidential) versions of this Report with the Commission and with ORS. For your convenience, we are providing you with ten (10) copies of the Public version of this Report. SCE&G is also providing one (1) copy of the Confidential version of this Report and is hereby petitioning the Commission to enter a confidentiality order protecting the commercially sensitive information contained therein from disclosure, as set forth below.

The Confidential version of this Report contains confidential information related to the pricing and pricing terms of the Engineering, Procurement and Construction Agreement (the "EPC Contract") between SCE&G and a consortium consisting of Westinghouse Electric Company, LLC and Chicago Bridge & Iron, formerly the Shaw Group, (collectively, the "Contractor"). The EPC Contract contains confidentiality provisions that require SCE&G to protect proprietary information that the Contractor believes to constitute trade secrets and to be commercially sensitive. The Contractor has requested that SCE&G maintain the confidentiality of certain information contained in **Appendix 2** and **Appendix 3**. This confidential information has been redacted from the Public Version of these appendices.

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In keeping with the Contractor's request and the terms of the EPC Contract, SCE&G respectfully requests that the Commission find that the Confidential version of the Report contains protected information and issue a protective order barring the disclosure of certain portions of **Appendix 2**, and **Appendix 3** of the Report under the Freedom of Information Act, S.C. Code Ann. §§ 30-4-10 *et seq.*, 26 S.C. Code Ann. Regs. 103-804(S)(1), or any other provision of law, except in its public form. Pursuant to 26 S.C. Code Ann. Regs. 103-804(S)(2), the determination of whether a document may be exempt from disclosure is within the Commission's discretion. Such a ruling in this instance would be consistent with the Commission's prior rulings in Docket No. 2008-196-E, Docket No. 2009-211-E, and Docket No. 2010-376-E. In those dockets, the Commission found, among other things, that the pricing and pricing terms of the EPC Contract are confidential, and issued a protective order barring the disclosure of such information. *See, e.g.,* Commission Order Nos. 2008-467, 2008-696, as amended by Order No. 2008-739, 2009-888, and 2010-198 issued in Docket No. 2008-196-E; Commission Order No. 2009-401 issued in Docket No. 2009-211-E; Commission Order Nos. 2010-795, 2011-127, and 2011-177 issued in Docket No. 2010-376-E; and Commission Order Nos. 2012-415, 2012-621 and 2012-623 issued in Docket No. 2012-203-E.

To this end, and in accordance with Commission Order No. 2005-226, dated May 6, 2005, in Docket No. 2005-83-A, enclosed with this letter are the following:

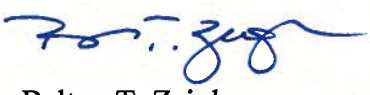
1. A true and correct copy of the Confidential version of the Report in a sealed envelope marked "CONFIDENTIAL." The title page of the Confidential version of the Report is marked "CONFIDENTIAL VERSION" and each page of the Confidential version of the Report is marked "CONFIDENTIAL VERSION."

2. Ten copies of a redacted Public version of the Report.

In the event that anyone should seek disclosure of the unredacted Confidential version of the Report, SCE&G respectfully requests that the Commission notify SCE&G of such request and provide it and the Contractor with an opportunity to obtain an order from this Commission or a court of competent jurisdiction protecting the Confidential version of this document from disclosure.

If you have any questions regarding these matters, please contact me.

Sincerely,



Belton T. Zeigler

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Enclosures

cc: Anthony James, Director of New Nuclear Development
Shannon Bowyer Hudson, Esquire
K. Chad Burgess, Associate General Counsel

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**BEFORE**

**THE PUBLIC SERVICE COMMISSION OF**

**SOUTH CAROLINA**

**DOCKET NO. 2008-196-E**

IN RE:

| | |
|---|---|
| **In re:**<br>**Combined Application of South Carolina Electric & Gas Company for a Certificate of Environmental Compatibility and Public Convenience and Necessity for a Base Load Review Order for the Construction and Operation of a Nuclear Facility in Jenkinsville, South Carolina** | CERTIFICATE OF SERVICE<br>QUARTERLY REPORT<br>ENDING December 31, 2014 |

This is to certify that I have caused to be served this day one (1) copy of the Confidential Version and ten (10) copies of the Public Version of **South Carolina Electric & Gas Company's Letter** and **Quarterly Report Ending December 31, 2014**, upon the person named below, via hand delivery and electronic mail to the PSC as listed below:

The Honorable Jocelyn Boyd
Chief Clerk and Administrator
Public Service Commission of South Carolina
101 Executive Center Drive
Columbia, South Carolina 29210
jocelyn.boyd@psc.sc.gov

Suzanne M. Crosthwaite

Suzanne M. Crosthwaite

Columbia, South Carolina
This 13th day of Febuary, 2014

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PUBLIC VERSION

# V.C. Summer Nuclear Station Units 2 & 3

## Quarterly Report to the South Carolina Office of Regulatory Staff Submitted by South Carolina Electric & Gas Company Pursuant to Public Service Commission Order No. 2009-104(A)

## Quarter Ending December 31, 2014

## I. Introduction and Summary

### A. Introduction

This quarterly report is submitted by South Carolina Electric & Gas Company (SCE&G or the Company) to the Public Service Commission of South Carolina (the Commission) and the South Carolina Office of Regulatory Staff (ORS). It is submitted in satisfaction of the requirements of S.C. Code Ann. § 58-33-277 (Supp. 2014) and the terms of Commission Order No. 2009-104(A). This report provides updated information concerning the status of the construction of V.C. Summer Nuclear Station (VCSNS) Units 2 & 3 (the Units) and provides the current capital cost forecasts and construction schedules for the Units as of the close of the quarter. In Order No. 2012-884 dated November 15, 2012, the Commission approved updated construction and capital cost schedules for the Units. This report provides a comparison of the current schedules and forecasts against those approved in Order No. 2012-884.

### B. Structure of Report and Appendices

The current reporting period is the quarter ending December 31, 2014. The report is divided into the following sections:

Section I: Introduction and Summary;

Section II: Progress of Construction of the Units;

Section III: Anticipated Construction Schedules;

Section IV: Schedules of the Capital Costs Incurred Including Updates to the Information Required by S.C. Code Ann. § 58-33-270(B)(6) (the Inflation Indices);

Section V: Updated Schedule of Anticipated Capital Costs; and

Section VI: Conclusion.

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**Appendices 1, 2, and 4** to this report contain detailed financial, milestone and other information updating the schedules approved by the Commission in Order No. 2012-884. For reference purposes, **Appendix 3** provides a copy of the capital cost schedule for the project as approved in Order No. 2012-884. **Appendix 5** provides a list of the License Amendment Requests (LARs) filed by SCE&G with the Nuclear Regulatory Commission (NRC).

A confidential and a public version of this report and its attachments are being provided. Unless otherwise specified, all cost information reflects SCE&G's 55% share of the project's cost in 2007 dollars. Attached to the end of the report is a glossary of acronyms and defined terms used.

### C. Construction Schedule and Milestones

As of the close of the period, one milestone, Set Nuclear Island Structural Module CA03 for Unit 2, was more than 18 months delayed. As reported on Appendix 1, page 9, two future equipment milestones, both related to the fabrication of the Reactor Coolant Pumps (RCP), are projected to be delayed by between 19 and 26 months, but no impact on the construction schedule is anticipated from this RCP fabrication delay. SCE&G anticipates updating all construction milestone completion dates based on the Revised Fully Integrated Construction Schedule. As of the close of the reporting period, negotiations concerning that schedule were underway but SCE&G had not agreed to new commercial operation dates for the Units.

There are 146 specific milestones for reporting purposes. As of December 31, 2014, 101 have been completed. Comparing the scheduled milestone completion dates, as of the date of this report, to the milestone completion dates approved by the Commission in Order No. 2012-884, the completion dates of 43 milestones have changed. Of these, one has been accelerated and 42 have been delayed by between 2 and 26 months.

**The Unit 2 and Unit 3 Construction Schedules.** During the third quarter of 2013, WEC/CB&I (the Consortium) provided SCE&G with revised Unit 2 and Unit 3 construction schedules (Revised Unit 2 and Unit 3 Schedules) which were based on a reevaluation of the submodule production schedule at the CB&I facility in Lake Charles, Louisiana. Based on these schedules, it was anticipated that Units 2 and 3 would be completed in the last quarters of 2017 and 2018 or the first quarters of 2018 and 2019, respectively. From the perspective of the Engineering, Procurement and Construction Contract (EPC Contract) as amended between SCE&G and WEC/CB&I, SCE&G has not agreed to these schedule changes and advised WEC/CB&I that it remained obligated to satisfy the dates previously agreed to in the EPC Contract.

During the fourth quarter of 2013, the Consortium began a full re-baselining of the Unit 2 and Unit 3 construction schedules to incorporate a more detailed evaluation of the

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engineering and procurement activities necessary to accomplish the schedules and to provide a detailed reassessment of engineering and design resource allocations, procurement, construction work crew efficiencies, and other items. In August 2014, SCE&G received preliminary information from the Consortium regarding the substantial completion dates of the two Units. Since receiving the August 2014 preliminary schedule information and associated cost estimates, SCE&G has worked with Consortium executive management to evaluate this information. Based upon this evaluation, the Consortium has indicated that the substantial completion date of Unit 2 is expected to occur by June 2019 and that the substantial completion date of Unit 3 may be approximately 12 months later. As a result, the completion dates for a number of milestones are expected to extend beyond the 18-month contingency period. SCE&G is continuing discussions with Consortium executive management in order to identify potential mitigation strategies to possibly accelerate the substantial completion date of Unit 2 to a time earlier in the first half of 2019 or to the end of 2018, with Unit 3 following approximately 12 months later. As of the close of the reporting period, the scheduling changes included in this preliminary information remained under review and had not been accepted by SCE&G.

During the third quarter of 2014, the Consortium provided preliminary cost estimates principally related to the delays for non-firm and non-fixed scopes of work to achieve the late 2018 substantial completion date for Unit 2. SCE&G's 55% portion of this preliminary estimate is approximately $660 million. This figure is presented in 2007 dollars and would be subject to escalation. It also excludes any Owners cost amounts associated with delays which could be significant. Further, this figure does not reflect consideration of liquidated damages provisions of the EPC Contract which would partly mitigate any such delay-related costs. The Consortium's preliminary schedule and the cost estimate information have not been accepted by SCE&G and as of the close of the period were under review, but SCE&G cannot predict when a revised schedule and cost estimate will be resolved with the Consortium. When new construction schedule dates and costs become sufficiently certain to be properly included in schedules filed under the Base Load Review Act (BLRA), SCE&G expects to petition the Commission for an order to update its construction milestone and capital cost estimate schedules for the project as the BLRA permits.

**Milestone Schedules.** The anticipated milestone completion dates presented in this report, related to construction activities, reflect the completion dates contained in the Revised Unit 2 and Unit 3 Schedules as updated through the project report that WEC/CB&I provided to SCE&G in February 2014.

SCE&G anticipates updating all construction milestone completion dates when the Revised Fully Integrated Construction Schedule has been reviewed and new commercial operation dates have been accepted. Pending completion of this review, the Revised Unit 2 and Unit 3 Schedules as updated through the project report that WEC/CB&I provided to SCE&G in February 2014 remain the current schedules for the project. This is the

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schedule on which mid- and long-term project construction milestones are based in this report. As to near-term milestones, WEC/CB&I provides updates on these activities on an ongoing basis, and the associated milestones are updated when relevant and definitive information is received from WEC/CB&I indicating a change. Equipment milestone dates are updated routinely as definitive information is received from equipment fabricators, suppliers and shippers. The equipment milestone dates reported here reflect the most current, updated information.

### D. Construction Costs and Cost Forecasts

Spending through December 31, 2014, in current dollars is approximately $1.059 billion less than the capital cost schedule approved in Order No. 2012-884. This is primarily attributable to the delays in the construction schedule as discussed in Section I.C. SCE&G anticipates that it will continue to expend amounts less than the amounts set forth in the current capital cost schedule until a revised capital cost forecast is approved by the Commission. SCE&G is currently in the process of evaluating its capital cost forecast for 2015 and beyond and will include this information in its future BLRA filings.

The present cash flow forecast indicates that the Company will be able to complete the Units for $4.548 billion in 2007 dollars, which is the amount approved in Order No. 2012-884. This does not include consideration of any additional EPC Contract costs or Owners cost associated with the schedule and cost information that was under negotiation with WEC/CB&I at the close of the review period. In addition, these cost projections have not been updated for certain change orders which had been negotiated or were under negotiation at the close of the reporting period, including Plant Layout Security, Cyber-Security Phase II, ITAAC Maintenance, Perch Guards, Plant Reference Simulator Hardware and Software Upgrade, and WEC Health Care Costs. As set forth in Section II.H., the value of these additional change orders is approximately $40 million.

Additional costs will be included in future filings as they become sufficiently certain to be included in BLRA capital cost schedules.

The current cost estimates include changes in timing of costs and minor shifts in costs among cost categories that occur in the normal course of managing the project. All amounts set forth in this Quarterly Report are based on SCE&G's existing 55% interest, except where expressly stated to be based upon 100% of the cost.

**Cash Flow Forecasts and the Revised Unit 2 and Unit 3 Schedules.** The cash flow forecasts provided in this report reflect changes in the timing of certain payments to WEC/CB&I based on the Revised Unit 2 and Unit 3 Schedules. Although the timing of cash flows has been revised, no increases in costs in 2007 dollars resulting from the Revised Unit 2 and Unit 3 Schedules or the information received in August 2014 are included in the cash flow estimates provided in this report. Inclusion in the cash flow

forecasts of the change orders discussed immediately above, however, will increase the cost of the project by the amount of approximately $40 million in 2007 dollars.

**Cost Comparisons.** In Order No. 2009-104(A), the Commission recognized that forecasts of Allowance for Funds Used During Construction (AFUDC) and escalation would vary over the course of the project and required those forecasts to be updated with each quarterly report. Escalation indices were issued in October 2014 for the period of January through June 2014 and have been used in forecasting the construction costs for the project that are presented here.

**Chart A** below compares the current capital cost forecast to the forecast presented in the last quarterly report. This chart shows a decrease in Gross Construction Costs of $0.9 million over the life of the project. With each quarterly update, a quarter that had been subject to the five-year escalation rate becomes subject to the one-year rate. The figures reported on **Chart A** also include the effect of calculating escalation on an updated cash flow projection for the project.

**Chart A: Reconciliation of Capital Cost ($000)**

| Forecast Item | Projected @ 12/31/14 (Five-Year Average Escalation Rates) | Projected @ 09/30/14 (Five-Year Average Escalation Rates) | Change |
|---|---|---|---|
| Gross Construction | $5,795,986 | $5,796,907 | ($921) |
| Less: AFUDC | $266,471 | $272,377 | ($5,906) |
| Total Project Cash Flow | $5,529,515 | $5,524,530 | $4,985 |
| Less: Escalation | $981,110 | $976,125 | $4,985 |
| **Capital Cost, 2007 Dollars** | **$4,548,405** | **$4,548,405** | **$0** |



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**Chart B** compares the current capital cost forecast to the forecast on which the Commission relied in adopting Order No. 2012-884. Chart B shows that the forecasted capital cost of the Units in 2007 dollars has not changed. Due to the changes in forecasted escalation and AFUDC (see Section I.F. below) the cost of the plant in future dollars has increased by approximately $41 million since Order No. 2012-884 was issued.

**Chart B: Reconciliation of Capital Cost ($000)**

| Forecast Item | Projected @ 12/31/14 (Five-Year Average Escalation Rates | As Forecasted and Approved In Order 2012-884 | Change |
|---|---|---|---|
| Gross Construction | $5,795,986 | $5,754,565 | $41,421 |
| Less: AFUDC | $266,471 | $237,715 | $28,756 |
| Total Project Cash Flow | $5,529,515 | $5,516,849 | $12,666 |
| Less: Escalation | $981,110 | $968,444 | $12,666 |
| **Capital Cost, 2007 Dollars** | **$4,548,405** | **$4,548,405** | **$0** |



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**Chart C** below shows the current forecasts of the cost of the Units compared to the cost forecasts underlying the initial BLRA order, which was issued by the Commission in 2009, and the update orders that the Commission issued subsequently. The decline in capital cost forecasts in 2007 dollars between Order No. 2010-12 and 2011-345 reflects the removal of Owner's contingency amounts from the forecasts as required by the opinion of the Supreme Court of South Carolina in *South Carolina Energy Users Comm. v. South Carolina Pub. Serv. Comm'n*, 388 S.C. 486, 697 S.E.2d 587 (2010). This chart shows that while the cost of the project in 2007 dollars has increased by $13 million since the initial forecasts, the cost of the project in future dollars is approximately $517 million below the initial forecast.

**Chart C: Summary of Nuclear Filings (billions of $)**

| Forecast Item | Order No. 2009-104(A) | Order No. 2010-12 | Order No. 2011-345 | Order No. 2012-884 | Projected @ 12/31/2014 |
|---|---|---|---|---|---|
| Capital Cost, 2007 Dollars | $4.535 | $4.535 | $4.270 | $4.548 | **$4.548** |
| Escalation | $1.514 | $2.025 | $1.261 | $0.968 | **$0.981** |
| Total Project Cash Flow | $6.049 | $6.560 | $5.531 | $5.517 | **$5.530** |
| AFUDC | $0.264 | $0.316 | $0.256 | $0.238 | **$0.266** |
| **Gross Construction** | **$6.313** | **$6.875** | **$5.787** | **$5.755** | **$5.796** |

### E. Escalation Rates

As provided in Order No. 2009-104(A), the most current one-year inflation indices are used to escalate costs occurring in the twelve-month period after the date of each quarterly report. The most current escalation indices are found in the Handy-Whitman July 2014 update which was issued in October 2014 and reports data for the period January through June 2014. Those rates are reflected in this report. The approved capital cost targets have been adjusted to reflect the currently reported historical escalation rates. The forecasted costs provided here reflect SCE&G's calculations related to the



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WEC/CB&I Claims, which change the index applicable to Firm with Indexed Adjustment cost categories going forward from a floating Handy-Whitman adjustment to a fixed rate for the life of the project.

As shown on **Appendix 4**, utility construction cost escalation rates were at historically high levels during the period 2005-2008 and have since dropped. Current escalation rates are shown below on **Chart D**. When compared to the previous Handy-Whitman release, the most recent update shows an upward trend in the one-year and five-year average rates.

**Chart D: Handy-Whitman Escalation Rates**

| Escalation Rate Comparison | | |
|---|---|---|
| | **July-Dec 2013** | **Jan-June 2014** |
| **HW All Steam Index:** | | |
| One-Year Rate | **(1.15%)** | **2.52%** |
| Five-Year Average | **2.05%** | **3.21%** |
| Ten-Year Average | **4.62%** | **4.35%** |
| **HW All Steam/Nuclear Index:** | | |
| One-Year Rate | **(1.32%)** | **2.52%** |
| Five-Year Average | **2.09%** | **3.21%** |
| Ten-Year Average | **4.65%** | **4.38%** |
| **HW All Transmission Plant Index:** | | |
| One-Year Rate | **(0.34%)** | **1.68%** |
| Five-Year Average | **0.55%** | **2.63%** |
| Ten-Year Average | **4.57%** | **4.05%** |

## F. AFUDC

Consistent with Order No. 2009-104(A), SCE&G computes AFUDC based on the Federal Energy Regulatory Commission (FERC) approved methodology as applied to the balance of Construction Work in Progress (CWIP) that is outstanding between rate adjustments. SCE&G's projected AFUDC rate is currently 7.27%, compared to the rate of 5.28% that applied when Order No. 2012-884 was issued.



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### G. Compliance with the Commission-Approved Cumulative Project Cash Flow Target

The current Cumulative Project Cash Flow target for the project was adopted by the Commission in Order No. 2012-884. In Order No. 2009-104(A), the Commission provided that the applicable Cumulative Project Cash Flow target would be adjusted with each quarterly report to reflect updated escalation data.

**Appendix 2** provides the Commission-approved Cumulative Project Cash Flow target updated for current escalation data. The cash flow targets through June 2014 have been updated to reflect actual escalation rates. The cash flow targets for the third quarter of 2014 and beyond have been updated based on the most recently available inflation indices, which for purposes of this report, are the indices provided in October 2014 that report data for the period January through June 2014. When final actual indices for 2014 become available, the cash flow data for 2014 will be revised to reflect the actual escalation rates.

**Appendix 2** compares the approved Cumulative Project Cash Flow target to the current cumulative cash flow schedules for the project, which include actual costs where available and SCE&G's working forecasts of annual cash flows for future years. In addition, the project cash flow targets presented on **Appendix 2** for 2012 have been adjusted to reflect timing differences between the billing methodology under the EPC Contract and the calculation of the escalated cash flow targets under Order No. 2009-104(A). Under the EPC Contract, for periods where actual escalation rates are not available, WEC/CB&I bills SCE&G based on a rolling 2-year average of the applicable Handy-Whitman rate and provides adjustments to reflect the actual rate when it is known. An adjustment has been made to **Appendix 2** target calculations to offset the timing differences that arise as a result of WEC/CB&I's approach to estimated billings and credits. This adjustment applies to those EPC Contract cost categories that are subject to indexed escalation.

### H. Nuclear Production Tax Credits

In August 2014, the Internal Revenue Service notified SCE&G that, subject to a national megawatt capacity limitation, the electricity to be produced by each of the Units would qualify for nuclear production tax credits under Section 45J of the Internal Revenue Code to the extent that the Units are operational before January 1, 2021, and other eligibility requirements are met. To the extent that production tax credits are realized, their benefits are expected to be provided to SCE&G's electric customers.

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## II. Progress of Construction of the Units

### A. Construction

The project continues to maintain an excellent safety record that exceeds industry expectations for projects of comparable size.

Progress continues at a steady pace in the multiple areas that constitute the project. SCE&G has provided an online video showing the progress made in 2014 on the construction of the Units. The video may be accessed directly at https://www.youtube.com/watch?v=5nLfn-5WJAU&index=1&list=PLA8526A9E662516DA or by using the online search phrase "SCE&G Highlights Nuclear Construction Progress in 2014."

As of the end of the fourth quarter, the critical path for Unit 2 runs through placement of concrete to support the Unit 2 Shield Building and fabrication of the Shield Building panels. Secondary construction critical paths include the successful assembly and setting in place of the CA01 module and construction of the Annex Building to support first energization of the plant for systems testing. The critical path for Unit 3 continues to run through the successful fabrication and setting in place of the CA20 module followed by the receipt of the CA01 submodules and the successful assembly and setting in place of the CA01 module. However, these matters will be updated as WEC/CB&I continues its review of the construction schedule and as negotiations continue concerning schedule adjustments.

#### 1. Unit 2 Nuclear Island (NI)

Outfitting of CA20 continued to ready the module for the placement of the concrete within the steel structures that form the framework for its walls. Work continued to fabricate and attach the anchor blocks that will anchor CA20 to the Unit 2 basemat. The installation of rebar and piping, and the placement of concrete continued in the interior and exterior walls of the Unit 2 NI Auxiliary Building. Concrete was placed in the fourth of six total layers of concrete to be placed on top of the Unit 2 NI basemat, upon which the Unit 2 Shield Building panels will be installed. The installation of rebar began for the fifth layer of concrete.

#### 2. Unit 3 Nuclear Island

The installation of rebar and the placement of concrete continued during the period for sections of the interior and exterior walls of the Unit 3 NI Auxiliary Building. The installation of rebar for the Unit 3 Shield Building foundation also continued. Backfill work continued around the exterior of the Unit 3 NI.

The first layer of concrete inside the Unit 3 Containment Vessel Bottom Head (CVBH) was placed.

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### 3. Units 2 and 3 Turbine Buildings and Condensers

Work continued during the period to weld-out or bolt-up structural steel for the Unit 2 Turbine Building including the turbine pedestals. Work commenced on installation of the Ventilation System, Condensate Polishing System, and Secondary Supplying System.

The placement of concrete under the Unit 3 Turbine Building continued. The erection of the structural steel modular sections of the Unit 3 Turbine Building, CH80 and CH82, continued during the period.

### 4. Unit 2 and Unit 3 Containment Vessel (CV) Fabrication

Welding of the Unit 2 CV Ring 1 to the CVBH continued during the period. The coating of Unit 2 CV Ring 2 air baffle supports was completed during the period and the installation of attachment plates continued. Welding of the third and final course of plates making up Unit 2 CV Ring 3 was completed. Welding continued on both Unit 3 CV Ring 1 and Unit 3 CV Ring 2.

Acceptance rates based on the Radiographic Testing (RT) of welds on the Units 2 and 3 CVBH and CV Rings remain above 99%.

### 5. Cooling Towers

Work continued to install the electrical and mechanical systems and to inspect and repair welds in Cooling Towers 2A and 3A. The installation of rebar and the placement of concrete for the walls of Cooling Tower 2B continued during the period. Structural work on Cooling Tower 3B also continued during the period. The placement of rebar and concrete continued for the construction of the pump basin for the Unit 2 Cooling Towers.

### 6. Unit 2 High-Side Switchyard

WEC/CB&I continued installing concrete foundations and walls for the Unit 2 Transformers in the Unit 2 High-Side Switchyard, which is located adjacent to the Unit 2 Turbine Building.

### 7. Unit 2 Switchyard

SCE&G has experienced capacitor failures in the Unit 2 Switchyard. The Unit 2 Switchyard remains under warranty, and CB&I and its subcontractor responsible for its construction are investigating the issue to determine the cause of the capacitor failures and appropriate corrective action.

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### 8. Offsite Water System (OWS)

WEC/CB&I continued to install equipment skids in the OWS facility and work progressed on ancillary buildings.

### 9. Workforce

Currently, approximately 3,500 WEC/CB&I personnel and subcontractor personnel are employed on site. Approximately 56% of these jobs are held by South Carolina residents.

## B. Equipment and Fabrication

Throughout the period, major equipment for the project continued to arrive at the site from manufacturers throughout the world. Major equipment is considered as any equipment with a cost of $10 million or greater. At the end of the period, approximately 85% of the Unit 2 major equipment and 30% of Unit 3 major equipment had been delivered to the project. This amounts to approximately 56% of all major equipment for the project.

### 1. Steam Generators

During the period, the Unit 2 Steam Generators were in transit to the site from Doosan's facilities in South Korea and were delivered to the site shortly after the end of the period. Machining, cladding and welding of components of the Unit 3 Steam Generators continued at Doosan with no significant issues.

### 2. Reactor Coolant Pumps

During the period, WEC redesigned and tested the lower thrust bearings of the RCPs. This redesign was in response to indications related to bearing performance during loss of cooling water event tests. Testing indicated that issues with these bearings were not resolved by the redesign. The anticipated delivery of the Unit 2 RCPs on site has been delayed from the date anticipated in Order No. 2012-884 by approximately 26 months and the Unit 3 RCPs have been delayed by 16 months from the comparable date. The additional delay is not anticipated to affect the construction schedule. This is a focus area for the project. Acceptance testing of the redesigned pumps is ongoing.

### 3. Core Make-Up Tanks, Accumulator Tanks, Pressurizers and the Passive Residual Heat Removal Heat Exchanger (PRHR)

During the period, hydrostatic testing of the Unit 3 Core Make-Up Tank 1 was completed. Unit 3 Core Make-Up Tanks 1 and 2, along with the Unit 2

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Pressurizer, were shipped during the period and were delivered shortly after the close of the period. The Unit 2 PRHR is staged at Carolina Energy Solutions in Rock Hill, South Carolina in anticipation of work related to a potential design modification to enhance the PRHR. Fabrication of the Unit 3 PRHR and Pressurizer continued at the Mangiarotti facilities.

### 4. Reactor Coolant Loop (RCL) Piping

All RCL piping for Units 2 and 3 has been delivered to the United States from IBF's facilities in Italy. The RCL hot and cold legs were shipped to Carolina Energy Solutions in Rock Hill for final machining of instrument connections. Surge lines were shipped and delivered directly to the site.

### 5. Squib Valves

The squib valves are in the process of being redesigned to address anomalies uncovered during the initial equipment qualification testing. SCE&G continues to monitor work being done by WEC and SPX to demonstrate that the valves will perform their design basis functions. This is a focus area for the project. No construction schedule impact is anticipated at this time.

### 6. Information Technology

**Site Fiber Optic System.** Work on the fiber optic cable system continues to progress as expected. Additional runs of fiber are being installed as site development progresses.

**Configuration Management Information System (CMIS).** CMIS is the system that will store documents and data related to the design and engineering of the Units, the Quality Assurance/Quality Control (QA/QC) records of equipment, operating programs and protocols for the Units. SCE&G continues to configure and test CMIS and expects the completion date to support the initial turnover of completed Unit 2 plant systems to SCE&G.

**Work Management System (WMS).** During the period, SCE&G received several of the major software modules for the WMS. SCE&G expects to begin module testing in the first quarter of 2015 and integrated systems testing later in the year. Work is progressing as expected.

**Handover and Turnover of Proprietary Information.** During the period, SCE&G and WEC/CB&I completed the pilot program for turnover of proprietary information for inclusion in the CMIS and the WMS and for other purposes. SCE&G has begun importing document transmittal files into the system for testing purposes. SCE&G and WEC/CB&I continue to develop and implement

processes to organize and control the handover and turnover of proprietary information related to the Units.

### 7. Module Fabrication and Assembly

Challenges related to fabrication of submodules continue to be a focus area of the project:

**The Revised Module Production Schedule.** As indicated in Section II.A., the fabrication and delivery of Shield Building panels and CA submodules are critical path items for both Units. Accordingly, production of these modules remains a very important focus area for the project. SCE&G maintains a presence on site at CB&I-LC to monitor activities and interact with CB&I-LC leadership on a regular basis. Additionally, SCE&G has added a presence on site at MetalTek-SMCI Division (SMCI) in Lakeland, Florida.

**Unit 2 Submodules.** The CA01 module houses the steam generator components, pressurizer and refueling canal within the CV. By the end of the period, all 47 CA01 submodules had been received on site and receipt inspections had been completed to support on-site assembly. Assembly of the CA01 submodules continued throughout the period. Delays in setting the Unit 2 CA01 module would likely affect the schedule for setting the Unit 2 CA03 module and, therefore, the other construction activities that follow the setting of that module. For this reason, SCE&G is monitoring the schedule for completing and setting the Unit 2 CA01 module closely.

The CA02 module forms part of the in-containment refueling water storage tank and pressurizer cubicle wall. By the end of the period, all CA02 submodules had been received on site.

The CA03 module forms part of the in-containment refueling water storage tank and pressurizer cubicle wall within the CV. Fabrication of CA03 submodules continued throughout the period at SMCI.

The CA05 module forms part of the chemical and volume control system tunnel and passive core cooling system walls within the CV. Assembly of the CA05 submodules on the platen was completed during the period and the module was set in the CV.

In addition, during the period, the CA22 module, which forms part of the Auxiliary Building floor, was received on site from the fabricator, Greenberry Industrial, and various modules forming the concrete walls inside the CV were received on site from SMCI.



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**Unit 3 Submodules.** Work continued at Oregon Iron Works and CB&I-LC facilities for the Unit 3 CA20 submodules. Work continued on the CA01 submodules at the Toshiba & IHI Corporation facilities in Japan.

**Mechanical Modules.** Mechanical modules are skids or racks that hold pumps, cable trays, pipes, conduits, valves or similar equipment and are being fabricated at the CB&I-LC and CB&I Island Park facilities in Beaumont, Texas. During the period, the fabrication of higher-priority Unit 2 mechanical modules and the assembly of the first floor Auxiliary Building mechanical modules continued on site.

**Shield Building.** During the period, additional shipments of the panels which will comprise the steel walls of the Unit 2 Shield Building were received on site from Newport News Industries. By the end of the period, 35 Unit 2 and 1 Unit 3 Shield Building panels had been delivered to the site.

**Conclusion.** Senior management from both SCE&G and WEC/CB&I continue to monitor the fabrication and delivery process related to submodules. WEC personnel continue to provide on-site engineering support for production at CB&I-LC. SCE&G continues to maintain a permanent resident at the CB&I-LC facility who provides additional monitoring and has added a resident at the SMCI facility. The fabrication of the submodules continues to be an important area of focus for the project.

## C. Quality Assurance and Quality Control

The New Nuclear Deployment (NND) Quality Systems Group continues its QA/QC oversight activities to ensure that WEC/CB&I is meeting quality requirements on site, internally, and at suppliers and sub-suppliers. If effective oversight by SCE&G or WEC/CB&I is not demonstrated in any area, the Quality Systems group tracks and escalates concerns to ensure that QA/QC systems are improved to ensure effective results going forward. During the fourth quarter, the Quality Systems group focused attention on new module suppliers and the implementation of their QA/QC programs. In addition, the Quality Systems group continued to target (1) site surveillances on welding, storage requirements, and concrete pours, and (2) off site sub-supplier surveillances for the safety-related components of Core Make-Up Tanks, Pressurizers, Steam Generators and Casings. During the period, the Quality Systems group completed its internal audits of WEC/CB&I Special Processes, Southern Nuclear Company (SNC) completed its peer audits of SCE&G Quality Systems, and ASME Management Controls completed its audit of WEC/CB&I. No conditions significantly adverse to quality were identified. Corrective actions are underway to address all findings. The Quality Systems group continues to monitor Safety Conscious Work Environment concerns to ensure that all personnel are encouraged and supported in reporting safety concerns.

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## D. Licensing and Permitting

As licensee for the Units, SCE&G is directly accountable to the NRC for contractors meeting nuclear safety-related QA/QC requirements both at the project site and at the facilities of its component manufacturers and equipment suppliers worldwide. WEC/CB&I, through the EPC Contract, is responsible to SCE&G for making sure that these requirements are met.

### 1. NRC Inspections

During the period, the NRC issued its Third Quarter Integrated Inspection Report that identified no findings. The NRC also conducted two additional inspections during the fourth quarter. A Fitness for Duty and Handling of Safeguards Information Inspection was conducted and indicated no findings. A Civil/ITAAC Inspection identified one potential Green Non-Cited Violation for a module CA20 shim design that did not fully meet code requirements. A Green finding is the least significant in the NRC Construction Reactor Oversight Process. It qualitatively indicates licensee performance is acceptable and that NRC Construction Reactor Oversight Process cornerstone objectives are fully met.

### 2. LARs

The NRC approves changes from the approved licensing basis for nuclear units through the LAR request and review process. SCE&G envisions that filings for LARs will be a normal part of the construction program for the Units going forward under the Combined Operating Licenses (COLs).

During the fourth quarter of 2014, SCE&G filed six new LARs with the NRC. The NRC has granted a total of twenty-six LARs. Five LARs were granted during the reporting period. Seventeen LARs were pending on December 31, 2014. For ease of reference, a report that tabulates all the LARs submitted by SCE&G to the NRC as of December 31, 2014, is attached as Appendix 5.

### 3. Inspections, Tests, Analyses and Acceptance Criteria

In the fourth quarter of 2014, SCE&G submitted eleven ITAAC Closure Notifications (ICN) to the NRC. Ten of the eleven ICNs have been verified complete by the NRC. SCE&G reported in the previous period that it intended to submit 13 ICNs to the NRC during the fourth quarter. Two of these submittals have been shifted to a later date. At this time, SCE&G anticipates submitting five ICNs to the NRC in the first quarter of 2015.

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### 4. Major Construction Permits

No other major construction-related permits are outstanding. Other construction-related permits are anticipated to be obtained in the ordinary course of administering the project.

## E. Engineering

### 1. Engineering Completion Status

As of December 31, 2014, the Units 2 & 3 plant design packages issued for construction (IFC) are 92% complete. IFC delivery from WEC/CB&I continues to be a focus area, and SCE&G is conducting monthly oversight meetings with WEC/CB&I concerning this issue.

### 2. Site Specific Design Activities

Site specific design work is ongoing in support of the following site specific systems: Circulating Water System (CWS), Power Distribution Center (PDC), Uninterruptible Power Supply (UPS), Raw Water System (RWS), Offsite Water System (OWS), Service Building, and Tabletop Switchyard.

## F. Training

**1. Plant Reference Simulator (PRS).** During the period, SCE&G completed site acceptance and American National Standards Institute/American Nuclear Society (ANSI/ANS) 3.5 testing on both Baseline 7 simulators anticipated to become the PRS when validated by the NRC. The ANSI/ANS 3.5 Standard establishes the functional requirements for full-scope nuclear power plant control room simulators for use in operator training and examination. Integrated Systems Validation (ISV) testing was postponed during the period so WEC testing documents and licensing documents could be updated through a LAR to correct inconsistencies. SCE&G is assessing regulatory alternatives with the NRC that would allow Initial Licensed Operator (ILO) exams to proceed pending issuance of a LAR pertaining to the ISV. At this time, delays related to these matters are not likely to impact SCE&G's readiness to support initial fuel load for Unit 2. This remains a focus area.

**2. Initial Licensed Operator Training.** During this period, all ILO training was placed on a pause for the last month of 2014 to allow time to revise and update training materials and resources as a result of the updating of WEC testing and licensing documents and the associated ISV testing postponement. It is expected that the ILO training will resume early in the first quarter of 2015 to support the first ILO class taking the NRC written and integrated operator simulator exams in May 2015. A second ILO class of 24 students is scheduled to resume training at the end of the first quarter of 2015 with an NRC testing date scheduled for November 2015. A third

class of 18 students will resume training early in the first quarter of 2015 with an NRC testing date scheduled for September 2016.

3. **Maintenance and Technical Staff Training.** During the period, Chemistry completed Tier 3 training which is made up of AP1000-specific Chemistry topics. Candidates in other disciplines were engaged in the development of plant programs and procedures pending the next round of their classroom training scheduled in the first quarter of 2015.

## G. Operational Readiness

1. **Mission Critical Hiring.** SCE&G has continued to successfully fill the 2014 operational readiness staffing positions that have been identified as mission critical. By the close of the period, seventy-three of seventy-four mission critical hires had been completed for 2014.

2. **Programs and Procedures.** During the period, SCE&G continued to perform a detailed evaluation of the impacts of the draft Revised Fully Integrated Construction Schedule on the operational readiness program and the allocation of resources to support the Plant Support/Programs Engineering schedule. The goal of this project is to produce a fully integrated and resource-loaded plan for the completion of all operations, maintenance and technical training programs and procedures that must be in place to support the Units' initial nuclear fuel loads. Completing this work remains a focus area due to the extent of work required and the availability of engineering resources.

During the period, operations procedures were received from WEC, comments were provided and changes were incorporated into the Baseline 7 plant simulator in support of a May 2015 NRC ILO examination.

SCE&G and WEC are currently negotiating roles, responsibilities and scope issues related to the on-going refinement of the design of the Instrumentation and Controls systems for the Units. These changes may impact operating procedures and associated training materials.

3. **Collaborative Equipment Reliability Program.** The collaborative project with SNC to classify structures, systems and components and to establish maintenance strategies for the AP1000 continues. Efforts to realign resources in this area have allowed SCE&G to maintain the current schedule consistent with SNC's program schedule.

4. **Materials Procurement Engineering.** In the prior period, SCE&G and WEC/CB&I began an engineering study to determine the technical requirements and supply chain activities that are necessary to identify the spare parts inventory required to support the safe, reliable and efficient testing and



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operation of the Units. SCE&G and WEC/CB&I are now negotiating commercial and scope issues related to the study. SCE&G is coordinating with SNC concerning a shared inventory of large capital spares where possible.

## H. Change Control/Owners Cost Forecast

**1. Plant Layout Security.** At the close of the review period, SCE&G and WEC/CB&I were nearing the completion of negotiations of a change order related to changes in plant layout to enhance the physical security of the Units. These reviews have been conducted based on NRC and nuclear industry standards that have become increasingly stringent in the years after the events of 9/11. SCE&G has determined that it is reasonable and prudent to alter the site layout in various ways to improve its physical security. The cost associated with this work is $20.35 million.

**2. Cyber-Security Upgrades Phase II.** At the close of the review period, SCE&G and WEC/CB&I were completing negotiations of a change order related to Phase II of the work to upgrade cyber-security protections for the Units. The agreed upon scope of work and associated costs for this phase of the plan is $18.8 million.

**3. ITAAC Maintenance.** At the close of the period, SCE&G and WEC/CB&I had finalized negotiations of a change order regarding the additional review of closed ITAACs. The NRC now requires that WEC/CB&I perform a more detailed review of closed ITAACs to ensure that any intervening changes in design would not have impacted original approval of the ITAAC. The cost of this change order is $59,400.

**4. Change Order 19, Plant Reference Simulator Hardware and Software Upgrade.** Change Order 19, related to work to upgrade the PRS hardware and software, was negotiated during the prior period and signed during the period. The work involves upgrades to enhance PRS displays and PRS software upgrades subsequent to Baseline 7. The cost of the change order is $1.1 million.

**5. Change Order 20, WEC Costs Related to the Implementation of the Health Care and Education Reconciliation Act of 2010 and Prior Health Care Acts ("Health Care Act").** Change Order 20, related to WEC's increased costs of compliance with the Health Care Act, was being finalized during the period and was executed shortly after the close of the period. The forecasted cost of this change order is $206,589 and covers additional actual costs for 2011, 2012, and 2013. SCE&G anticipates receiving additional change orders for time periods beyond 2013.



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6. **Change Order 18, Perch Guards.** Change Order 18, providing for the installation of perch guards on transmission structures to prevent avian interference with system reliability, was negotiated during the prior period and signed during the period. The cost of the change order is $14,056.

7. **Other Change Orders.** Negotiations continued on (1) the final language for Change Order 16 (delay in receiving the combined operating licenses, Shield Building redesign, module redesign, and Unit 2 rock conditions); and (2) Change Order 17 (equipment required to be installed in the OWS for the removal of bromide from raw water during treatment, the transfer of certain CB&I start-up construction support Time & Material scopes of work and associated dollars to the Target and Firm price categories, and other miscellaneous items). Costs related to Change Order 16 were approved by the Commission in Order No. 2012-884. There will be no increase to EPC Contract costs as a result of Change Order 17.

8. **Notices of Change.** During the period, SCE&G received two Notices of Change for increased costs and project schedule impacts incurred by WEC/CB&I for changes in concrete reinforcing steel specifications and for several other areas allegedly impacted by changes to nuclear regulatory requirements. One Notice of Change was related to requirements for NI basemat reinforcing steel and shear reinforcing steel. The second Notice of Change was related to regulatory requirements in nine engineering and licensing areas. Based upon an invoice provided by WEC/CB&I, SCE&G's share of these costs would be $28.3 million. SCE&G has not accepted responsibility for these costs and has not paid this invoice provided by WEC/CB&I.

## I. Transmission

1. **VCS2-Lake Murray 230 kV Line No. 2 and Segment of the VCS2-St. George 230kV Line No. 1.** The VCS2-Lake Murray 230 kV Line No. 2 is energized. SCE&G plans to energize the segment of the VCS2-St. George 230 kV Line No. 1 that was built as a part of this project when the remaining segment of that line is built.

2. **The Remaining Segment of VCS2-St. George 230 kV Line No. 1 and the VCS2-St. George 230 kV Line No. 2.** Construction activities for these lines continued during the period. The VCS2-St. George 230 kV Line No. 2 segment between VCS2 and the Lake Murray Substation is complete. Construction of both the No. 1 and No. 2 lines from the Lake Murray Substation continues from the point where they cross Interstate 20 towards the site of the new Saluda River Substation. Construction also continued for both the No. 1 and No. 2 lines in the Orangeburg area heading south toward the St. George Switching Station.

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3. **St. George Switching Station.** In prior periods, the overall engineering layout of the station and the topographic surveys of the site were completed and the official jurisdictional determination of wetlands was received from the Army Corps of Engineers. Preparation of the site plan and storm water permit application continued during the period. The current scheduled completion date is June 2016.

4. **Saluda River Substation**. Construction continued on the Saluda River Substation. At the end of the period, the erection of the steel structures was complete and the main power transformer was placed on the pad. The construction of the main control house and the fencing and wall around the substation was also completed during the period. Work on the 115 kV bus was complete at the end of the period and work on the 230 kV bus remained in progress. The scheduled completion date is June 2015.

## III. Anticipated Construction Schedules

As of the close of the period, one milestone, Set Nuclear Island Structural Module CA03 for Unit 2, was more than 18 months delayed. In addition, as reported on Appendix 1, page 9, two future equipment milestones are projected to be outside of the contingency period. SCE&G anticipates filing additional proceedings before the Commission to update the schedules for the project when an agreement is reached concerning key provisions of the Revised Fully Integrated Construction Schedule that was under review at the close of the period.

**Appendix 1** to this quarterly report lists and updates each of the specific milestones constituting the anticipated construction schedules for the Units pursuant to S.C. Code Ann. § 58-33-270(B)(1) and Order No. 2012-884.

## IV. Schedules of the Capital Costs Incurred Including Updates to the Information Required by S.C. Code Ann. § 58-33-270(B) (6) (the Inflation Indices)

The Capital Costs section of this report (Section IV.A.) provides an update of the cumulative capital costs incurred and forecasted to be incurred in completing the project. These costs are compared to the cumulative capital cost targets approved by the Commission in Order No. 2012-884. The approved capital cost targets have been adjusted to reflect the currently reported historical escalation rates. There has not been any use by the Company of the capital cost timing contingencies that were approved by the Commission in Order No. 2009-104(A). The Inflation Indices section (Section IV.B.) of this report provides updated information on inflation indices and the changes in them.

As indicated in the Construction Schedule and Milestones section (Section I.C.), the cost projections set forth on **Appendix 2** do not include consideration of any additional EPC Contract costs or Owners cost associated with the schedule and cost information that was under negotiation with WEC/CB&I at the close of the review

period. In addition, the cost projections set forth on **Appendix 2** have not been updated for certain change orders which had been negotiated or were under negotiation at the close of the reporting period, including Plant Layout Security, Cyber-Security Phase II, ITAAC Maintenance, Perch Guards, Plant Reference Simulator Hardware and Software Upgrade, and WEC Health Care Costs. As set forth in the Change Control/Owners Cost Forecast section (Section II.H.), the value of these additional change orders is approximately $40 million.

Additional costs will be included in future filings as they become sufficiently certain to be included in BLRA capital cost schedules.

### A. Capital Costs

**Appendix 2** shows the Cumulative Project Cash Flow target as approved in Order No. 2012-884 and as updated for escalation and other Commission-approved adjustments under the heading **"Per Order 2012-884 Adjusted."**

**Appendix 2** also shows the cumulative cash flow for the project based on actual expenditures to date and the Company's current forecast of cost and construction schedules under the heading **"Actual through December 2014 plus Projected."**

As shown on **Appendix 2,** the expenditure for the project for the 12 months ended December 31, 2014, is approximately $512 million. As shown on **Appendix 2,** line 39, the cumulative amount spent on the project as of December 31, 2014, is approximately $2.822 billion. As shown on **Appendix 2,** line 18, the Cumulative Project Cash Flow target approved by the Commission for year-end 2014 adjusted for current escalation and WEC/CB&I billing differences is approximately $3.819 billion. As a result, the cumulative cash flow at year-end 2014 is approximately $997 million less than the target.

For comparison purposes, **Appendix 3** sets out the cash flow schedule for the project as it was approved in Order No. 2012-884. **Appendix 3** does not include any adjustments to the cash flow schedule for changes in inflation indices or adjustments in capital cost schedules made by the Company. The AFUDC forecast presented on **Appendix 3** is the AFUDC forecast that was current at the time of Order No. 2012-884.

### B. Inflation Indices

**Appendix 4** shows the updated inflation indices approved in Order No. 2009-104(A). Included is a history of the annual Handy-Whitman All Steam Index, South Atlantic Region; the Handy-Whitman All Steam and Nuclear Index, South Atlantic Region; the Handy-Whitman All Transmission Plant Index, South Atlantic Region; and the Chained GDP Index for the past 10 years. The changes in these indices and the escalation-related effects of cost rescheduling resulted in a decrease in the projected cost of the Units in future dollars from approximately $6.3 billion as forecast in Order No. 2009-104(A) to a forecast of approximately $5.8 billion using current inflation data.



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## V. Updated Schedule of Anticipated Capital Costs

The updated schedule of anticipated capital costs for Units 2 & 3 is reflected in **Appendix 2.**

## VI. Conclusion

As of the close of the reporting period, the Units were anticipated to be completed at a cost of approximately $4.5 billion in 2007 dollars. The Company maintains a staff that monitors the work of its contractors and continues to monitor closely areas of concern related to either the cost or schedule for the project. The Company will continue to update the Commission and the ORS of progress and concerns as the project proceeds.



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# ATTACHMENT 1

## GLOSSARY OF ACRONYMS OR DEFINED TERMS

| Acronym or Defined Term | Reference |
|---|---|
| AFUDC | Allowance for Funds Used During Construction. |
| AP1000 | The WEC designed Advanced Pressurized water nuclear reactor of approximately 1000 megawatts generating capacity. |
| APOG | A group of utilities who have submitted applications for AP1000 COLs. |
| BLRA | The Base Load Review Act, S.C. Code Ann. § 58-33-210 et seq. (Supp. 2009). |
| CA | The designation for specific pre-fabricated structural modules that form part of the reactor building or auxiliary building, such as Module CA20. |
| CAP | Corrective Action Program. |
| CAR | A Corrective Action Report related to design, engineering or construction of the Units, or related processes, that must be corrected. |
| CB&I | Chicago Bridge & Iron, a sub-contractor on the project which, upon acquisition of the Shaw Group, became a member of the Consortium and a prime contractor on the project. |
| CB&I-LC | CB&I Lake Charles - the module fabrication unit formerly known as Shaw Modular Solutions or SMS and located in Lake Charles, Louisiana. |
| CB&I Services | A subsidiary of CB&I that is fabricating the containment vessels on site under contract with Westinghouse. |
| CES | Carolina Energy Solutions, a subcontractor located in Rock Hill, South Carolina. |
| CMIS | Configuration Management Information System. |
| COLs | Combined Operating Licenses for construction and operation of a nuclear unit issued by the NRC. |
| COLA | A Combined Operating License Application. |



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# ATTACHMENT 1

## GLOSSARY OF ACRONYMS OR DEFINED TERMS

| Acronym or Defined Term | Reference |
|---|---|
| Commission | The Public Service Commission of South Carolina. |
| Consortium | The joint venture between WEC and CB&I to construct the Units under the terms of the EPC Contract. |
| CR | A Condition Report communicating and memorializing concerns with the design, engineering or construction of the Units, or related processes, which in some cases can become the basis for a Corrective Action Report. |
| CV | The Containment Vessel which provides containment for the reactor vessel and associated equipment. |
| CVBH | The Containment Vessel Bottom Head that forms the bottom of the Containment Vessel. |
| CWIP | Construction Work in Progress. |
| CWP | Circulating Water Pipe. |
| CWS | The Circulating Water System –the system that will transport waste heat from the turbines to the cooling towers. |
| Cyber Security | Technologies, processes and practices designed to protect networks, computers, programs and data from attack, damage or unauthorized access. |
| DCD | Design Control Document which is approved by the Nuclear Regulatory Commission and sets forth the approved design of a nuclear reactor. |
| Departures | Departures are minor deviations from the approved Design Control Document included in the licensing basis for the Units that do not rise to the level requiring a LAR. |
| EMD | Electro-Mechanical Division of Curtiss-Wright Corp., the sub-contractor for the Reactor Coolant Pumps. |
| EPA | The United States Environmental Protection Agency. |



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# ATTACHMENT 1

## GLOSSARY OF ACRONYMS OR DEFINED TERMS

| Acronym or Defined Term | Reference |
|---|---|
| EPC Contract | The Engineering, Procurement and Construction Agreement for construction of the Units entered into by SCE&G and WEC/CB&I. |
| ERB | The Emergency Response Building which provides office space and housing for the emergency response personnel and equipment for all three units. |
| Exit Debriefing | A meeting held between the NRC and the licensee at the conclusion of an NRC inspection to discuss the results of the inspection. |
| FERC | The Federal Energy Regulatory Commission. |
| Fixed/Firm | Prices under the EPC Contract which are either fixed or are firm but subject to defined escalation rates. |
| GDP | Gross Domestic Product. |
| HFE/ISV | Human Factors Engineering/Integrated Systems Validation –part of the development of a training simulator for the Units. |
| HL or Hot Leg | That part of the Reactor Cooling Loop that transports steam to the steam generators. |
| HLD | Heavy Lift Derrick - the derrick that was erected on site to move large modules and equipment. |
| IBF | Subcontractor of Tioga that manufactures the Reactor Coolant Loop piping. |
| ICN | ITAAC Closure Notification – the letter from the licensee to notify the NRC that an ITAAC is complete in accordance with 10 CFR 52.99(c)(1). |
| IFC | Issued for Construction – engineering drawings that include information necessary for construction of specific structures, systems and components. |
| ILO | Initial Licensed Operator. |
| INPO | Institute of Nuclear Power Operations. |



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# ATTACHMENT 1

## GLOSSARY OF ACRONYMS OR DEFINED TERMS

| Acronym or Defined Term | Reference |
|---|---|
| IPS | Integrated Project Schedule for licensing and construction of the Units. |
| ISV | Integrated Systems Validation. |
| ITAAC | Inspections, Tests, Analyses, and Acceptance Criteria which are the inspections, tests, analyses and acceptance criteria that the NRC has determined to be necessary and sufficient to demonstrate that a nuclear unit has been constructed and will operate in conformity with the COLs, the Atomic Energy Act of 1954, as amended, and the NRC's regulations. |
| LAR | License Amendment Request – A formal request made by VCSNS to amend the combined operating license, its appendices, or its associated bases. |
| LNTP | Limited Notice to Proceed authorizing a vendor to commence specific work. |
| LSS | Limited Scope Simulator –a training simulator with limited functionality that can be used for the initial stages of operator training. |
| MAB | Module Assembly Building - a building on site where large modules will be constructed and equipment will be prepared for installation in a space that is protected from the elements. |
| Mangiarotti | Mangiarotti Nuclear, S.p.A. |
| NEI | Nuclear Energy Institute. |
| NI | Nuclear Island, comprising the steel containment vessel, the reactor building, and the auxiliary building. |
| NLC | Nuclear Learning Center - a training facility operated by SCE&G at the Jenkinsville site. |
| NLO | Non-Licensed Operator. |
| NND | The New Nuclear Deployment Team within SCE&G. |



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# ATTACHMENT 1

## GLOSSARY OF ACRONYMS OR DEFINED TERMS

| Acronym or Defined Term | Reference |
|---|---|
| NNI | Newport News Industries - a module fabrication subcontractor to WEC/CB&I. |
| NPDES | National Pollutant Discharge Elimination System. |
| NRC | The United States Nuclear Regulatory Commission. |
| ORS | South Carolina Office of Regulatory Staff. |
| OWS | Off Site Water System – the system that withdraws water from Monticello Reservoir and provides potable and filtered water for the Units. |
| PAR | Preliminary Amendment Request - A formal request made by VCSNS which allows VCSNS to proceed at its own risk with work consistent with an amendment request contained in an LAR prior to approval. |
| PDC | Power Distribution Center - prefabricated, modular enclosures housing electrical equipment such as switchgear, motor control center equipment and other auxiliary equipment. |
| Pike | Pike Energy Solutions, a contractor for transmission and switchyard related work. |
| PRA | Probabilistic Risk Assessment. |
| PRHR | The Passive Residual Heat Removal Heat Exchanger unit –a heat exchanger unit that is part of the passive safety system which provides cooling to the AP1000 reactor during emergency situations. |
| PRS | Plant Reference Simulator – a training simulator with full functionality that can be used in all stages of operator training. |
| PWS | The Potable Water System - which provides potable water to the site. |
| QA | Quality Assurance – The planned and systematic activities implemented in a quality system so that the quality requirements for a product or service will be fulfilled. |



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# ATTACHMENT 1

## GLOSSARY OF ACRONYMS OR DEFINED TERMS

| Acronym or Defined Term | Reference |
|---|---|
| QA/QC | Quality Assurance/Quality Control. |
| QC | Quality Control – The observation techniques and activities used to fulfill requirements for quality. |
| RAI | Requests for Additional Information issued by the NRC staff to license applicants. |
| RCA | Root Cause Analysis – identification and evaluation of the reason for non-conformance, an undesirable condition, or a problem which (when solved) restores the status quo. |
| RCL | The Reactor Coolant Loop – the piping and related equipment that transports heat from the reactor to the steam generator. |
| RCP | The Reactor Cooling Pump which forms part of the Reactor Coolant System. |
| RCS | The Reactor Coolant System - the complete system for transferring and transporting heat from the reactor to the steam generator. |
| RFI | Requests for Information issued by the NRC staff to licensees. |
| ROW | Right-of-way. |
| RT | Radiographic Testing - a nondestructive testing method of inspecting materials for hidden flaws by using the ability of short wavelength electromagnetic radiation (high energy photons) to penetrate various materials. |
| RV | Reactor Vessel. |
| RWS | Raw Water System – the system for withdrawing and transporting raw water from the Monticello Reservoir. |
| SAT | Site Acceptance Testing. |
| SCDHEC | The South Carolina Department of Health and Environmental Control. |
| SCDNR | The South Carolina Department of Natural Resources. |



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# ATTACHMENT 1

## GLOSSARY OF ACRONYMS OR DEFINED TERMS

| Acronym or Defined Term | Reference |
|---|---|
| SCE&G or The Company | South Carolina Electric & Gas Company. |
| SCPSC | The Public Service Commission of South Carolina. |
| SMS | Shaw Modular Solutions, LLC. |
| SNC | Southern Nuclear Company – a subsidiary of Southern Company and licensed operator of the Vogtle Nuclear Units and two other nuclear plants. |
| SRO | Senior Reactor Operator. |
| SROC | Senior Reactor Operator Certification. |
| Target | Costs under the EPC Contract where targets have been established but where SCE&G pays actual costs as incurred. |
| TEi | Thermal Engineering International – a subsidiary of Babcock Power which manufactures moisture separator reheaters and other power plant equipment. |
| Units | V. C. Summer Nuclear Station Units 2 & 3. |
| Update Docket | A proceeding under the BLRA seeking Commission approval of updated cost and construction schedules for the Units. |
| UPS | Uninterruptible Power Supply. |
| URI | Unresolved Items – A term used by the NRC during inspections for items that require further action. |
| USACOE | The United States Army Corps of Engineers. |
| VCSNS or VCSN | V. C. Summer Nuclear Station. |

# ATTACHMENT 1

## GLOSSARY OF ACRONYMS OR DEFINED TERMS

| Acronym or Defined Term | Reference |
|---|---|
| WEC | Westinghouse Electric Company, LLC. |
| WEC/CB&I | The consortium formed by Westinghouse Electric Company, LLC and CB&I. |
| WMS | Work Management System. |
| WTP | The off-site Water Treatment Plant which will take water from Lake Monticello and treat it to potable water standards. |
| WWS | The Waste Water System – the system for collection, treatment and disposal of domestic waste water generated on site. |
| YFS | The Yard Fire System – the system that provides fire detection and protection outside of the plant. |
| ZBS | The Offsite Power System –the system which provides electrical power to the site. |



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# APPENDIX 1

## V. C. Summer Nuclear Station Units 2 & 3

**Quarterly Report to the South Carolina Office of Regulatory Staff**
**Submitted by South Carolina Electric & Gas Company**
**Pursuant to Public Service Commission Order No. 2009-104(A)**

**Quarter Ending December 31, 2014**

**Appendix 1** lists and updates each of the milestones which the Commission adopted as the Approved Construction Schedule for the Units, pursuant to S.C. Code Ann. § 58-33-270(B)(1) in Order No. 2012-884. **Appendix 1** provides columns with the following information:

1. Milestone tracking ID number.
2. The description of the milestone as updated in Order No. 2012-884.
3. The BLRA milestone date as approved by the Commission in Order No. 2012-884.
4. The current milestone date.
5. For each completed milestone, the date by which it was completed. For milestones completed prior to the current reporting quarter, the milestone entry is shaded in gray. For milestones completed during the current reporting quarter, the milestone entry is shaded in green.
6. Information showing the number of months, if any, by which a milestone has been shifted. For milestones with planned completion dates that vary in days instead of months, the milestone entry is shaded in yellow.
7. Information as to whether any milestone has been shifted outside of the +18/-24 Month Contingency approved by the Commission.
8. Notes.

On the final page of the document, there is a chart summarizing milestone completion and movement comparing the current milestone date to the milestone date approved in Order No. 2012-884. This movement is shown for only the milestones that have not been completed.



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# Appendix 1
## VC Summer Units 2 and 3

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 1 | Approve Engineering Procurement and Construction Agreement | Complete | | 5/23/2008 | | No | |
| 2 | Issue POs to nuclear component fabricators for Units 2 & 3 Containment Vessels | Complete | | 12/3/2008 | | No | |
| 3 | Contractor Issue PO to Passive Residual Heat Removal Heat Exchanger Fabricator - First Payment - Unit 2 | Complete | | 8/18/2008 | | No | |
| 4 | Contractor Issue PO to Accumulator Tank Fabricator - Unit 2 | Complete | | 7/31/2008 | | No | |
| 5 | Contractor Issue PO to Core Makeup Tank Fabricator - Units 2 & 3 | Complete | | 9/30/2008 | | No | |
| 6 | Contractor Issue PO to Squib Valve Fabricator - Units 2 & 3 | Complete | | 3/31/2009 | | No | |
| 7 | Contractor Issue PO to Steam Generator Fabricator - Units 2 & 3 | Complete | | 5/29/2008 | | No | |
| 8 | Contractor Issue Long Lead Material PO to Reactor Coolant Pump Fabricator - Units 2 & 3 | Complete | | 6/30/2008 | | No | |
| 9 | Contractor Issue PO to Pressurizer Fabricator - Units 2 & 3 | Complete | | 8/18/2008 | | No | |
| 10 | Contractor Issue PO to Reactor Coolant Loop Pipe Fabricator - First Payment - Units 2 & 3 | Complete | | 6/20/2008 | | No | |
| 11 | Reactor Vessel Internals - Issue Long Lead Material PO to Fabricator - Units 2 & 3 | Complete | | 11/21/2008 | | No | |
| 12 | Contractor Issue Long Lead Material PO to Reactor Vessel Fabricator - Units 2 & 3 | Complete | | 5/29/2008 | | No | |
| 13 | Contractor Issue PO to Integrated Head Package Fabricator - Units 2 & 3 | Complete | | 7/31/2009 | | No | |
| 14 | Control Rod Drive Mechanism Issue PO for Long Lead Material to Fabricator - Units 2 & 3 - first payment | Complete | | 6/21/2008 | | No | |
| 15 | Issue POs to nuclear component fabricators for Nuclear Island structural CA20 Modules | Complete | | 8/28/2009 | | No | |

Legend = Completed = Completed this Quarter = Movement in Days Only



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**Appendix 1**
**VC Summer Units 2 and 3**

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 16 | Start Site Specific and balance of plant detailed design | Complete | | 9/11/2007 | | No | |
| 17 | Instrumentation & Control Simulator - Contractor Place Notice to Proceed - Units 2 & 3 | Complete | | 10/31/2008 | | No | |
| 18 | Steam Generator - Issue Final PO to Fabricator for Units 2 & 3 | Complete | | 6/30/2008 | | No | |
| 19 | Reactor Vessel Internals - Contractor Issue PO for Long Lead Material (Heavy Plate and Heavy Forgings) to Fabricator - Units 2 & 3 | Complete | | 1/29/2010 | | No | |
| 20 | Contractor Issue Final PO to Reactor Vessel Fabricator - Units 2 & 3 | Complete | | 9/30/2008 | | No | |
| 21 | Variable Frequency Drive Fabricator Issue Transformer PO - Units 2 & 3 | Complete | | 4/30/2009 | | No | |
| 22 | Start clearing, grubbing and grading | Complete | | 1/26/2009 | | No | |
| 23 | Core Makeup Tank Fabricator Issue Long Lead Material PO - Units 2 & 3 | Complete | | 10/31/2008 | | No | |
| 24 | Accumulator Tank Fabricator Issue Long Lead Material PO - Units 2 & 3 | Complete | | 10/31/2008 | | No | |
| 25 | Pressurizer Fabricator Issue Long Lead Material PO - Units 2 & 3 | Complete | | 10/31/2008 | | No | |
| 26 | Reactor Coolant Loop Pipe - Contractor Issue PO to Fabricator - Second Payment - Units 2 & 3 | Complete | | 4/30/2009 | | No | |
| 27 | Integrated Head Package - Issue PO to Fabricator - Units 2 and 3 - second payment | Complete | | 7/31/2009 | | No | |
| 28 | Control Rod Drive Mechanisms - Contractor Issue PO for Long Lead Material to Fabricator - Units 2 & 3 | Complete | | 6/30/2008 | | No | |
| 29 | Contractor Issue PO to Passive Residual Heat Removal Heat Exchanger Fabricator - Second Payment - Units 2 & 3 | Complete | | 10/31/2008 | | No | |
| 30 | Start Parr Road intersection work | Complete | | 2/13/2009 | | No | |

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**Appendix 1**
**VC Summer Units 2 and 3**

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 31 | Reactor Coolant Pump - Issue Final PO to Fabricator - Units 2 & 3 | Complete | | 6/30/2008 | | No | |
| 32 | Integrated Heat Packages Fabricator Issue Long Lead Material PO - Units 2 & 3 | Complete | | 10/1/2009 | | No | |
| 33 | Design Finalization Payment 3 | Complete | | 1/30/2009 | | No | |
| 34 | Start site development | Complete | | 6/23/2008 | | No | |
| 35 | Contractor Issue PO to Turbine Generator Fabricator - Units 2 & 3 | Complete | | 2/19/2009 | | No | |
| 36 | Contractor Issue PO to Main Transformers Fabricator - Units 2 & 3 | Complete | | 9/25/2009 | | No | |
| 37 | Core Makeup Tank Fabricator Notice to Contractor Receipt of Long Lead Material - Units 2 & 3 | Complete | | 12/30/2010 | | No | |
| 38 | Design Finalization Payment 4 | Complete | | 4/30/2009 | | No | |
| 39 | Turbine Generator Fabricator Issue PO for Condenser Material - Unit 2 | Complete | | 8/28/2009 | | No | |
| 40 | Reactor Coolant Pump Fabricator Issue Long Lead Material Lot 2 - Units 2 & 3 | Complete | | 4/30/2009 | | No | |
| 41 | Passive Residual Heat Removal Heat Exchanger Fabricator Receipt of Long Lead Material - Units 2 & 3 | Complete | | 5/27/2010 | | No | |
| 42 | Design Finalization Payment 5 | Complete | | 7/31/2009 | | No | |
| 43 | Start erection of construction buildings, to include craft facilities for personnel, tools, equipment; first aid facilities; field offices for site management and support personnel; temporary warehouses; and construction hiring office | Complete | | 12/18/2009 | | No | |
| 44 | Reactor Vessel Fabricator Notice to Contractor of Receipt of Flange Nozzle Shell Forging - Unit 2 | Complete | | 8/28/2009 | | No | |
| 45 | Design Finalization Payment 6 | Complete | | 10/7/2009 | | No | |

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## Appendix 1
## VC Summer Units 2 and 3

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 46 | Instrumentation and Control Simulator - Contractor Issue PO to Subcontractor for Radiation Monitor System - Units 2 & 3 | Complete | | 12/17/2009 | | No | |
| 47 | Reactor Vessel Internals - Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2 | Complete | | 7/29/2011 | | No | |
| 48 | Turbine Generator Fabricator Issue PO for Moisture Separator Reheater/Feedwater Heater Material - Unit 2 | Complete | | 4/30/2010 | | No | |
| 49 | Reactor Coolant Loop Pipe Fabricator Acceptance of Raw Material - Unit 2 | Complete | | 2/18/2010 | | No | |
| 50 | Reactor Vessel Internals - Fabricator Start Weld Neutron Shield Spacer Pads to Assembly - Unit 2 | Complete | | 8/28/2012 | | No | |
| 51 | Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 2 | Complete | | 6/30/2009 | | No | |
| 52 | Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 2 | Complete | | 12/23/2010 | | No | |
| 53 | Start excavation and foundation work for the standard plant for Unit 2 | Complete | | 3/15/2010 | | No | |
| 54 | Steam Generator Fabricator Notice to Contractor of Receipt of 2nd Steam Generator Tubesheet Forging - Unit 2 | Complete | | 4/30/2010 | | No | |
| 55 | Reactor Vessel Fabricator Notice to Contractor of Outlet Nozzle Welding to Flange Nozzle Shell Completion - Unit 2 | Complete | | 12/30/2010 | | No | |
| 56 | Turbine Generator Fabricator Notice to Contractor Condenser Fabrication Started - Unit 2 | Complete | | 5/17/2010 | | No | |
| 57 | Complete preparations for receiving the first module on site for Unit 2 | Complete | | 1/22/2010 | | No | |

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**Appendix 1**
**VC Summer Units 2 and 3**

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 58 | Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Transition Cone Forging - Unit 2 | Complete | | 4/21/2010 | | No | |
| 59 | Reactor Coolant Pump Fabricator Notice to Contractor of Manufacturing of Casing Completion - Unit 2 | Complete | | 11/16/2010 | | No | |
| 60 | Reactor Coolant Loop Pipe Fabricator Notice to Contractor of Machining, Heat Treating & Non-Destructive Testing Completion - Unit 2 | Complete | | 3/20/2012 | | No | |
| 61 | Core Makeup Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 2 | Complete | | 11/26/2012 | | No | |
| 62 | Polar Crane Fabricator Issue PO for Main Hoist Drum and Wire Rope - Units 2 & 3 | Complete | | 2/1/2011 | | No | |
| 63 | Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 3 | Complete | | 6/14/2011 | | No | |
| 64 | Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 2 | Complete | | 3/26/2012 | | No | |
| 65 | Start placement of mud mat for Unit 2 | Complete | | 7/20/2012 | | No | |
| 66 | Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Tubing - Unit 2 | Complete | | 9/28/2010 | | No | |
| 67 | Pressurizer Fabricator Notice to Contractor of Welding of Upper and Intermediate Shells Completion - Unit 2 | Complete | | 10/28/2011 | | No | |
| 68 | Reactor Vessel Fabricator Notice to Contractor of Closure Head Cladding Completion - Unit 3 | Complete | | 6/28/2012 | | No | |
| 69 | Begin Unit 2 first nuclear concrete placement | Complete | | 3/9/2013 | | No | |
| 70 | Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 2 | Complete | | 12/1/2011 | | No | |
| 71 | Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2 | Complete | | 7/29/2011 | | No | |

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# Appendix 1
## VC Summer Units 2 and 3

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 72 | Steam Generator Fabricator Notice to Contractor of Completion of 1st Steam Generator Tubing Installation - Unit 2 | Complete | | 1/27/2012 | | No | |
| 73 | Reactor Coolant Loop Pipe - Shipment of Equipment to Site - Unit 2 | Complete | | 12/19/2013 | | No | |
| 74 | Control Rod Drive Mechanism - Ship Remainder of Equipment (Latch Assembly & Rod Travel Housing) to Head Supplier - Unit 2 | Complete | | 7/16/2012 | | No | |
| 75 | Pressurizer Fabricator Notice to Contractor of Welding of Lower Shell to Bottom Head Completion - Unit 2 | Complete | | 12/22/2011 | | No | |
| 76 | Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 2 | Complete | | 5/4/2012 | | No | |
| 77 | Design Finalization Payment 14 | Complete | | 10/31/2011 | | No | |
| 78 | Set module CA04 for Unit 2 | Complete | | 5/3/2014 | | No | |
| 79 | Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Final Post Weld Heat Treatment - Unit 2 | Complete | | 5/24/2011 | | No | |
| 80 | Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Completion of Tubing - Unit 2 | Complete | | 5/29/2012 | | No | |
| 81 | Polar Crane Fabricator Notice to Contractor of Girder Fabrication Completion - Unit 2 | Complete | | 10/23/2012 | | No | |
| 82 | Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 3 | Complete | | 8/26/2013 | | No | |
| 83 | Set Containment Vessel ring #1 for Unit 2 | Complete | | 6/3/2014 | | No | |
| 84 | Reactor Coolant Pump Fabricator Delivery of Casings to Port of Export - Unit 2 | Complete | | 7/6/2013 | | No | |
| 85 | Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 3 | Complete | | 7/18/2013 | | No | |

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**Appendix 1**
**VC Summer Units 2 and 3**

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 86 | Reactor Vessel Fabricator Notice to Contractor of Receipt of Core Shell Forging - Unit 3 | Complete | | 3/29/2012 | | No | |
| 87 | Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 3 | Complete | | 11/9/2011 | | No | |
| 88 | Set Nuclear Island structural module CA03 for Unit 2 | 6/26/2013 | 10/22/2014 | | +16 Month(s) | No | Definitive information to set new milestone date not yet received. |
| 89 | Squib Valve Fabricator Notice to Contractor of Completion of Assembly and Test for Squib Valve Hardware - Unit 2 | Complete | | 5/10/2012 | | No | |
| 90 | Accumulator Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3 | Complete | | 9/16/2013 | | No | |
| 91 | Polar Crane Fabricator Notice to Contractor of Electric Panel Assembly Completion - Unit 2 | Complete | | 3/6/2013 | | No | |
| 92 | Start containment large bore pipe supports for Unit 2 | Complete | | 11/13/2014 | | No | |
| 93 | Integrated Head Package - Shipment of Equipment to Site - Unit 2 | Complete | | 5/9/2014 | | No | |
| 94 | Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 2 | Complete | | 12/17/2013 | | No | |
| 95 | Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 3 | Complete | | 2/7/2014 | | No | |
| 96 | Steam Generator Fabricator Notice to Contractor of Satisfactory Completion of 1st Steam Generator Hydrotest - Unit 2 | Complete | | 1/14/2013 | | No | |
| 97 | Start concrete fill of Nuclear Island structural modules CA01 and CA02 for Unit 2 | 4/3/2014 | 5/24/2015 | | +13 Month(s) | No | Due to delays associated with fabrication, assembly and setting of the CA01 module. |

Legend - Completed - Completed this Quarter - Movement in Days Only



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# Appendix 1
## VC Summer Units 2 and 3

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 98 | Passive Residual Heat Removal Heat Exchanger - Delivery of Equipment to Port of Entry - Unit 2 | Complete | | 4/25/2014 | | No | |
| 99 | Refueling Machine Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 2 | 11/30/2013 | 1/30/2015 | | +14 Month(s) | No | Completed as of 01/08/2015. |
| 100 | Deliver Reactor Vessel Internals to Port of Export - Unit 2 | 1/31/2014 | 5/30/2015 | | +16 Month(s) | No | Due to schedule refinement and review. |
| 101 | Set Unit 2 Containment Vessel #3 | 4/24/2014 | 8/31/2015 | | +16 Month(s) | No | Due to delays associated with fabrication, assembly and setting of the CA01 module. |
| 102 | Steam Generator - Contractor Acceptance of Equipment at Port of Entry - Unit 2 | 7/31/2013 | 1/30/2015 | | +18 Month(s) | No | Completed as of 01/16/2015. |
| 103 | Turbine Generator Fabricator Notice to Contractor Turbine Generator Ready to Ship - Unit 2 | Complete | | 5/28/2013 | | No | |
| 104 | Pressurizer Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3 | 3/31/2014 | 2/28/2015 | | +11 Month(s) | No | Due to schedule refinement and review. |
| 105 | Polar Crane - Shipment of Equipment to Site - Unit 2 | 1/31/2014 | 7/30/2015 | | +18 Month(s) | No | Due to schedule refinement and review. |
| 106 | Receive Unit 2 Reactor Vessel on site from fabricator | Complete | | 7/31/2013 | | No | |
| 107 | Set Unit 2 Reactor Vessel | 6/23/2014 | 4/10/2015 | | +10 Month(s) | No | Due to delays associated with fabrication, assembly and setting of the CA01 module. |
| 108 | Steam Generator Fabricator Notice to Contractor of Completion of 2nd Channel Head to Tubesheet Assembly Welding - Unit 3 | 12/31/2013 | 1/30/2015 | | +13 Month(s) | No | Due to schedule refinement and review. |
| 109 | Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 3 | 8/31/2014 | 2/28/2015 | | +6 Month(s) | No | Due to design changes. |

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# Appendix 1
## VC Summer Units 2 and 3

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 110 | Reactor Coolant Pump - Shipment of Equipment to Site (2 Reactor Coolant Pumps) - Unit 2 | 10/31/2013 | 12/30/2015 | | +26 Month(s) | Yes | Due to design changes. |
| 111 | Place first nuclear concrete for Unit 3 | Complete | | 11/2/2013 | | No | |
| 112 | Set Unit 2 Steam Generator | 10/23/2014 | 7/31/2015 | | +9 Month(s) | No | Due to delays associated with fabrication, assembly and setting of the CA01 module. |
| 113 | Main Transformers Ready to Ship - Unit 2 | Complete | | 7/31/2013 | | No | |
| 114 | Complete Unit 3 Steam Generator Hydrotest at fabricator | 2/28/2014 | 4/30/2015 | | +14 Month(s) | No | Due to schedule refinement and review. |
| 115 | Set Unit 2 Containment Vessel Bottom Head on basemat legs | Complete | | 5/22/2013 | | No | |
| 116 | Set Unit 2 Pressurizer Vessel | 5/16/2014 | 6/1/2015 | | +13 Month(s) | No | Due to delays associated with fabrication, assembly and setting of the CA01 module. |
| 117 | Reactor Coolant Pump Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 3 | 2/28/2015 | 9/14/2016 | | +19 Month(s) | Yes | Due to design changes. |
| 118 | Deliver Reactor Vessel Internals to Port of Export - Unit 3 | 6/30/2015 | 8/30/2016 | | +14 Month(s) | No | Due to schedule refinement and review. |
| 119 | Main Transformers Fabricator Issue PO for Material - Unit 3 | 2/28/2015 | 2/2/2015 | | | No | Due to schedule refinement and review. |
| 120 | Complete welding of Unit 2 Passive Residual Heat Removal System piping | 2/5/2015 | 10/12/2015 | | +8 Month(s) | No | Due to delays associated with fabrication, assembly and setting of the CA01 module. |
| 121 | Steam Generator - Contractor Acceptance of Equipment at Port of Entry - Unit 3 | 4/30/2015 | 11/30/2015 | | +7 Month(s) | No | Due to delay associated with fabrication activities. |

Legend - Completed - Completed this Quarter - Movement in Days Only



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**Appendix 1**
**VC Summer Units 2 and 3**

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 122 | Refueling Machine - Shipment of Equipment to Site - Unit 3 | 2/28/2015 | 11/6/2015 | | +9 Month(s) | No | Due to schedule refinement and review. |
| 123 | Set Unit 2 Polar Crane | 1/9/2015 | 10/28/2015 | | +9 Month(s) | No | Due to delays associated with fabrication, assembly and setting of the CA01 module. |
| 124 | Reactor Coolant Pumps - Shipment of Equipment to Site - Unit 3 | 6/30/2015 | 10/19/2016 | | +16 Month(s) | No | Due to design changes. |
| 125 | Main Transformers Ready to Ship - Unit 3 | 7/31/2015 | 5/31/2015 | | -2 Month(s) | No | Schedule ahead of plan. |
| 126 | Spent Fuel Storage Rack - Shipment of Last Rack Module - Unit 3 | 7/31/2014 | 12/30/2014 | | +5 Month(s) | No | Due to schedule refinement and review. |
| 127 | Start electrical cable pulling in Unit 2 Auxiliary Building | 8/14/2013 | 11/14/2014 | | +15 Month(s) | No | Definitive information to set new milestone date not yet received. |
| 128 | Complete Unit 2 Reactor Coolant System cold hydro | 1/22/2016 | 10/16/2016 | | +9 Month(s) | No | Due to delays associated with fabrication, assembly and setting of the CA01 module. |
| 129 | Activate class 1E DC power in Unit 2 Auxiliary Building | 3/15/2015 | 2/6/2016 | | +11 Month(s) | No | Due to delays associated with engineering and licensing approvals and delay of FNC. |
| 130 | Complete Unit 2 hot functional test | 5/3/2016 | 2/15/2017 | | +9 Month(s) | No | Due to delays associated with fabrication, assembly and setting of the CA01 module. |

Legend - Completed - Completed this Quarter - Movement in Days Only



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PUBLIC VERSION

**Appendix 1**
**VC Summer Units 2 and 3**

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 131 | Install Unit 3 ring 3 for containment vessel | 8/25/2015 | 6/9/2016 | | +10 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |
| 132 | Load Unit 2 nuclear fuel | 9/15/2016 | 7/25/2017 | | +10 Month(s) | No | Due to delays associated with fabrication, assembly and setting of the CA01 module. |
| 133 | Unit 2 Substantial Completion | 3/15/2017 | 12/15/2017 | | +9 Month(s) | No | Due to delays associated with fabrication, assembly and setting of the CA01 module. |
| 134 | Set Unit 3 Reactor Vessel | 10/22/2015 | 1/26/2016 | | +3 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |
| 135 | Set Unit 3 Steam Generator #2 | 2/25/2016 | 4/2/2016 | | +2 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |
| 136 | Set Unit 3 Pressurizer Vessel | 7/16/2015 | 1/26/2016 | | +6 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |
| 137 | Complete welding of Unit 3 Passive Residual Heat Removal System piping | 6/16/2016 | 6/15/2016 | | | No | Due to schedule refinement and review. |

Legend: = Completed; = Completed this Quarter; = Movement in Days Only



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PUBLIC VERSION

**Appendix 1**
**VC Summer Units 2 and 3**

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 138 | Set Unit 3 polar crane | 5/9/2016 | 10/10/2016 | | +5 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |
| 139 | Start Unit 3 Shield Building roof slab rebar placement | 5/26/2016 | 10/21/2016 | | +5 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |
| 140 | Start Unit 3 Auxiliary Building electrical cable pulling | 11/7/2014 | 9/23/2015 | | +10 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |
| 141 | Activate Unit 3 Auxiliary Building class 1E DC power | 5/15/2016 | 12/5/2016 | | +7 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |
| 142 | Complete Unit 3 Reactor Coolant System cold hydro | 3/22/2017 | 8/30/2017 | | +5 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |
| 143 | Complete Unit 3 hot functional test | 7/3/2017 | 1/4/2018 | | +6 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |

Legend - Completed - Completed this Quarter - Movement in Days Only



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PUBLIC VERSION

**Appendix 1**
**VC Summer Units 2 and 3**

| Tracking ID | Order No. 2012-884 Description | Order No. 2012-884 Date | 14-4Q Targeted Milestone Completion Date | Actual Completion Date | Delta Months from Order No. 2012-884 Date | Outside +18/-24 Months Contingency? | Notes |
|---|---|---|---|---|---|---|---|
| 144 | Complete Unit 3 nuclear fuel load | 11/15/2017 | 6/20/2018 | | +7 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |
| 145 | Begin Unit 3 full power operation | 4/8/2018 | 11/25/2018 | | +7 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |
| 146 | Unit 3 Substantial Completion | 5/15/2018 | 12/15/2018 | | +7 Month(s) | No | Due to rescheduling of Unit 3 work impacted by delays associated with fabrication, assembly and setting of the CA01 module. |

**SUMMARY**

| | | | | |
|---|---|---|---|---|
| **Total Milestones Completed** | **101** | **out of** | **146 =** | **69%** |
| **Milestone Movement - Order No. 2012-884 vs. 14-4Q:** | | | | |
| **a) Forward Movement** | **42** | **out of** | **146 =** | **29%** |
| **b) Backward Movement** | **1** | **out of** | **146 =** | **1%** |
| **Milestones Within +12 to +18 Month range** | **13** | **out of** | **146 =** | **9%** |
| **Milestones over the +18 Month range** | **2** | **out of** | **146 =** | **1%** |

Legend - Completed - Completed this Quarter - Movement in Days Only



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# APPENDIX 2

## V. C. Summer Nuclear Station Units 2 & 3

### Quarterly Report to the South Carolina Office of Regulatory Staff Submitted by South Carolina Electric & Gas Company Pursuant to Public Service Commission Order No. 2009-104(A)

### Quarter Ending December 31, 2014

**Appendix 2** is an updated and expanded version of the information contained in the capital cost schedule approved by the Commission in Order No. 2012-884.

**Appendix 2** shows:

1. The actual expenditures on the project by plant cost category through the current period.
2. The changes in capital costs reflecting the Company's current forecast of expenditures on the project for each future period by plant cost category. In updating its cost projections the Company has used the current construction schedule for the project and the Commission-approved inflation indices as set forth in **Appendix 4** to this report.
3. The cumulative CWIP for the project and the balance of CWIP that is not yet reflected in revised rates.
4. The current rate for calculating AFUDC computed as required under applicable FERC regulations.

The Cumulative Project Cash Flow target as approved in Order No. 2012-884 and as updated for escalation and other Commission-approved adjustments is found under the heading **"Per Order 2012-884 Adjusted."** The adjustments reflect:

1. Changes in inflation indices.
2. Budget Carry-Forward Adjustments used, where appropriate to track the effect of lower-than-expected cumulative costs on the future cumulative cash flow of the project.

**Appendix 2** also shows the cumulative cash flow for the project based on actual expenditures to date and the current construction schedule and forecast of year-by-year costs going forward. This information is found under the heading **"Actual through December 2014 plus Projected."**

# Appendix 2

PUBLIC VERSION

## RESTATED and UPDATED CONSTRUCTION EXPENDITURES

(Thousands of $)

### V.C. Summer Units 2 and 3 - Summary of SCE&G Capital Cost Components

| Per Order 2012-884 Adjusted | Total | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual Project Cash Flow(per order) | 5,516,849 | 21,723 | 100,905 | 340,003 | 398,551 | 349,061 | 713,307 | 950,179 | 1,007,569 | 831,281 | 521,351 | 201,408 | 81,510 |
| Capital Cost Rescheduling Contingency | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Budget Carry-Forward Adjustment | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Net | 5,516,849 | 21,723 | 100,905 | 340,003 | 398,551 | 349,061 | 713,307 | 950,179 | 1,007,569 | 631,281 | 521,351 | 201,408 | 81,510 |
| Adjusted for Change in Escalation | 5,388,322 | 21,723 | 100,905 | 340,003 | 398,551 | 349,061 | 704,909 | 935,236 | 968,168 | 785,625 | 505,192 | 198,519 | 80,429 |
| Cumulative Project Cash Flow(Target) | | 21,723 | 122,629 | 462,632 | 861,183 | 1,210,244 | 1,915,153 | 2,850,390 | 3,818,557 | 4,604,183 | 5,109,374 | 5,307,893 | 5,388,322 |

**Actual through December 2014* plus Projected**

| | | Actual | | | | | | | | Projected | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Plant Cost Categories | Total | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Fixed with No Adjustment | | | | | | | | | | | | | |
| Firm with Fixed Adjustment A | | | | | | | | | | | | | |
| Firm with Fixed Adjustment B | | | | | | | | | | | | | |
| Firm with Indexed Adjustment | | | | | | | | | | | | | |
| Actual Craft Wages | | | | | | | | | | | | | |
| Non-Labor Costs | | | | | | | | | | | | | |
| Time & Materials | | | | | | | | | | | | | |
| Owners Costs | | | | | | | | | | | | | |
| Transmission Costs | 329,512 | - | 26 | 724 | 927 | 11,964 | 51,677 | 56,593 | 47,207 | 62,447 | 65,794 | 31,443 | 710 |
| Total Base Project Costs(2007 $) | 4,548,405 | 21,723 | 97,386 | 319,073 | 374,810 | 314,977 | 488,461 | 448,947 | 422,076 | 989,180 | 564,069 | 348,502 | 159,200 |
| Total Project Escalation | 981,110 | - | 3,519 | 20,930 | 23,741 | 34,084 | 74,485 | 88,622 | 89,890 | 260,250 | 188,662 | 133,624 | 63,303 |
| Total Revised Project Cash Flow | 5,529,515 | 21,723 | 100,905 | 340,003 | 398,551 | 349,061 | 562,946 | 537,569 | 511,966 | 1,249,430 | 752,732 | 482,125 | 222,503 |
| Cumulative Project Cash Flow(Revised) | | 21,723 | 122,629 | 462,632 | 861,183 | 1,210,244 | 1,773,190 | 2,310,759 | 2,822,725 | 4,072,155 | 4,824,887 | 5,307,012 | 5,529,515 |
| AFUDC(Capitalized Interest) | 266,471 | 645 | 3,497 | 10,564 | 17,150 | 14,218 | 18,941 | 27,722 | 26,131 | 50,305 | 48,340 | 32,257 | 16,702 |
| Gross Construction | 5,795,986 | 22,368 | 104,403 | 350,567 | 415,701 | 363,278 | 581,886 | 565,291 | 538,097 | 1,299,735 | 801,072 | 514,383 | 239,205 |
| Construction Work in Progress | | 22,368 | 126,771 | 477,338 | 893,039 | 1,256,317 | 1,838,203 | 2,403,495 | 2,941,591 | 4,241,327 | 5,042,398 | 5,556,781 | 5,795,986 |

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| | |
|---|---|
| CWIP Currently In Rates | 2,666,843 |
| December 31, 2014 Actual Incremental CWIP Not Currently In Rates | 274,748 |

*Applicable index escalation rates for 2014 are estimated. Escalation is subject to restatement when actual indices for 2014 are final.

Notes:

2015-2018 AFUDC rate applied: 7.27%

The AFUDC rate applied is the current SCE&G rate. AFUDC rates can vary with changes in market interest rates, SCE&G's embedded cost of capital, capitalization ratios, construction work in process, and SCE&G's short-term debt outstanding.

As discussed in Section I(C) of the Quarterly Report for the Fourth Quarter of 2014, as of the close of the reporting period, SCE&G remained in negotiations with WEC/CB&I concerning the Revised Fully Integrated Construction Schedule which WEC/CB&I presented to SCE&G in the third quarter of 2014 and the preliminary costs estimates related to it. The cost schedules presented here, including Owners cost schedules, have not been updated to reflect any changes related to the Revised Fully Integrated Construction Schedule and associated scheduling changes. SCE&G anticipates updating those cost schedules in future filings.

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# APPENDIX 3

## V. C. Summer Nuclear Station Units 2 & 3

**Quarterly Report to the South Carolina Office of Regulatory Staff**
**Submitted by South Carolina Electric & Gas Company**
**Pursuant to Public Service Commission Order No. 2009-104(A)**

**Quarter Ending December 31, 2014**

For comparison purposes, **Appendix 3** provides the schedule of capital costs for the project which was approved by the Commission in Order No. 2012-884 as the Approved Capital Cost of the Units, pursuant to S.C. Code Ann. § 58-33-270(B)(2). **Appendix 3** also reflects the forecast of AFUDC expense based on these adjusted schedules and the AFUDC rates that were current at the time of Order No. 2012-884. **Appendix 3** is intended to provide a fixed point of reference for future revisions and updating. While the schedule of costs contained on **Appendix 3** is subject to revision for escalation, changes in AFUDC rates and amounts, capital cost scheduling contingencies and other contingency adjustments as authorized in Order No. 2009-104(A), no such adjustments have been made to the schedules presented here.



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## Appendix 3

PUBLIC VERSION

**RESTATED and UPDATED CONSTRUCTION EXPENDITURES**
**(Thousands of $)**

**V.C. Summer Units 2 and 3 - Summary of SCE&G Capital Cost Components**

**Per Order 2012-884**

| Plant Cost Categories | Total | Actual | | | | | Projected | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Fixed with No Adjustment | CONFIDENTIAL | | | | | | | | | | | | |
| Firm with Fixed Adjustment A | | | | | | | | | | | | | |
| Firm with Fixed Adjustment B | | | | | | | | | | | | | |
| Firm with Indexed Adjustment | | | | | | | | | | | | | |
| Actual Craft Wages | | | | | | | | | | | | | |
| Non-Labor Costs | | | | | | | | | | | | | |
| Time & Materials | | | | | | | | | | | | | |
| Owners Costs | | | | | | | | | | | | | |
| Transmission Costs | 329,512 | - | 26 | 724 | 927 | 11,964 | 57,206 | 56,903 | 57,508 | 77,990 | 64,727 | 1,537 | - |
| Total Base Project Costs(2007 $) | 4,548,405 | 21,723 | 97,386 | 319,073 | 374,810 | 314,977 | 613,678 | 780,753 | 792,394 | 647,295 | 386,537 | 142,999 | 56,781 |
| Total Project Escalation | 968,444 | - | 3,519 | 20,930 | 23,741 | 34,084 | 99,630 | 169,425 | 215,175 | 183,987 | 134,815 | 58,409 | 24,729 |
| **Total Revised Project Cash Flow** | 5,516,849 | 21,723 | 100,905 | 340,003 | 398,551 | 349,061 | 713,307 | 950,179 | 1,007,569 | 831,281 | 521,351 | 201,408 | 81,510 |
| **Cumulative Project Cash Flow(Revised)** | | 21,723 | 122,629 | 462,632 | 861,183 | 1,210,244 | 1,923,551 | 2,873,730 | 3,881,299 | 4,712,580 | 5,233,931 | 5,435,339 | 5,516,849 |
| **AFUDC(Capitalized Interest)** | 237,715 | 645 | 3,497 | 10,564 | 17,150 | 14,218 | 20,449 | 38,384 | 42,868 | 40,888 | 27,518 | 15,391 | 6,144 |
| **Construction Work in Progress** | | 22,368 | 126,771 | 477,338 | 893,039 | 1,256,317 | 1,990,074 | 2,978,637 | 4,029,074 | 4,901,243 | 5,450,113 | 5,666,911 | 5,754,565 |

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# APPENDIX 4

## V. C. Summer Nuclear Station Units 2 & 3

**Quarterly Report to the South Carolina Office of Regulatory Staff**
**Submitted by South Carolina Electric & Gas Company**
**Pursuant to Public Service Commission Order No. 2009-104(A)**

**Quarter Ending December 31, 2014**

**Appendix 4** shows the changes in the inflation indices approved in Order No. 2009-104(A). Included is a ten year history of the Handy-Whitman All Steam Index, South Atlantic Region; the Handy-Whitman All Steam and Nuclear Index, South Atlantic Region; the Handy-Whitman All Transmission Plant Index, South Atlantic Region; and the Chained GDP Index. The change in the relevant indices from the Combined Application is also provided.

# Appendix 4, Chart A

## Inflation Indices, Chart A

### HW All Steam Generation Plant Index, July 2014

| Year | Index | Yr/Yr change | Three Year Average | Five Year Average | Ten Year Average |
|---|---|---|---|---|---|
| 2014 | 611 | 2.52% | 2.16% | 3.21% | 4.35% |
| 2013 | 596 | 2.05% | 2.91% | 2.18% | 4.77% |
| 2012 | 584 | 1.92% | 3.82% | 3.60% | 4.67% |
| 2011 | 573 | 4.75% | 2.31% | 4.75% | |
| 2010 | 547 | 4.79% | 3.78% | 5.31% | |
| 2009 | 522 | -2.61% | 4.74% | 5.50% | |
| 2008 | 536 | 9.16% | 8.13% | 7.35% | |
| 2007 | 491 | 7.68% | 6.99% | 5.74% | |
| 2006 | 456 | 7.55% | 6.64% | 4.75% | |
| 2005 | 424 | 5.74% | 4.49% | | |
| 2004 | 401 | 6.65% | 3.50% | | |
| 2003 | 376 | 1.08% | | | |
| 2002 | 372 | 2.76% | | | |
| 2001 | 362 | | | | |

| | BLRA Filing Jul-07 | Order 2010-12 Jan-09 | Order 2011-345 Jul-10 | Order 2012-884 Jan-12 | Update Jul-14 |
|---|---|---|---|---|---|
| **HW All Steam Index:** | | | | | |
| One year | **7.68%** | **4.83%** | **4.79%** | **4.51%** | **2.52%** |
| Five Year | **5.74%** | **7.19%** | **5.31%** | **3.91%** | **3.21%** |

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# Appendix 4, Chart B

## Inflation Indices, Chart B

**HW All Steam and Nuclear Generation Plant Index, July 2014**

| Year | Index | Yr/Yr change | Three Year Average | Five Year Average | Ten Year Average |
|---|---|---|---|---|---|
| 2014 | 611 | 2.52% | 2.22% | 3.21% | 4.38% |
| 2013 | 596 | 2.05% | 2.97% | 2.22% | 4.79% |
| 2012 | 584 | 2.10% | 3.82% | 3.64% | 4.70% |
| 2011 | 572 | 4.76% | 2.31% | 4.76% | |
| 2010 | 546 | 4.60% | 3.78% | 5.32% | |
| 2009 | 522 | -2.43% | 4.82% | 5.55% | |
| 2008 | 535 | 9.18% | 8.15% | 7.37% | |
| 2007 | 490 | 7.69% | 7.00% | 5.75% | |
| 2006 | 455 | 7.57% | 6.66% | 4.77% | |
| 2005 | 423 | 5.75% | 4.50% | | |
| 2004 | 400 | 6.67% | 3.50% | | |
| 2003 | 375 | 1.08% | | | |
| 2002 | 371 | 2.77% | | | |
| 2001 | 361 | | | | |

| | BLRA Filing Jul-07 | Order 2010-12 Jan-09 | Order 2011-345 Jul-10 | Order 2012-884 Jan-12 | Update Jul-14 |
|---|---|---|---|---|---|
| **HW All Steam/Nuclear Index:** | | | | | |
| One year | 7.69% | 4.84% | 4.60% | 4.52% | 2.52% |
| Five Year | 5.75% | 7.20% | 5.32% | 3.87% | 3.21% |

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# Appendix 4, Chart C

## Inflation Indices, Chart C

### HW All Transmission Plant Index, July 2014

| Year | Index | Yr/Yr change | Three Year Average | Five Year Average | Ten Year Average |
|---|---|---|---|---|---|
| 2014 | 604 | 1.68% | 1.07% | 2.63% | 4.05% |
| 2013 | 594 | 1.71% | 2.13% | 1.09% | 4.91% |
| 2012 | 584 | -0.17% | 3.25% | 2.56% | 4.71% |
| 2011 | 585 | 4.84% | 1.30% | 4.36% | |
| 2010 | 558 | 5.08% | 2.71% | 5.23% | |
| 2009 | 531 | -6.02% | 3.96% | 5.48% | |
| 2008 | 565 | 9.07% | 9.02% | 8.73% | |
| 2007 | 518 | 8.82% | 8.11% | 6.86% | |
| 2006 | 476 | 9.17% | 8.58% | 5.25% | |
| 2005 | 436 | 6.34% | 5.43% | | |
| 2004 | 410 | 10.22% | 3.59% | | |
| 2003 | 372 | -0.27% | | | |
| 2002 | 373 | 0.81% | | | |
| 2001 | 370 | | | | |

| | BLRA Filing Jul-07 | Order 2010-12 Jan-09 | Order 2011-345 Jul-10 | Order 2012-884 Jan-12 | Update Jul-14 |
|---|---|---|---|---|---|
| **HW All Transmission Plant Index** | | | | | |
| One year | 8.82% | 7.41% | 5.08% | 2.48% | 1.68% |
| Five Year | 6.86% | 8.60% | 5.23% | 3.00% | 2.63% |

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# Appendix 4

## Inflation Indices, Chart D

### GDP Chained Price Index, 2014

| SERIESTYPE | UNIT | SHORT LABEL | ID | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Chained Price Index--Gross Domestic Product** | | | | | | | | | | |
| U.S. Macro - 10 Year Baseline | (2005=100) | Chained price index-gross domestic product , Source: BEA , Units: Index- 2005=100.0 | 45158933 | 99.21 | 99.97 | 100.75 | 102.79 | 104.70 | 106.33 | 107.98 |
| Annual Percent change | | | | | **0.77%** | **0.78%** | **2.02%** | **1.86%** | **1.56%** | **1.55%** |
| 3-Year Annual Percent change | | | | | 1.67% | 1.47% | 1.19% | 1.55% | 1.81% | 1.66% |
| **5-Year Annual Percent change** | | | | | **2.51%** | **2.11%** | **1.70%** | **1.67%** | **1.40%** | **1.55%** |
| **Consumer Price Index, All-Urban** | | | | | | | | | | |
| U.S. Macro - 10 Year Baseline | Index | Consumer price index, all-urban , Source: BLS , Units: - 1982-84=1.00 | 45158182 | 2.15 | 2.15 | 2.18 | 2.25 | 2.30 | 2.33 | 2.36 |
| Percent change | | | | | **0.00%** | **1.40%** | **3.21%** | **2.22%** | **1.30%** | **1.29%** |
| 3-Year Annual Percent change | | | | | 2.17% | 1.68% | 1.54% | 2.28% | 2.25% | 1.60% |
| 5-Year Annual Percent change | | | | | 2.62% | 2.23% | 2.22% | 2.10% | 1.63% | 1.88% |
| **Producer Price Index--Finished Goods** | | | | | | | | | | |
| U.S. Macro - 10 Year Baseline | (1982=1.0) | Producer price index-finished goods , Source: BLS , Units: Index- 1982=1.0 | 45159751 | 1.77 | 1.73 | 1.80 | 1.91 | 1.94 | 1.97 | 2.00 |
| Percent change | | | | | **-2.26%** | **4.05%** | **6.11%** | **1.57%** | **1.55%** | **1.52%** |
| 3-Year Annual Percent change | | | | | 2.64% | 2.53% | 2.63% | 3.91% | 3.08% | 1.55% |
| 5-Year Annual Percent change | | | | | 3.03% | 2.90% | 3.61% | 3.04% | 2.20% | 2.96% |

| | BLRA Filing Jul-07 | Order 2010-12 Jan-09 | Order 2011-345 Jul-10 | Order 2012-884 Jan-12 | Update Jul-14 |
|---|---|---|---|---|---|
| **GDP Chained Price Index** | | | | | |
| One year | 2.66% | 2.24% | 0.43% | 2.11% | 1.55% |
| Five Year | 2.81% | 2.86% | 1.97% | 1.69% | 1.55% |

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# APPENDIX 5

## V. C. Summer Nuclear Station Units 2 & 3

**Quarterly Report to the South Carolina Office of Regulatory Staff**
**Submitted by South Carolina Electric & Gas Company**
**Pursuant to Public Service Commission Order No. 2009-104(A)**

**Quarter Ending December 31, 2014**

**Appendix 5** indicates those LARs that have been submitted by SCE&G to the NRC for review. Included is the title of each LAR, a brief description of the change(s) associated with the LAR, the date the LAR was submitted to the NRC, and the status of the requests.



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# Appendix 5

PUBLIC VERSION

## V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

| Topic | Description of Change | Submittal Date | Status |
|---|---|---|---|
| LAR 12-01 - Additional Electrical Penetration Assemblies | Provide additional penetrations of the Containment Vessel to allow sufficient space for electrical and instrument cables. | 8/29/2012 | Approved on 7/1/2013 |
| LAR-12-02 – Tier 1 Table 3.3-1 Discrepancies – PAR Utilized | Conform the current ITAAC standards used to verify the shield building wall thickness to align with those approved in DCD Rev. 19. | 9/26/2012 | Approved on 5/30/2013 |
| LAR 13-01 - Basemat Shear Reinforcement Design Spacing Requirements - PAR Utilized | Clarify the provisions for maximum spacing of the shear reinforcement in the basemat below the auxiliary building to be consistent with requirements shown in existing FSAR figures. | 1/15/2013 | Approved on 2/26/2013 |
| LAR 13-02 - Basemat Shear Reinforcement Design Details - PAR Utilized | Revises the requirements for development of basemat shear reinforcement in the licensing basis from ACI 349 Appendix B to ACI 318-11, Section 12.6. The use of ACI 318 criteria for headed reinforcement results in longer shear ties and thicker concrete in areas below the elevator pits and a sump in the nuclear island basemat. | 1/18/2013 | Approved on 3/1/2013 |
| LAR 13-03 - Turbine Building Eccentric and Concentric Bracing | Revises the turbine building main area to use a mixed bracing system using eccentrically and concentrically braced frames as a means of preventing the turbine building from collapsing onto the Nuclear Island (NI) during a seismic event. The structural design code is also changed to a code that includes adequate provisions for the new bracing system. | 2/7/2013 | Approved on 7/1/2013 |
| LAR 13-04 - Reconciliation of Tier 1 Valve Differences | Reconciles valve related information contained in Tier 1 material to be consistent with corresponding Tier 2 material currently incorporated in the UFSAR. | 2/7/2013 | Under NRC Review |

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## V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

| Topic | Description of Change | Submittal Date | Status |
|---|---|---|---|
| LAR 13-05 - Structural Modules Shear Stud Size and Spacing | Revises Note 2 of UFSAR Figure 3.8.3-8, Sheet 1, which presents typical structural wall module details. This information needs to be changed to be consistent with the design basis calculations. | 2/14/2013 | Approved on 5/23/2013 |
| LAR 13-06 - Primary Sampling System Changes | Alters the design of the Primary Sampling System (PSS) by replacing a check valve with a solenoid-operated gate valve, modifying the PSS inside-containment header and adding a PSS containment penetration. | 2/7/2013 | Approved on 8/22/2013 |
| LAR 13-07 - Changes to the Chemical and Volume Control System (CVS) | Alters the design of the Chemical and Volume Control System (CVS) by adding/changing valves, separating the zinc and hydrogen injection paths and relocating the zinc injection point. | 3/13/2013 | Approved on 2/24/2014 |
| LAR 13-08 - Module Obstructions and Details | Withdrawn after review with NRC-see Letter NND-13-202. *Superceded by LAR 13-20*. | 2/28/2013 | Withdrawn |
| LAR 13-09 - Annex/Radwaste Building Layout Changes | Updates column line numbers on Annex Building Figures and changes the configuration of the Radwaste building by adding three bunkers for storage and merging two rooms. | 2/27/2014 | Under NRC Review |
| LAR 13-10 - Human Factors Engineering Integrated System Validation Plan | Revises referenced document APP-OCS-GEH-320 from Revision D to Revision 2. | 3/13/2013 | Approved on 7/31/2014 |
| LAR 13-11 - NI Wall Reinforcement Criteria -PAR Utilized | Revises structural code criteria for anchoring reinforcement bar within the NI walls (adopts ACI-318 for this purpose). | 3/26/2013 | Approved on 6/6/2013 |

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## V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

| Topic | Description of Change | Submittal Date | Status |
|---|---|---|---|
| LAR 13-12 - Fire Area Boundary Changes | Revises various information to support fire area boundaries (HVAC information, stairwell changes, and other layout changes). | 7/17/2013 | Approved on 9/9/2014 |
| LAR 13-13 - Turbine Building Layout Changes | Revises the door location, clarifies column line designations, changes floor to ceiling heights and increases elevations and wall thickness in certain areas. | 7/30/2013 | Approved on 5/12/2014 |
| LAR 13-14 - Turbine Building Battery Room and Electrical Changes | Revises the Non-Class 1E dc and Uninterruptible Power Supply System (EDS) and Class 1E dc and Uninterruptible Power Supply System (IDS) by: (1) Increasing EDS total equipment capacity, component ratings, and protective device sizing to support increased load demand, (2) Relocating equipment and moving Turbine Building (TB) first bay EDS Battery Room and Charger Room. The floor elevation increases from elevation 148'-0" to elevation 148'-10" to accommodate associated equipment cabling with this activity, and (3) Removing the Class 1E IDS Battery Back-up tie to the Non-Class 1E EDS Battery. | 10/2/2013 | Approved on 10/24/2014 |
| LAR 13-15 - Operator Break Room Configuration | No description provided. This is no longer a LAR. | Changed to a Non-LAR Departure | |
| LAR 13-16 - Revision to Human Factors Engineering Design Verification Plan (GEH-120) | Revises referenced document APP-OCS-GEH-120 from Revision B to Revision 1. | 9/25/2013 | Approved on 7/31/2014 |

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## V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

| Topic | Description of Change | Submittal Date | Status |
|---|---|---|---|
| LAR 13-17 - Revision to Human Factors Engineering Task Support Verification (GEH-220) | Revises referenced document APP-OCS-GEH-220 from Revision B to Revision 1. | 9/25/2013 | Approved on 7/31/2014 |
| LAR 13-18 - Revision to Human Factors Engineering Issue Resolution Plan | Revises APP-OCS-GEH-420 to make a number of changes in order to refine the process for capturing and resolving Human Engineering Discrepancies (HEDs) from that process document as described in Revision B. | 10/3/2013 | Approved on 7/31/2014 |
| LAR 13-19 - Revision to Human Factors Engineering Plan | Revises APP-OCS-GEH-520 to make a number of changes in order to confirm aspects of the HSI and OCS design features that could not be evaluated in other Human Factors Engineering (HFE) V&V activities. | 10/3/2013 | Approved on 7/31/2014 |
| LAR 13-20 - Modules / Stud Channel Obstructions Revision | Revises requirements for design spacing of shear studs and wall module trusses and the design of structural elements of the trusses such as angles and channels. These revisions are to address interferences and obstructions. | 7/17/2013 | Approved on 11/19/2013 |
| LAR 13-21 - CA03 Module Design Differences | Corrects inconsistencies between Tier 2* and Tier 2 information. | 2/2/2014 | Under NRC Review |
| LAR 13-22 - Annex Building Structure and Layout Changes | The proposed changes would revise the Combined Licenses (COLs) by (a) installing an additional nonsafety-related battery, (b) revising the annex building internal configuration by converting a shift turnover room to a battery room, adding an additional battery equipment room, and moving a fire area wall, (c) increasing the height of a room, and (d) increasing certain floor thicknesses. The proposed changes include reconfiguring existing rooms and related room, wall, and access path changes. | 12/4/2014 | Under NRC Review |

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## V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

| Topic | Description of Change | Submittal Date | Status |
|---|---|---|---|
| LAR 13-23 - Reinforced Concrete (RC) to Steel Plate Composite Construction (SC) Connections | The proposed amendment would revise Tier 2* and associated Tier 2 material related to the design details of connections in several locations between the steel plate composite construction (SC) used for the shield building and the standard reinforced concrete (RC) walls, floors, and roofs of the auxiliary building and lower walls of the shield building. | 7/11/2014 | Approved on 12/16/2014 |
| LAR 13-25 - Tier 1 Editorial and Consistency Changes | Revises information to correct consistency and editorial issues. This submittal does not contain any technical changes. | 7/2/2013 | Approved on 7/31/2014 |
| LAR 13-26 - EP Rule Changes | Revision to the Emergency Plan in order to comply with regulatory changes enacted by the Nuclear Regulatory Commission (NRC) in the Final Rule. These changes include the addition of text that 1) clarifies the distance of the Emergency Operations Facility (EOF) from the site, 2) updates the content of exercise scenarios to be performed at least once each exercise cycle, and 3) requires the Evacuation Time Estimate (ETE) to be updated annually between decennial censuses. | 12/17/2013 | Approved on 6/20/2014 |
| LAR 13-27 - Control Rod Drive Mechanism Latching Relays | The proposed change would revise Combined License (COL) numbers NPF-93 and NPF-94 for Virgil C. Summer Nuclear Station, Units 2 & 3, respectively, to specify the use of Control Rod Drive Mechanism (CRDM) latching control relays (referred to as control relays herein) in lieu of field breakers to open the CRDM motor generator (MG) set generator field on a diverse actuation system (DAS) signal. | 10/30/2014 | Under NRC Review |

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## V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

| Topic | Description of Change | Submittal Date | Status |
|---|---|---|---|
| LAR 13-28 - Piping Line Number Additions, Deletions, and Functional Capability Re-designation | The proposed changes revise the Combined License (COL) in regard to changes to the Automatic Depressurization System (ADS), the Passive Containment Cooling System (PCS), the Passive Core Cooling System (PXS), the Normal Residual Heat Removal System (RNS), the Containment Air Filtration System (VFS), Spent Fuel Pool Cooling System (SFS) and the Sanitary Discharge System (SDS) piping line numbers to reflect the as-designed configuration resulting from changes in piping layout or rerouting. The changes consist of adding or deleting piping line numbers of existing piping lines, or updating the functional capability classification of existing process flow lines for the tables. | 12/18/2014 | Under NRC Review |
| LAR 13-29 - Class 1E DC and Uniterruptible Power Supply System Removal of Spare Battery Termination Boxes | The proposed changes revise COLs concerning the Class 1E dc and Uninterruptible Power Supply System (IDS). The proposed changes replace four Spare Termination Boxes (IDSS-DF-2, IDSS-DF-3, IDSS-DF-4, and IDSS-DF-5) with a single Spare Battery Termination Box (IDSS-DF-3), and make minor raceway and cable routing changes. | 12/19/2014 | Under NRC Review |
| LAR 13-32 - WLS Changes | Clarifies the description of the WLS, including changing depiction of valves to be consistent with Tier 1 figure conventions, ensuring consistency between Tier 1 and Tier 2 descriptions, and clarifying the safety classification of the drain hubs. | 8/30/2013 | Approved on 1/8/2014 |

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## V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

| Topic | Description of Change | Submittal Date | Status |
|---|---|---|---|
| LAR 13-33 - Passive Core Cooling System (PXS) Condensate Return | The proposed amendment would revise the plant-specific Tier 1 and associated Tier 2 material to increase the efficiency of the return of condensate utilized by the passive core cooling system (PXS) to the in-containment refueling water storage tank (IRWST) to support the capability for long term cooling. | 7/8/2014 | Under NRC Review |
| LAR 13-34 - Clarification of Tier 2* Material in HFE Documents | The proposed changes reclassify portions of the five Tier 2* Human Factors (HF) Verification & Validation (V&V) planning documents listed in Updated Final Safety Analysis Report (UFSAR) Table 1.6-1 and Chapter 18, Section 18.11.2. | 3/19/2014 | Approved on 10/8/2014 |
| LAR 13-36 - CIM / DAS Diversity Clarification | The requested amendment proposed to depart from approved AP1000 Design Control Document (DCD) Tier 2* information as incorporated into the Updated Final Safety Analysis Report (UFSAR) by clarifying the position on design diversity, specifically human diversity, as related to the Component Interface Module (CIM) and Diverse Actuation System (DAS) design. | 9/11/2014 | Under NRC Review |
| LAR 13-37 - VCSNS Units 2 & 3 Tech Spec Upgrade | Revises Technical Specifications to closer align with the guidance of the Technical Specifications Task Force (TSTF) Writer's Guide for Plant-Specific Improved Technical Specifications, TSTF-GG-05-01, Revision 1, and with NUREG-1431, Standard Technical Specifications - Westinghouse Plants as updated by NRC approved generic changes. | 12/4/2013 | Approved on 11/12/2014 |

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## V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

| Topic | Description of Change | Submittal Date | Status |
|---|---|---|---|
| LAR 13-38 - ACI Code Compliance with Critical Sections Higher Elevations | Withdrawn after review with NRC-see Letter NND-13-0745. | 11/7/2013 | Withdrawn |
| LAR 13-41 - Coating Thermal Conductivity | Revises Design Control Document (DCD) Tier 2 information as incorporated into the Updated Final Safety Analysis Report (UFSAR) to allow use of a new methodology to determine the effective thermal conductivity resulting from oxidation of the inorganic zinc (IOZ) used in the containment vessel coating system. | 11/26/2013 | Under NRC Review |
| LAR 13-42 - Tier 1 Editorial and Consistency Changes #2 | Allows various changes to correct editorial errors in Tier 1 and promote consistency with the Updated Final Safety Analysis Report (Tier 2 information). | 5/20/2014 | Under NRC Review |
| LAR 14-01 - Auxiliary Building Roof and Floor Details | Departs from VCSNS Units 2 and 3 plant-specific Design Control Document (DCD) Tier 2* material contained within the Updated Final Safety Analysis Report (UFSAR) to identify design details of the floors of the auxiliary building that may vary due to design and loading conditions, in accordance with code requirements. | 4/3/2014 | Approved on 7/18/2014 |
| LAR 14-03 - Tier 2* Editorial and Clarification Changes | Departs from VCSNS Units 2 and 3 plant-specific Design Control Document (DCD) Tier 2* material contained within the Updated Final Safety Analysis Report (UFSAR) by making editorial and consistency corrections. | 6/12/2014 | Under NRC Review |

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## V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

| Topic | Description of Change | Submittal Date | Status |
|---|---|---|---|
| LAR 14-05 - Containment Internal Structural Module Design Details | The requested amendment proposes to depart from Tier 2* information in the Updated Final Safety Analysis Report (UFSAR), plant-specific Tier 1 and corresponding COL Appendix C information, and involved UFSAR Tier 2 information to address changes in the UFSAR and design documents related to containment internal structural wall module design details. | 7/17/2014 | Under NRC Review |
| LAR 14-06 - Enclosures for Class 1E Electrical Penetrations in Middle Annulus | Departs from VCSNS Units 2 and 3 plant-specific Design Control Document (DCD) Tier 2* material contained within the Updated Final Safety Analysis Report (UFSAR) by eliminating the Division A fire zone enclosure and adding three new fire zones for Divisions B, C, and D Class 1 E electrical penetration rooms. | 6/20/2014 | Approved on 12/30/2014 |
| LAR 14-07 - CA04 Structural Module ITAAC Dimensions Change | The proposed amendment would allow changes to adjust the concrete wall thickness tolerances of four Nuclear Island walls found in Tier 1. | 9/25/2014 | Under NRC Review |
| LAR 14-08 - Integrated Test Program (ITP) | The requested amendment requires changes to the Updated Final Safety Analysis Report (UFSAR) in the form of departures from the incorporated plant-specific Design Control Document (DCD) Tier 2 information, and involves changes to related plant-specific Tier 1 information with corresponding changes to the associated COL information. Many of the changes in this amendment request are done in order to conform to the Tier 1 Section 3.4 exemption request described in Enclosure 2. In that change, construction and installation testing is removed from the ITP and replaced with component testing. | 10/23/2014 | Under NRC Review |

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## V.C. Summer Units 2 and 3 License Amendment Requests (LARs)

| Topic | Description of Change | Submittal Date | Status |
|---|---|---|---|
| LAR 14-09 - Turbine Building Switchgear Room and Office Layout Changes | The requested amendment would depart from VCSNS Units 2 and 3 plant-specific Design Control Document (DCD) Tier 2* material contained within the Updated Final Safety Analysis Report (UFSAR) by relocating fire area rated fire barriers due to changes to the layout of the switchgear rooms and office area in the turbine building. The requested amendment would also depart from plant-specific DCD Tier 2 material that involves the proposed Tier 2* departures. | 9/18/2014 | Under NRC Review |
| LAR 14-15 - Compressed and Instrument Air Supply Modification | The proposed change would revise the Combined Licenses (COLs) in regard to removing a supply line from the Compressed and Instrument Air System (CAS) to the generator breaker package and involves changes to related plant-specific Tier 1 information, with corresponding changes to associated COL Appendix C information. | 10/30/2014 | Under NRC Review |
| LAR 14-16 - Condensate Water Storage Tank Volume | No description provided. This is no longer a LAR. | Changed to a Non-LAR Departure | |

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