South Carolina Office of Regulatory Staff Review of South Carolina Electric & Gas Company's 2013 1st Quarter Report on V. C. Summer Units 2 and 3 Status of Construction

July 5, 2013



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Executive Summary

On May 13, 2013, SCE&G submitted its 2013 1st Quarter Report related to construction of the Units. The Report is filed in Commission Docket No. 2008-196-E and covers the quarter ending March 31, 2013. With reference to the Base Load Review Act, ORS's review of the Company's Report focuses on SCE&G's ability to adhere to the approved schedule and approved budget.

Approved Schedule Review

SCE&G's Milestone Schedule indicates that overall construction supports a substantial completion date of March 15, 2017 for Unit 2 and May 15, 2018 for Unit 3. ORS's review of the schedule approved in Order No. 2012-884 and the Engineering and Procurement Contract confirms that the project remains on schedule within the schedule criteria established by the Base Load Review Order. Per the Base Load Review Order, overall construction is considered to be on schedule if the substantial completion dates are not accelerated more than twenty-four (24) months or delayed more than eighteen (18) months. As of March 31, 2013 eighty-four (84) of the 146 milestone activities had been completed. Construction activities continued, with work on the CR10 module (the steel framework that will be set on the basemat to support the Containment Vessel. A major milestone was reached with the pouring of the Unit 2 Nuclear Island basemat concrete, which was completed on March 11, 2013. However, challenges continue in the area of module fabrication and assembly.

ORS has identified several ongoing construction challenges that pose a potential risk to the on-time completion of the project. ORS is monitoring these areas closely. The most significant issue is the delay in the delivery of the structural submodules. Despite continuing high-level management and executive focus from Chicago Bridge and Iron, Westinghouse Electric Company and SCE&G, the delivery and quality problems associated with these submodules are still not satisfactorily resolved. Delays in these submodules affect almost all subsequent critical path sequences in the construction schedule.

Subsequent to the end of the quarter, SCE&G announced that, due to challenges in the project schedule primarily related to module fabrication, the substantial completion date of Unit 2 had the potential to be delayed by up to twelve (12) months. A delay to the Unit 3 substantial completion date is also likely.

Approved Budget Review

The current approved base project cost in 2007 dollars is \$4.548 billion. There has been no increase in the total base project cost (in 2007 dollars). With escalation applied, the total cash flow budgeted for the project is \$5.523 billion. The cumulative amount spent on the project as of December 31, 2012 was \$1.773 billion. The cumulative project cash flow is forecasted to be approximately \$176.733 million under budget at the end of 2013. Due to escalation, an increased project cash flow of approximately \$54.092 million is necessary to complete the project in 2018.

On March 2, 2009, the Public Service Commission of South Carolina ("Commission") approved South Carolina Electric & Gas Company's ("SCE&G" or the "Company") request for the construction of V.C. Summer Nuclear Station Units 2 and 3 (the "Units") and the Engineering, Procurement and Construction ("EPC") Contract. This approval can be found in the Base Load Review Order No. 2009-104(A) filed in Docket No. 2008-196-E. On January 21, 2010, the Commission approved the Company's request to update milestones and capital cost schedules in Order No. 2010-12, which is filed in Docket No. 2009-293-E. On May 16, 2011, the Commission approved SCE&G's petition for revisions and updates to capital cost schedules in Order No. 2011-345, which is filed in Docket No. 2010-376-E.

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

In 2010, SCE&G reported that Santee Cooper began reviewing its level of ownership participation in the Units. Since then, Santee Cooper has sought partners in its 45% ownership. Santee Cooper signed a Letter of Intent with Duke Energy Carolinas, LLC in 2011. On April 13, 2012, Santee Cooper issued a press release announcing it had signed a Letter of Intent with South Mississippi Electric Power Association for the opportunity to secure 2 to 7 percent of the capacity and energy output from the Units (roughly 4 to 15 percent of Santee Cooper's 45% interest). On April 24, 2012, Santee Cooper issued another press release announcing it signed a Letter of Intent to provide for negotiations for the purchase of 2 to 5 percent (roughly 4 to 11 percent of Santee Cooper's 45% ownership) of the Units with American Municipal Power, Inc. These press releases can be found as Appendices C and D, respectively, in the South Carolina Office of Regulatory Staff's ("ORS's") 2012 1st Quarterly Report.

On May 15, 2012, SCE&G filed an application with the Commission in Docket No. 2012-203-E for updates and revisions to schedules related to the construction of the Units ("Update Filing"). The Update Filing indicated that SCE&G intended to delay the substantial completion date of Unit 2 from April 2016 until March 2017, while advancing the substantial completion date for Unit 3 from January 2019 to May 2018. The requested schedule changes, along with an increase to the base project cost totaling \$278.05 million, were approved by the Commission in

Order No. 2012-884 on November 15, 2012.¹ Petitions for Rehearing or Reconsideration were filed on behalf of the Sierra Club and the South Carolina Energy Users Committee. Both of these petitions were denied via Commission Directive on December 12, 2012. The changes associated with these new substantial completion dates will be updated in the Company's EPC Contract with Westinghouse Electric Company ("WEC") and Chicago Bridge and Iron ("CB&I"). CB&I became a party to the EPC Contract via its acquisition of the Shaw Group, Inc. This acquisition was completed during the quarter.

On May 13, 2013, SCE&G submitted its 2013 1st Quarter Report ("Report") related to construction of the Units. The Report is filed in Commission Docket No. 2008-196-E and covers the quarter ending March 31, 2013. The Company's Report is submitted pursuant to S.C. Code Ann. § 58-33-277 (Supp. 2012) of the Base Load Review Act ("BLRA"), which requires the Report to include the following information:

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

With reference to Section 58-33-275(A) of the BLRA, ORS's review of the Company's Report focuses on SCE&G's ability to adhere to (1) the approved construction schedule and (2) the approved capital cost schedule.

¹ Petitions for Rehearing or Reconsideration were filed on behalf of the Sierra Club and the South Carolina Energy users Committee. Both of these petitions were denied via Commission Order No. 2013-5 issued on February 14, 2013. The Sierra Club and the South Carolina Energy Users Committee subsequently filed appeals with the Supreme Court of South Carolina. Those appeals are now pending.

Approved Schedule Review

Milestone Schedule

As of March 31, 2013, ORS verified that of the Milestone Schedule's 146 activities:

- Eighty-four (84) milestone activities have been completed (includes eighty-four (84) historical milestones and zero (0) future milestones)
- Sixty-two (62) milestone activities are yet to be completed (includes eight (8) delayed historical and fifty-four (54) future milestones)

ORS also verified that during the 1st Quarter of 2013:

- Six (6) milestone activities were scheduled to be completed
 - Three (3) of these milestones have been completed
 - Three (3) of these milestones have not been completed

Per the Base Load Review Order, overall construction is considered to be on schedule if the substantial completion dates are not accelerated more than twenty-four (24) months or delayed more than eighteen (18) months. As part of its review of the approved schedule, ORS identifies Caution Milestones. Caution Milestones are those that have been delayed ten (10) months or longer. If any Milestone is delayed sixteen (16) months or greater, ORS may issue a formal notification to the Commission of the delay. As of the end of the 1st quarter of 2013, ORS identified two (2) Caution Milestones.

• Milestone Activity No. 84 – Reactor Coolant Pump Fabricator Delivery of Casings to Port of Export – Unit 2.

Status: Delayed 10 months.

This activity was scheduled to be completed by July 31, 2012. Its revised target completion date is June 11, 2013. This milestone is delayed due to the rework of a casing. The revised delivery date, while delayed, still supports the site need date for construction activities.

• Milestone Activity No. 93 – Integrated Head Package Shipment of Equipment to Site – Unit 2.

Status: Delayed 11 months.

This activity was scheduled to be completed by March 31, 2013. Its revised target completion date is February 28, 2014. This milestone is delayed due to design changes on components of the Integrated Head Package. The revised delivery date, while delayed, still supports the site need date for construction activities.

SCE&G's Milestone Schedule attached to the Report indicates that overall construction supports a substantial completion date of March 15, 2017 for Unit 2 and May 15, 2018 for Unit 3. ORS's review of the schedule approved in Order No. 2012-884 and the EPC Contract confirms that the project remains on schedule with the schedule criteria established in the Base Load Review Order. Appendix A shows details of the Milestone Schedule as of March 31, 2013.

Table 1 shows the status of the ninety-two (92) historical milestones and Chart 1 shows the status of all 146 milestones for the 1st quarter of 2013 and prior.²

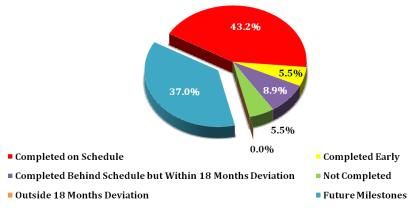
Table 1:

Historical Milestones 1 st Quarter 2013 and Prior							
92 of 146 Total Milesto	mes # of	% of All					
	Milestones	Milestones ³					
Completed on Schedule	63	43.2%					
Completed Early	8	5.5%					
Completed Behind Schedule but Within 18 Months Deviation	13	8.9%					
Not Completed	8	5.5%					
Outside 18 Months Deviation	0	0.0%					
Total Historical Milestones	92	63.0%					

Chart 1:



1st Quarter 2013 and Prior



² The numbers reported by ORS and SCE&G may vary. For reporting purposes, ORS applies a 30 day threshold before a milestone is deemed accelerated or delayed. SCE&G uses a threshold less than 30 days. For instance, if a milestone is scheduled to be completed January 2, 2013 and the actual completion date is December 29, 2012, SCE&G deems the milestone as completed one month early since it is completed in a prior calendar month. ORS would report this milestone as being accomplished on schedule since it was completed within 30 days of the scheduled completion date.

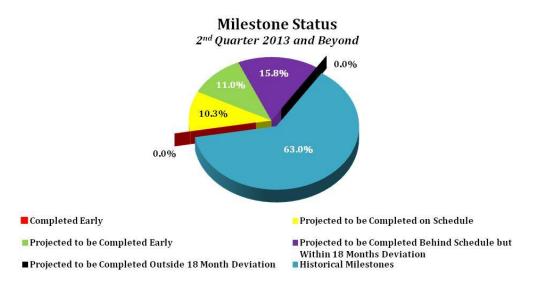
³ Slight variances may occur due to rounding.

Table 2 shows the status of the fifty-four (54) future milestones and Chart 2 shows the status of all 146 milestones for the 2^{nd} quarter 2013 and beyond.

Table 2:

Future Milestones 2 nd Quarter 2013 and Beyond							
54 of 146 Total Milest	tones						
# of % of All Milestones Milestones							
Completed Early	0	0.0%					
Projected to be Completed on Schedule	15	10.3%					
Projected to be Completed Early	16	11.0%					
Projected to be Completed Behind Schedule but Within 18 Months Deviation	23	15.8%					
Projected to be Outside 18 Months Deviation	0	0.0%					
Total Future Milestones	54	37.0%					

<u>Chart 2:</u>



ORS reviews all invoices associated with the Milestone Schedule and during the 1st quarter of 2013, there were three (3) invoices paid. ORS reviews invoices to ensure that the invoices are paid in accordance with Company policies and practices and in accordance with the terms of the EPC contract. ORS also reviews the escalation applied to these invoices for consistency with the appropriate Handy Whitman inflation indices.

⁴ Slight variances may occur due to rounding.

Specific Construction Activities

Major construction activities during the 1st quarter of 2013 are listed below:

- Concrete and rebar work in the Unit 2 Nuclear Island was on hold at the beginning of the quarter pending resolution of issues raised by the NRC during the September 2012 monthly inspection. The NRC identified issues with the spacing of the rebar to ensure adequate shear strength of the basemat and raised questions regarding rebar design surrounding the Nuclear Island elevator pit and sumps. The Company filed two (2) License Amendment Requests ("LARs") with the NRC regarding these issues (LAR 13-01 and LAR 13-02). These LARs were approved by the NRC with the latter one approved on March 1, 2013. The pouring of the Nuclear Island basemat for Unit 2 was started on March 9 and completed on March 11, 2013. This represented the completion of BLRA Milestone 69. The pouring of basemat concrete was a critical path activity for Unit 2.
- Forms were constructed and concrete was placed for the basement walls of the Unit 2 Turbine Building. At the end of the quarter the Unit 2 Turbine Building basement walls were approximately 50% complete.
- Unit 2 Containment Vessel ("CV") construction activities continued, with CB&I installing exterior rebar on the CV Bottom Head ("CVBH"). CB&I also continues to work on the CV ring segments, with fit-up and welding of the ring segments continuing during the quarter. Fabrication of Unit 2 CV Ring 1 was nearing completion at the end of the quarter, with all four courses of plate fitted and welded together. The assembly of the Unit 2 CV Ring 2 began, with fit up and welding activities of the first two courses of plate completed at the end of the quarter.
- Fabrication of the Unit 2 CR10 Module, which supports the CVBH, was completed during the quarter.
- Several CA20 submodules were installed on the CA20 Platen inside the Module Assembly Building ("MAB") during the quarter in preparation for welding and weld repair. A total of forty (40) CA20 submodules had been delivered to the site from CB&I Lake Charles as of the end of the 1st quarter of 2013, with six (6) of these arriving on site during the 1st quarter of 2013. During the 3rd quarter of 2012, it was determined as a result of a WEC design review that the weld process used at many points on the modules, called a "fillet weld", did not meet the requirement reflected in the current licensing basis drawings for a full penetration weld. A CB&I subcontractor plans to repair welds in the affected CA20 submodules on the project site. Preparations for this process began during the 1st quarter of 2013. The delivery and assembly of all of the structural modules, including CA20, is a critical path activity and is likely to result in a delay in the completion date.

- Construction of the CA01 Platen to provide the support for the fabrication of the CA01 module inside the MAB was completed during 2nd quarter 2012. As of March 31, 2013, no CA01 submodules had been received on site. Assembly of the CA01 module is a critical path activity as CA01 must be set before installation of CV ring segments can progress beyond the 1st ring.
- The placement of leveling concrete in the Unit 3 Nuclear Island began in December 2012 in preparation for the placement of the waterproof membrane, the upper mudmat and the basemat concrete. This is a critical path activity for Unit 3.
- Plates for the Unit 3 CVBH were received on site, and some pre-assembly work was completed on these plates.
- Work continued on the Cooling Towers throughout the quarter. Precast components for Cooling Tower 2A continued to be set into place. Fans and fan shroud installation were also begun. Circulating Water System ("CWS") internal piping for Cooling Tower 3 B was completed and it is ready for turnover to Evaptech for erection of the cooling tower structure. Backfill of the Cooling Tower 2B foundation was completed and foundation piles began to be driven. Piles were also driven for the Unit 3 pump structure.
- Significant progress has been made on fabricating the Unit 2 Main Condenser with 40% of the required welding completed. The three main sections of the Main Condenser are all in fabrication adjacent to the Turbine Building location in preparation for setting on the Turbine Building foundation.
- Testing of the completed electrical switchyard was conducted and the switchyard was turned over to SCE&G's transmission department for operation.

Photographs of 1st quarter construction activities are shown in Appendix B.

Critical Path Activities

Critical path activities are those that drive the construction schedule. These assessments are based on previous critical paths and projected future critical paths.

- **Unit 2 Basemat:** The Unit 2 basemat began concrete pour on March 9, 2013 and was completed on March 11, 2013. This marked the completion of BLRA Milestone # 69.
- **Unit 2 CA01 Module:** Field assembly of the Unit 2 CA01 module was previously scheduled to begin in June 2011 but has not yet begun. The module segments required for the CA01 module are to be fabricated by CB&I Lake Charles, formerly known as Shaw Modular Solutions ("SMS"), and the delivery of these segments is behind schedule.

In previous quarterly reports, ORS discussed deficiencies related to CB&I Lake Charles' Quality Assurance Program ("QAP"). Additionally, production of the module segments has been repeatedly delayed due to module redesign and production issues. Since March 2012, SCE&G is maintaining a full-time presence at the CB&I Lake Charles facility, in addition to the previously-assigned WEC full-time presence, to monitor production and QAP issues. Also, monthly management meetings among SCE&G, WEC, CB&I and CB&I Lake Charles are being held to monitor CB&I Lake Charles progress. On October 24, 2012, SMS was issued a Notice of Nonconformance by the NRC for its QAP program. Responses to this Notice of Nonconformance were due to the NRC by November 30, 2012. However, CB&I Lake Charles requested and was granted an extension until January 11, 2013 to submit a response. This response was filed January 10, 2013.

The continued issues at CB&I Lake Charles affect construction of the CA01 and CA20 modules inside the MAB. Efforts continue to re-baseline the schedule. ORS will continue to closely monitor and report on issues related to CB&I Lake Charles. As the CA01 module must be placed before the setting of the CV rings can progress beyond the 1st ring this is a critical path activity. This critical path activity is behind schedule and could delay the completion date.

• Unit 2 CA20 Module: Site assembly of the CA20 module was previously scheduled to begin in November 2010, and the module was previously scheduled to be set prior to the end of the 4th quarter of 2011. CA20 submodule segments are being fabricated by CB&I. As of the end of the 3rd quarter of 2012 a sufficient quantity of submodules had been received on site to begin assembly of the module. However, WEC identified a discrepancy regarding welds in certain structural modules between WEC's technical drawings and the NRC approved design. This issue is part of a larger class of issues relating to discrepancies between the design specification and the NRC approved design. WEC and SCE&G undertook a comprehensive review of these issues and determined that certain fillet welds were required to be repaired to reflect the full penetration welds required by the COL. It was determined that the repairs to the CA20 submodules would be performed on site, and a contractor has been selected and

mobilized at the site, but no repair work has yet begun as of the end of the quarter. This critical path activity is behind schedule and could delay the completion date.

- **Unit 2 Containment Vessel:** The CVBH segments were delivered early, and assembly is currently on schedule. Installation of the CV is dependent on the placement of the Unit 2 basemat, and the critical path for the schedule recently approved in the Update Filing runs directly from the basemat pour through these activities.
- Unit 2 Shield Building: Because of the production and quality issues associated with CB&I Lake Charles, fabrication of the Shield Building modules has been reassigned to Newport News Industries ("NNI"). Mobilization and preparation for production continued at NNI throughout the quarter. However, no submodules have yet been delivered to the site, and a detailed schedule for their delivery is not yet available. In addition, mock-up materials were delivered to the site to test field activities related to the installation of the Shield Building modules. Installation of the Shield Building is dependent on the placement of the Unit 2 basemat. The critical path for the schedule recently approved in the Update Filing runs directly from the basemat pour through activities associated with the Unit 2 Containment Vessel and Shield Building. As the basemat pour has been delayed, this critical path activity is currently behind schedule.
- **Unit 3 Basemat:** Excavation and blasting has been completed in the Nuclear Island and Turbine Island areas. Geologic mapping of the subfoundation was completed in October of 2012, and this activity received a favorable NRC inspection report. The pouring of leveling concrete commenced in December of 2012. This critical path activity is on schedule.

Transmission

On February 28, 2011, SCE&G entered into a contract with Pike Electric for the permitting, engineering and design, procurement of material, and the construction of four (4) 230 kV transmission lines and associated facilities related to the Units. This project will consist of two phases.

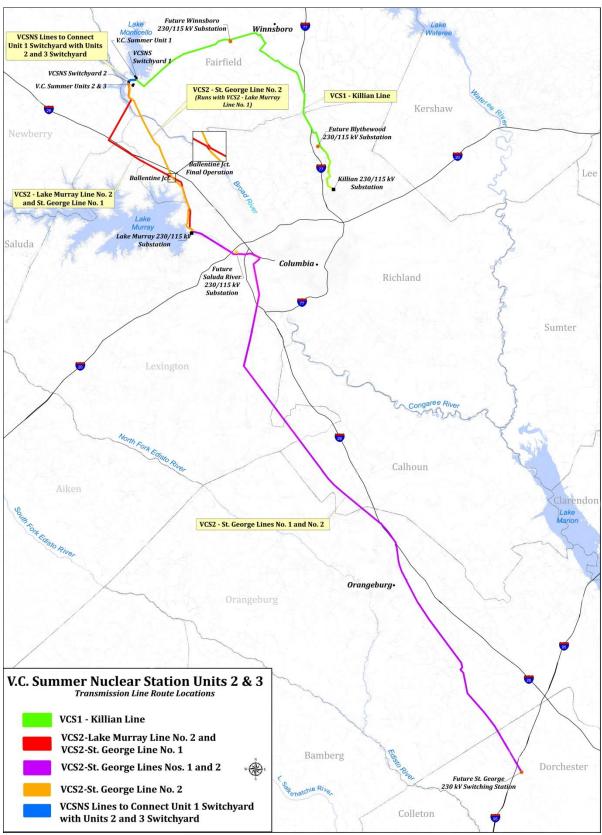
Phase 1 consists of construction of two (2) new 230 kV transmission lines in support of Unit 2: the VCS1–Killian Line and the VCS2–Lake Murray Line. The VCS1–Killian Line will connect the existing V.C. Summer Switchyard ("Switchyard 1") to the Company's existing Killian Road 230 kV Substation. The VCS2–Lake Murray Line will connect the newly-constructed Switchyard ("Switchyard 2") to the Company's existing Lake Murray 230 kV Substation. Switchyard 2 will allow the connection of both the Unit 2 and Unit 3 generators to the grid. Also, for Phase 1, two (2) new 230 kV interconnections between Switchyard 1 and Switchyard 2 have been constructed. Construction of the Phase 1 lines continued during the 1st quarter of 2013. As of March 31, 2013, the VCS1–Killian Line was approximately ninety-five percent (95%) complete and the VCS2–Lake Murray Line was approximately sixty percent (60%) complete.

Phase 2 consists of construction of two (2) new 230 kV transmission lines and associated facilities in support of Unit 3. These consist of the VCS2–St. George Line #1, VCS2–St. George Line #2, St. George 230 kV Switching Station, and Saluda River 230/115 kV Substation. Both the VCS2–St. George Line #1 and VCS2–St. George Line #2 will connect Switchyard 2 to the yet-to-be constructed St. George 230 kV Switching Station. Additionally, a third new 230 kV interconnection between Switchyard 1 and Switchyard 2 will be required for Phase 2. SCE&G also entered into an agreement to purchase the site for the Saluda River 230/115 kV Substation, to be built adjacent to and interconnect with the VCS2-St. George lines. The preliminary environmental assessment of this site has been completed.

On June 1, 2012, the Company filed its application for Phase 2 of the project with the Commission in Docket No. 2012-225-E. A hearing was conducted on August 22, 2012, and Order No. 2012-730 approving the application was issued by the Commission on September 26, 2012. Construction of the lines and associated facilities approved in Order No. 2012-730 has not yet begun.

Map 1 shows the geographical location of SCE&G's new transmission lines and other SCE&G associated facilities to support the Units.

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



Change Orders and Amendments

During the 1st quarter of 2013, no Change Orders or Amendments were executed. Four (4) Change Orders were under negotiation at the end of the 1st quarter 2013.

The first of these Change Orders would incorporate the settlement agreement with WEC/CB&I into the EPC Contract. The costs associated with this Change Order are incorporated in the Company's Update Filing. Execution of this change order has been delayed pending the resolution of a question regarding the application of the Handy-Whitman inflation indices. The Company is withholding payment of disputed amounts on invoices that are affected by these indices pending resolution of this matter.

The second Change Order under negotiation would incorporate Phase 2 of the cyber security changes catalogued in Change Order #14. The third incorporates potential design changes to the offsite water treatment system. The final Change Order under negotiation would address WEC's costs associated with recent federal health care legislation.

Table 3 details all Change Orders and Amendments. A list of definitions for each type of Change Order is found below.

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

<u>Table 3:</u>

Change Orders and Amendments

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

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

⁵ Fixed Price with 0% escalation, but would be applied to Time and Materials Work Allowances by adding a new category for Simulator Instructor training and reducing Startup Support by a commensurate amount.

Licensing and Inspection Activities

Federal Activities

As of March 31, 2013, SCE&G has identified the need to submit more than fifty (50) LARs to the NRC. The exact number of LARs required varies, as one LAR may address multiple identified issues. A LAR is the process by which a licensee requests changes to the COL issued by the NRC. The licensee may request a Preliminary Amendment Request ("PAR") to accompany a LAR. PARs allow the licensee to continue with construction at its own risk while awaiting final dispensation of the LAR. A table of LARs submitted to the NRC, and accompanying PARs, if requested, is attached as Appendix C. Issues surrounding the approval of LARs are discussed in more detail in the section entitled "Construction Challenges."

SCE&G received its annual assessment letter from the NRC on March 6, 2013. This letter summarizes inspection activities from January 1, 2012 through December 31, 2012, and is attached as Appendix D. The NRC concluded that, overall, the Units were being constructed in a manner that preserved public health and safety, and met all cornerstone objectives. At the time this report was issued, all violations cited were of the Green category, which carry very low safety significance.

The NRC conducts monthly civil inspections to monitor construction progress. While no additional issues were identified in the monthly civil inspections, discussions continued during the quarter surrounding the unresolved issue ("URI") related to concrete reinforcement in the basemat elevator pits and sump areas discussed in ORS's 3rd Quarter Report. On December 21, 2012, the NRC re-exited the September 2012 Monthly Civil Inspection identifying this as a potential violation.

On March 26, 2013, the NRC re-exited its September 2012 Monthly Civil Inspection again and identified one (1) potential White finding. White findings are findings of low to moderate safety significance. This finding was related to design control surrounding the issue of the concrete reinforcement in the basemat elevator pits and sump areas. Two LARs have since been approved by the NRC relating to this issue. The Company has submitted additional documentation to the NRC to help the NRC determine the final significance of this finding and a regulatory conference was scheduled for April 30, 2013. Further activities surrounding this potential violation are discussed in more detail in the section entitled "Notable Activities Occurring After March 31, 2013."

In addition to the monthly civil inspections, the NRC conducted inspections of the Unit 2 basemat rebar cage prior to and during the placement of concrete. The NRC identified two

minor violations. The NRC also conducted an inspection of Unit 2 CV Ring 1 welding activities in which no findings were identified.

The NRC is also closely monitoring the testing of squib valves, which are a type of valve used in the passive safety system of the Units. A meeting was held with the NRC on February 20, 2013 to discuss the testing program for squib valves.

State Activities

There are currently no major state construction-related permits outstanding.

Approved Budget Review

ORS's budget review includes an analysis of the 1st Quarter 2013 capital costs, project cash flow, escalation and Allowance for Funds Used During Construction ("AFUDC").

Capital Costs

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

- Fixed with No Adjustment
- Firm with Fixed Adjustment A
- Firm with Fixed Adjustment B
- Firm with Indexed Adjustment
- Actual Craft Wages
- Non-Labor Cost
- Time & Materials
- Owners Costs
- Transmission Projects

ORS monitors variances due to project changes (e.g., shifts in work scopes, payment timetables, construction schedule adjustments, Change Orders). At the end of the 1stquarter of 2013, SCE&G's total base project cost (in 2007 dollars) is \$4.548 billion.

Project Cash Flow

As shown in Appendix 2 of the Company's Report, the cumulative amount spent on the project as of December 31, 2012 was \$1.773 billion. The cumulative amount forecasted to be spent on the project by December 31, 2013 is \$2.701 billion.

With reference to Appendix 2, ORS evaluated the total revised project cash flow (Line 37) with respect to the annual project cash flow, adjusted for changes in escalation (Line 16). This evaluation provides a comparison of the Company's current project cash flow to the cash flow schedule approved by the Commission in Order No. 2012-884. To produce a common basis for the comparison, Line 16 adjusts the approved cash flow schedule to reflect the current escalation rates. As of December 31, 2012, the comparison shows the yearly maximum annual variance from the approved cash flow schedule through the life of the project. The comparison also shows that the cumulative project cash flow is forecasted to be approximately \$176.733 million under budget at the end of 2013. Due to escalation, at the completion of the project in

2018 the cumulative project cash flow is forecasted to be approximately \$54.092 million over budget.

Table 4 shows the annual and cumulative project cash flows as compared to those approved in Order No. 2012-884.

<u>Table 4:</u>

P	Project Cash Flow Comparison								
	\$'s in Thousands ⁶								
		Annual Over/(Under)	Cumulative Over/(Under)						
	2007	-	-						
	2008	\$0	\$0						
Actual	2009	\$0	\$0						
Act	2010	\$0	\$0						
	2011	\$0	\$0						
	2012	(\$142,004)	(\$142,004)						
	2013	(\$34,730)	(\$176,733)						
_	2014	\$48,737	(\$127,996)						
ected	2015	\$40,422	(\$87,574)						
Projected	2016	\$42,473	(\$45,101)						
Ч	2017	\$80,394	\$35,293						
	2018	\$18,799	\$54,092						

In summary, the Report shows no increase in the total base project cost (in 2007 dollars). Due to escalation, an increased project cash flow of approximately \$54.092 million is necessary to complete the project in 2018. These forecasts reflect the updated capital cost schedules approved in Order No. 2012-884, the current construction schedule and the inflation indices in the Company's Appendix 4. This increased project cash flow is due to increased escalation resulting from construction delays and short-term escalation rate increases since the filing.

⁶ Slight variances may occur due to rounding.

AFUDC and Escalation

The forecasted AFUDC for the total project as of the end of the 1st quarter of 2013 is \$243.198 million and is currently based on a forecasted 6.09% AFUDC rate.

Changes in the AFUDC rate, timing changes in project spending due to construction schedule shifts, and five-year average escalation rates are all factors that impact the projected project cash flow. Worldwide economic conditions previously reduced the projected escalation cost of the project; however, these economic conditions are now improving. Due to increases in AFUDC and escalation rates, as well as changes to the timing of payments due to construction delays, the overall project is over budget. More specifically, as of March 31, 2013, the SCE&G forecasted gross construction cost of the plant is \$5.765 billion as compared to the approved gross construction cost of \$5.754 billion, which represents an increase of approximately \$11 million.

Annual Request for Revised Rates

Pursuant to the BLRA, SCE&G may request revised rates no earlier than one year after the request of a Base Load Review Order or any prior revised rates request. SCE&G filed its Annual Request for Revised Rates with the Commission in Docket No. 2013-150-E on May 30, 2013, the anniversary date of SCE&G's previous request for revised rates.

Table 5 below shows the requested increases and approved increases from all prior Revised Rate Filings with the Commission.

Requested vs. Approved Increases SCE&G Revised Rate Filings								
Docket No.	Order No.	Requested Increase	ORS Examination	Approved Increase	Retail Increase			
2008-196-Е	2009-104(A)	\$8,986,000	(\$1,183,509)	\$7,802,491	0.43%			
2009-211-Е	2009-696	\$22,533,000	\$0	\$22,533,000	1.10%			
2010-157-Е	2010-625	\$54,561,000	(\$7,260,000)	\$47,301,000	2.31%			
2011-207-Е	2011-738	\$58,537,000	(\$5,753,658)	\$52,783,342	2.43%			
2012-186-Е	2012-761	\$56,747,000	(\$4,598,087)	\$52,148,913	2.33%			
2013-150-Е	N/A	\$69,671,000	N/A	N/A	N/A			

<u> Table 5:</u>

Additional ORS Monitoring Activities

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

- Audits capital cost expenditures and resulting AFUDC in CWIP
- Physically observes construction activities
- Bi-monthly on-site review of construction documents
- Holds monthly update meetings with SCE&G
- Meets quarterly with representatives of WEC
- Participates in NRC Public Meetings regarding SCE&G COL and other construction activities

Construction Challenges

Based upon the information provided by the Company in its Report, as well as information obtained via additional ORS monitoring activities, ORS identifies the following ongoing challenges in the construction of the Units:

Nuclear Island Basemat

The issues surrounding the pouring of the Unit 2 Nuclear Island basemat were previously identified as a significant construction challenge. SCE&G successfully completed the concrete pour of the Unit 2 Nuclear Island basemat on March 11, 2013. ORS will, however, continue to closely monitor the progress of Unit 3 Nuclear Island basemat.

Structural Modules

The most significant, currently identified challenge to the project is the continued inability of CB&I Lake Charles to reliably meet the quality and schedule requirements of the Project. Despite intense and continuous management focus from CB&I Lake Charles, CB&I, WEC and SCE&G, CB&I Lake Charles has been unable to meet its revised schedules to deliver submodules to VCS in a timely manner. CB&I Lake Charles has also continued to struggle with quality issues, ranging from design compliance to the completion of final inspection paperwork. With the issues surrounding the Nuclear Island basemat concrete pour resolved, this issue is the most immediate challenge to the project. Although SCE&G and CB&I have demonstrated success performing the field activities associated with the on-site assembly of the limited number of CA20 modules received, this area remains as a significant challenge to the Project. Specifically, the on-site weld repairs that need to be made, resulting from an incorrect interpretation of the approved design during the module fabrication process, and the assembly of the submodules into modules to be installed in the Nuclear Island, are significant construction challenges.

Shield Building Modules

Although shield building module fabrication has been reassigned to NNI, thus freeing CB&I Lake Charles to concentrate on the structural modules, NNI's performance has not yet been demonstrated and a delivery schedule has not yet been provided. The shield building modules are more complex and present even greater fabrication and erection challenges to the Project than the structural modules. Though some mock-ups have been produced, these mock-ups are only being used for testing purposes. The full extent of challenges in this area remains unknown; however, given the Project's history with structural module fabrication, it is an area of concern moving forward. NNI will need to demonstrate sustained and reliable performance

in both the quality and on-time delivery of submodules, and CB&I will need to do the same in the area of erecting the shield building modules on-site.

Structural Design Compliance

The issues relating to the basemat design, as well as a portion of the issues relating to the structural modules and shield building modules, are related to compliance with the design approved by the NRC. This structural design compliance is emerging as an issue affecting multiple areas of the project. WEC has had challenges providing accurate directions for fabrication, in part because of differences in the interpretation of the Design Control Document ("DCD") approved by the NRC. Issues range from a lack of compliance to applicable building codes for concrete and rebar to the failure to correctly translate the requirement for full penetration welds in structural modules to documents used for fabrication. This raises questions of whether the overall WEC structural design will face similar challenges at each new phase of construction. WEC has taken steps to engage the services of structural experts from several leading nuclear plant design and engineering firms to assist them in the structural design area, which indicates a commitment to addressing these issues going forward. This is an area that presents a significant continuing challenge to the project, and remains an open concern at this time. The next area of challenges in structural design compliance relates to the connections used between the walls and the Nuclear Island basemat. Sustained progress in this area will be a key indicator of how the project will address the remaining structural compliance issues. These concerns have resulted in many design drawings placed on "hold" and WEC needs to provide a detailed schedule for the release of the holds on these design drawings so that they can be released for construction.

Instrumentation and Control Design

The completion of the WEC Instrumentation and Control ("I&C") design is also presenting a significant challenge to the project. The most obvious impact that is of concern is the effect of this on the availability of the Plant Reference Simulator ("PRS"). The PRS must be available in time to support operator training. The current schedule for delivery of the PRS has very little margin for any delays. However, I&C design must also support plant equipment procurement and construction activities above and beyond those required for completion of the PRS. This is also presenting a significant challenge to the project that must be monitored closely.

Overlapping Unit 2 & Unit 3 Construction Schedules

The delays in starting Unit 2 construction, in particular those associated with Nuclear Island basemat completion and structural submodule fabrication and erection, may begin to challenge the ability of the project to work on both Units simultaneously while adhering to the approved schedule. This has the potential to result in significant challenges to the Unit 3 construction schedule. A detailed integrated schedule for both units must be provided that

reflects how this challenge will be addressed and sustained satisfactory performance in meeting these schedules must be demonstrated to alleviate this concern.

Manufacturing of Major Equipment

Factors such as design changes, labor conditions, shipping conditions, and the financial stability of foreign manufacturers due to financial market conditions must be monitored closely. Significant progress was demonstrated this quarter with the completion of the hydrotests on Steam Generator A, the Deaerator and the Moisture-Separator Reheaters; however, these challenges still remain for the remaining equipment.

License Amendment Reviews

The NRC reviews of the LARs are proving to be more problematic and to require significantly more resources than originally planned. As demonstrated by the extended review required of the basemat reinforcing LARs, the activities and efforts required resulted in actual construction delays and costs. There are several additional LARs that may require similar efforts. Therefore, the resolution of these LARs presents a potential challenge to the construction of the Units.

Notable Activities Occurring after March 31, 2013

The BLRA allows SCE&G forty-five (45) days from the end of the current quarter to file its Report. Items of importance that occurred subsequent to the closing of the 1^{st} quarter of 2013 are reported below.

CB&I Lake Charles NRC Violation

On April 19, 2013 the NRC issued a notice of violation to CB&I for discrimination against an employee who raised a safety concern. These events occurred prior to CB&I's acquisition of Shaw, Inc. The NRC has proposed a penalty of \$36,400. The NRC has also issued an order directing CB&I to improve the nuclear safety culture at CB&I Lake Charles. The NRC particularly emphasized that it would like to see improvements to the policies and organizational structure for reporting safety concerns by CB&I Lake Charles workers. A press release by the NRC regarding these issues is included as Appendix E.

NRC Licensing

On March 26, 2013 the NRC re-exited its September 2012 Monthly Civil Inspection and identified one (1) potential White finding. White findings are findings of low to moderate safety significance. This finding was issued related to design control surrounding the issue of the concrete reinforcement in the basemat elevator pits and sump areas. Two LARs have since been approved by the NRC relating to this issue. The Company has submitted additional documentation to the NRC to help the NRC determine the final significance of this finding and a regulatory conference was scheduled for April 30, 2013. The information presented at the regulatory conference satisfied the NRC and the finding was determined to be a green finding on May 16, 2013. The letter from the NRC detailing the final determination of this finding is attached as Appendix F.

Construction Schedule

On June 5, 2013 SCE&G announced at its Analyst Day presentation that due to continuing challenges with the schedule for submodule fabrication, it anticipated a delay in the completion of the Units. The Company's estimated range for the completion of Unit 2 is between the beginning of the 4th quarter of 2017 and the end of the 1st quarter of 2018. The Consortium has not yet provided new estimates for the completion of Unit 3; however, it is likely that it will be delayed as well, in a similar manner to Unit 2. SCE&G has estimated their portion of the potential cost to the project for the delay of both Units to be approximately \$200 million. SCE&G has not accepted responsibility for these incremental costs. A copy of SCE&G's Analyst Day presentation is attached as Appendix G.

Unit 2 CVBH Placement

The Unit 2 CVBH was placed into the CR10 module on May 22, 2013. After its placement and final survey, the clearance beneath the CVBH was determined to be approximately 0.7 inch lower than expected in a several locations. While this clearance is not a licensing issue, it presents a problem for construction equipment and piping that must access the area under the CVBH. The Consortium has since raised the CVBH to remedy these issues and lowered the CVBH again to its final alignment. Grout was then placed underneath the CVBH on June 30, 2013.

Unit 2 CR10 Placement

Subsequent to the placement of the Unit 2 CVBH in the CR10 module, cracking was observed in the grout which is packed around the bolts securing the CR10 module to the basemat. As with concrete, samples of grout are routinely taken during pouring for testing at set intervals after installation. The most recent tests of these samples showed a lower development strength than was expected. The Consortium considered removing the grout and replacing it, but has since determined the grout to be structurally adequate as is and plans to use it as installed.

SCE&G's 2013 2nd quarter report is due forty-five (45) days after June 30, 2013. ORS expects to continue publishing a review evaluating SCE&G's quarterly reports.

Detailed Milestone Schedule as of March 31, 2013

		Key:	Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
1	Approve Engineering, Procurement and Construction Agreement	5/23/2008		No	No	5/23/2008	
2	Issue Purchase Orders ("P.O.") to Nuclear Component Fabricators for Units 2 and 3 Containment Vessels	12/3/2008		No	No	12/3/2008	
3	Contractor Issue P.O. to Passive Residual Heat Removal Heat Exchanger Fabricator – First Payment - Unit 2	8/31/2008		No	No	8/18/2008	
4	Contractor Issue P.O. to Accumulator Tank Fabricator – Unit 2	7/31/2008		No	No	7/31/2008	
5	Contractor Issue P.O. to Core Makeup Tank Fabricator - Units 2 & 3	9/30/2008		No	No	9/30/2008	
6	Contractor Issue P.O. to Squib Valve Fabricator- Units 2 & 3	3/31/2009		No	No	3/31/2009	
7	Contractor Issue P.O. to Steam Generator Fabricator - Units 2 & 3	6/30/2008		No	No	5/29/2008	1 Month Early
8	Contractor Issue Long Lead Material P.O. to Reactor Coolant Pump Fabricator - Units 2 & 3	6/30/2008		No	No	6/30/2008	
9	Contractor Issue P.O. to Pressurizer Fabricator - Units 2 & 3	8/31/2008		No	No	8/18/2008	
10	Contractor Issue P.O. to Reactor Coolant Loop Pipe Fabricator - First Payment - Units 2 & 3	6/30/2008		No	No	6/20/2008	

		Key:	Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
11	Reactor Vessel Internals – Issue Long Lead Material P.O. to Fabricator - Units 2 & 3	11/21/2008		No	No	11/21/2008	
12	Contractor Issue Long Lead Material - P.O. to Reactor Vessel Fabricator - Units 2 & 3	6/30/2008		No	No	5/29/2008	1 Month Early
13	Contractor Issue P.O. to Integrated Head Package Fabricator - Units 2 & 3	7/31/2009		No	No	7/31/2009	
14	Control Rod Drive Mechanism – Issue P.O. for Long Lead Material to Fabricator - Units 2 & 3 - First Payment	6/21/2008		No	No	6/21/2008	
15	Issue P.O.'s to Nuclear Component Fabricators for Nuclear Island Structural CA20 Modules	7/31/2009		No	No	8/28/2009	
16	Start Site Specific and Balance of Plant Detailed Design	9/11/2007		No	No	9/11/2007	
17	Instrumentation & Control Simulator - Contractor Place Notice to Proceed - Units 2 & 3	10/31/2008		No	No	10/31/2008	
18	Steam Generator - Issue Final P.O. to Fabricator for Units 2 & 3	6/30/2008		No	No	6/30/2008	
19	Reactor Vessel Internals - Contractor Issue P.O. for Long Lead Material (Heavy Plate and Heavy Forgings) to Fabricator - Units 2 & 3	1/31/2010		No	No	1/29/2010	
20	Contractor Issue Final P.O. to Reactor Vessel Fabricator - Units 2 & 3	9/30/2008		No	No	9/30/2008	

		Key:	Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
21	Variable Frequency Drive Fabricator Issue Transformer P.O Units 2 & 3	4/30/2009		No	No	4/30/2009	
22	Start Clearing, Grubbing and Grading	1/26/2009		No	No	1/26/2009	
23	Core Makeup Tank Fabricator Issue Long Lead Material P.O Units 2 & 3	10/31/2008		No	No	10/31/2008	
24	Accumulator Tank Fabricator Issue Long Lead Material P.O Units 2 & 3	10/31/2008		No	No	10/31/2008	
25	Pressurizer Fabricator Issue Long Lead Material P.O Units 2 & 3	10/31/2008		No	No	10/31/2008	
26	Reactor Coolant Loop Pipe - Contractor Issue P.O. to Fabricator - Second Payment - Units 2 & 3	4/30/2009		No	No	4/30/2009	
27	Integrated Head Package - Issue P.O. to Fabricator - Units 2 & 3 - Second Payment	7/31/2009		No	No	7/31/2009	
28	Control Rod Drive Mechanism - Contractor Issue P.O. for Long Lead Material to Fabricator - Units 2 & 3	6/30/2008		No	No	6/30/2008	
29	Contractor Issue P.O. to Passive Residual Heat Removal Heat Exchanger Fabricator - Second Payment - Units 2 & 3	10/31/2008		No	No	10/31/2008	
30	Start Parr Road Intersection Work	2/13/2009		No	No	2/13/2009	

		Key:	Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
31	Reactor Coolant Pump - Issue Final P.O. to Fabricator - Units 2 & 3	6/30/2008		No	No	6/30/2008	
32	Integrated Heat Packages Fabricator Issue Long Lead Material P.O Units 2 & 3	10/31/2009		No	No	10/1/2009	1 Month Early
33	Design Finalization Payment 3	1/31/2009		No	No	1/30/2009	
34	Start Site Development	6/23/2008		No	No	6/23/2008	
35	Contractor Issue P.O. to Turbine Generator Fabricator - Units 2 & 3	2/28/2009		No	No	2/19/2009	
36	Contractor Issue P.O. to Main Transformers Fabricator - Units 2 & 3	9/30/2009		No	No	9/25/2009	
37	Core Makeup Tank Fabricator Notice to Contractor Receipt of Long Lead Material - Units 2 & 3	11/30/2010		No	No	12/30/2010	Delayed 1 Month
38	Design Finalization Payment 4	4/30/2009		No	No	4/30/2009	
39	Turbine Generator Fabricator Issue P.O. for Condenser Material - Unit 2	8/31/2009		No	No	8/28/2009	
40	Reactor Coolant Pump Fabricator Issue Long Lead Material Lot 2 - Units 2 & 3	4/30/2009		No	No	4/30/2009	

		Key:	Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
41	Passive Residual Heat Removal Heat Exchanger Fabricator Receipt of Long Lead Material - Units 2 & 3	5/31/2010		No	No	5/27/2010	
42	Design Finalization Payment 5	7/31/2009		No	No	7/31/2009	
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	10/9/2009		No	No	12/18/2009	Delayed 2 Months
44	Reactor Vessel Fabricator Notice to Contractor of Receipt of Flange Nozzle Shell Forging - Unit 2	7/31/2009		No	No	8/28/2009	
45	Design Finalization Payment 6	10/31/2009		No	No	10/7/2009	
46	Instrumentation and Control Simulator - Contractor Issue P.O. to Subcontractor for Radiation Monitor System - Units 2 & 3	12/31/2009		No	No	12/17/2009	
47	Reactor Vessel Internals - Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	6/30/2011		No	No	7/29/2011	
48	Turbine Generator Fabricator Issue P.O. for Moisture Separator Reheater/Feedwater Heater Material - Unit 2	4/30/2010		No	No	4/30/2010	
49	Reactor Coolant Loop Pipe Fabricator Acceptance of Raw Material - Unit 2	4/30/2010		No	No	2/18/2010	2 Months Early

		Key:	Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
50	Reactor Vessel Internals - Fabricator Start Weld Neutron Shield Spacer Pads to Assembly - Unit 2	7/31/2012		No	No	8/28/2012	
51	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 2	6/30/2009		No	No	6/30/2009	
52	Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 2	11/30/2010		No	No	12/23/2010	
53	Start Excavation and Foundation Work for the Standard Plant for Unit 2	3/15/2010		No	No	3/15/2010	
54	Steam Generator Fabricator Notice to Contractor of Receipt of 2nd Steam Generator Tubesheet Forging - Unit 2	2/28/2010		No	No	4/30/2010	Delayed 2 Months
55	Reactor Vessel Fabricator Notice to Contractor of Outlet Nozzle Welding to Flange Nozzle Shell Completion - Unit 2	2/28/2010		No	No	12/30/2010	Delayed 10 Months
56	Turbine Generator Fabricator Notice to Contractor Condenser Fabrication Started - Unit 2	5/31/2010		No	No	5/17/2010	
57	Complete Preparations for Receiving the First Module On Site for Unit 2	8/18/2010		No	No	1/22/2010	6 Months Early
58	Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Transition Cone Forging - Unit 2	4/30/2010		No	No	4/21/2010	
59	Reactor Coolant Pump Fabricator Notice to Contractor of Manufacturing of Casing Completion - Unit 2	11/30/2010		No	No	11/16/2010	

		Key:	Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
60	Reactor Coolant Loop Pipe Fabricator Notice to Contractor of Machining, Heat Treating & Non- Destructive Testing Completion - Unit 2	12/31/2010		No	No	3/20/2012	Delayed 14 Months
61	Core Makeup Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 2	9/30/2012		No	No	11/26/2012	Delayed 1 Month
62	Polar Crane Fabricator Issue P.O. for Main Hoist Drum and Wire Rope - Units 2 & 3	2/28/2011		No	No	2/1/2011	
63	Control Rod Drive Mechanisms - Fabricator to Start Procurement of Long Lead Material - Unit 3	6/30/2011		No	No	6/14/2011	
64	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 2	10/31/2011		No	No	3/26/2012	Delayed 4 Months
65	Start Placement of Mud Mat for Unit 2	6/29/2012		No	No	7/20/2012	
66	Steam Generator Fabricator Notice to Contractor of Receipt of 1st Steam Generator Tubing - Unit 2	1/31/2011		No	No	9/28/2010	4 Months Early
67	Pressurizer Fabricator Notice to Contractor of Welding of Upper and Intermediate Shells Completion - Unit 2	10/31/2010		No	No	10/28/2011	Delayed 12 Months
68	Reactor Vessel Fabricator Notice to Contractor of Closure Head Cladding Completion - Unit 3	6/30/2012		No	No	6/28/2012	

Ke		Key:	Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
69	Begin Unit 2 First Nuclear Concrete Placement	8/24/2012		No	No	3/9/2013	Delayed 6 Months
70	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 2	9/30/2011		No	No	12/1/2011	Delayed 2 Months
71	Fabricator Start Fit and Welding of Core Shroud Assembly - Unit 2	6/30/2011		No	No	7/29/2011	
72	Steam Generator Fabricator Notice to Contractor of Completion of 1st Steam Generator Tubing Installation - Unit 2	5/31/2011		No	No	1/27/2012	Delayed 8 Months
73	Reactor Coolant Loop Pipe - Shipment of Equipment to Site - Unit 2	12/31/2012	9/30/2013	No	No		Delayed 9 Months
74	Control Rod Drive Mechanism - Ship Remainder of Equipment (Latch Assembly & Rod Travel Housing) to Head Supplier - Unit 2	6/30/2012		No	No	7/16/2012	
75	Pressurizer Fabricator Notice to Contractor of Welding of Lower Shell to Bottom Head Completion - Unit 2	10/31/2010		No	No	12/22/2011	Delayed 13 Months
76	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 2	5/31/2012		No	No	5/4/2012	
77	Design Finalization Payment 14	10/31/2011		No	No	10/31/2011	

Key:		Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone	
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
78	Set Module CA04 For Unit 2	11/6/2012	8/6/2013	No	No		Delayed 9 Months
79	Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Final Post Weld Heat Treatment - Unit 2	6/30/2010		No	No	5/24/2011	Delayed 10 Months
80	Passive Residual Heat Removal Heat Exchanger Fabricator Notice to Contractor of Completion of Tubing - Unit 2	5/31/2012		No	No	5/29/2012	
81	Polar Crane Fabricator Notice to Contractor of Girder Fabrication Completion - Unit 2	10/31/2012		No	No	10/23/2012	
82	Turbine Generator Fabricator Notice to Contractor Condenser Ready to Ship - Unit 3	8/31/2013	8/31/2013	No	No		
83	Set Containment Vessel Ring #1 for Unit 2	1/7/2013	9/4/2013	No	No		Delayed 8 Months
84	Reactor Coolant Pump Fabricator Delivery of Casings to Port of Export - Unit 2	7/31/2012	6/11/2013	No	No		Delayed 10 Months
85	Reactor Coolant Pump Fabricator Notice to Contractor of Stator Core Completion - Unit 3	8/31/2013	8/31/2013	No	No		
86	Reactor Vessel Fabricator Notice to Contractor of Receipt of Core Shell Forging - Unit 3	9/30/2012		No	No	3/29/2012	6 Months Early

		Key:	Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
87	Contractor Notified that Pressurizer Fabricator Performed Cladding on Bottom Head - Unit 3	1/31/2013		No	No	11/9/2011	14 Months Early
88	Set Nuclear Island Structural Module CA03 for Unit 2	6/26/2013	2/3/2014	No	No		Delayed 7 Months
89	Squib Valve Fabricator Notice to Contractor of Completion of Assembly and Test for Squib Valve Hardware - Unit 2	5/31/2012		No	No	5/10/2012	
90	Accumulator Tank Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	3/31/2013	7/31/2013	No	No		Delayed 4 Months
91	Polar Crane Fabricator Notice to Contractor of Electric Panel Assembly Completion - Unit 2	3/31/2013		No	No	3/6/2013	
92	Start Containment Large Bore Pipe Supports for Unit 2	6/28/2013	1/10/2014	No	No		Delayed 6 Months
93	Integrated Head Package - Shipment of Equipment to Site - Unit 2	3/31/2013	2/28/2014	No	No		Delayed 11 Months
94	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 2	5/31/2013	9/30/2013	No	No		Delayed 4 Months
95	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Steam Generator Tubing Installation - Unit 3	6/30/2013	7/31/2013	No	No		Delayed 1 Month

	Key:		Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
96	Steam Generator Fabricator Notice to Contractor of Satisfactory Completion of 1st Steam Generator Hydrotest - Unit 2	1/31/2013		No	No	1/14/2013	
97	Start Concrete Fill of Nuclear Island Structural Modules CA01 and CA02 for Unit 2	4/3/2014	7/22/2013	No	No		8 Months Early
98	Passive Residual Heat Removal Heat Exchanger - Delivery of Equipment to Port of Entry - Unit 2	12/31/2012	7/31/2013	No	No		Delayed 7 Months
99	Refueling Machine Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 2	11/30/2013	10/31/2013	No	No		1 Month Early
100	Deliver Reactor Vessel Internals to Port of Export - Unit 2	1/31/2014	5/31/2014	No	No		Delayed 4 Months
101	Set Unit 2 Containment Vessel #3	4/24/2014	10/20/2014	No	No		Delayed 5 Months
102	Steam Generator - Contractor Acceptance of Equipment at Port of Entry - Unit 2	7/31/2013	9/30/2013	No	No		Delayed 2 Months
103	Turbine Generator Fabricator Notice to Contractor Turbine Generator Ready to Ship - Unit 2	4/30/2013	5/31/2013	No	No		Delayed 1 Month
104	Pressurizer Fabricator Notice to Contractor of Satisfactory Completion of Hydrotest - Unit 3	3/31/2014	12/31/2013	No	No		3 Months Early

Key:		Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone	
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
105	Polar Crane - Shipment of Equipment to Site - Unit 2	1/31/2014	11/30/2013	No	No		2 Months Early
106	Receive Unit 2 Reactor Vessel On Site From Fabricator	5/13/2014	8/31/2013	No	No		8 Months Early
107	Set Unit 2 Reactor Vessel	6/23/2014	7/18/2014	No	No		
108	Steam Generator Fabricator Notice to Contractor of Completion of 2nd Channel Head to Tubesheet Assembly Welding - Unit 3	12/31/2013	2/28/2014	No	No		Delayed 1 Month
109	Reactor Coolant Pump Fabricator Notice to Contractor of Final Stator Assembly Completion - Unit 3	8/31/2014	12/31/2014	No	No		Delayed 4 Months
110	Reactor Coolant Pump - Shipment of Equipment to Site (2 Reactor Coolant Pumps) - Unit 2	10/31/2013	11/30/2013	No	No		Delayed 1 Month
111	Place First Nuclear Concrete for Unit 3	10/9/2013	10/13/2013	No	No		
112	Set Unit 2 Steam Generator	10/23/2014	11/14/2013	No	No		11 Months Early
113	Main Transformers Ready to Ship - Unit 2	9/30/2013	11/30/2013	No	No		Delayed 2 Months

		Key:	Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
114	Complete Unit 3 Steam Generator Hydrotest at Fabricator	2/28/2014	7/31/2014	No	No		Delayed 5 Months
115	Set Unit 2 Containment Vessel Bottom Head on Basemat Legs	10/11/2012	5/24/2013	No	No		Delayed 7 Months
116	Set Unit 2 Pressurizer Vessel	5/16/2014	8/27/2014	No	No		Delayed 3 Months
117	Reactor Coolant Pump Fabricator Notice to Contractor of Satisfactory Completion of Factory Acceptance Test - Unit 3	2/28/2015	1/31/2015	No	No		
118	Deliver Reactor Vessel Internals to Port of Export - Unit 3	6/30/2015	3/31/2015	No	No		3 Months Early
119	Main Transformers Fabricator Issue P.O. for Material - Unit 3	2/28/2015	2/28/2015	No	No		
120	Complete Welding of Unit 2 Passive Residual Heat Removal System Piping	2/5/2015	2/3/2015	No	No		
121	Steam Generator - Contractor Acceptance of Equipment At Port of Entry - Unit 3	4/30/2015	12/31/2014	No	No		4 Months Early
122	Refueling Machine - Shipment of Equipment to Site - Unit 3	2/28/2015	10/31/2014	No	No		4 Months Early
123	Set Unit 2 Polar Crane	1/9/2015	3/26/2015	No	No		Delayed 2 Months

	Key:		Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
124	Reactor Coolant Pumps - Shipment of Equipment to Site - Unit 3	6/30/2015	9/30/2015	No	No		Delayed 3 Months
125	Main Transformers Ready to Ship - Unit 3	7/31/2015	5/31/2015	No	No		2 Months Early
126	Spent Fuel Storage Rack - Shipment of Last Rack Module - Unit 3	7/31/2014	7/31/2014	No	No		
127	Start Electrical Cable Pulling in Unit 2 Auxiliary Building ²	8/14/2013	3/26/2014	No	No		Delayed 7 Months
128	Complete Unit 2 Reactor Coolant System Cold Hydro	1/22/2016	2/25/2016	No	No		Delayed 1 Month
129	Activate Class 1E DC Power in Unit 2 Auxiliary Building	3/15/2015	4/28/2015	No	No		Delayed 1 Month
130	Complete Unit 2 Hot Functional Test	5/3/2016	5/11/2016	No	No		
131	Install Unit 3 Ring 3 for Containment Vessel	8/25/2015	10/15/2015	No	No		Delayed 1 Month
132	Load Unit 2 Nuclear Fuel	9/15/2016	12/11/2016	No	No		Delayed 2 Months
133	Unit 2 Substantial Completion	3/15/2017	3/15/2017	No	No		

Кеу:		Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone	
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
134	Set Unit 3 Reactor Vessel	10/22/2015	7/7/2015	No	No		3 Months Early
135	Set Unit 3 Steam Generator #2	2/25/2016	11/17/2015	No	No		3 Months Early
136	Set Unit 3 Pressurizer Vessel	7/16/2015	7/22/2015	No	No		
137	Complete Welding of Unit 3 Passive Residual Heat Removal System Piping	6/16/2016	2/17/2016	No	No		4 Months Early
138	Set Unit 3 Polar Crane	5/9/2016	6/9/2016	No	No		Delayed 1 Month
139	Start Unit 3 Shield Building Roof Slab Rebar Placement	5/26/2016	3/30/2016	No	No		1 Month Early
140	Start Unit 3 Auxiliary Building Electrical Cable Pulling ²	11/7/2014	1/20/2015	No	No		Delayed 2 Months
141	Activate Unit 3 Auxiliary Building Class 1E DC Power	5/15/2016	5/28/2016	No	No		
142	Complete Unit 3 Reactor Coolant System Cold Hydro	3/22/2017	1/19/2017	No	No		2 Months Early
143	Complete Unit 3 Hot Functional Test	7/3/2017	3/30/2017	No	No		3 Months Early

		Key:	Milestones Not Completed	Completed Prior to Q1-13	Current Quarter	Scheduled to Be Completed Q2-13	ORS Caution Milestone
Activity No.	Milestone	Completion Date Approved in Order No. 2012-884	Scheduled Completion Date as of Q1-13	Outside 18 - 24 Month Contingency?	Impact to Substantial Completion Date? ¹	Actual Completion Date	Deviation from Order No. 2012-884
144	Complete Unit 3 Nuclear Fuel Load	11/15/2017	11/10/2017	No	No		
145	Begin Unit 3 Full Power Operation	4/8/2018	4/27/2018	No	No		
146	Unit 3 Substantial Completion	5/15/2018	5/15/2018	No	No		

Notes:

White highlighting represents Future or Historical Milestones that have not been completed.
Grey highlighting represents Future or Historical Milestones that were completed prior to the 1st Quarter 2013.
Yellow highlighting represents those Milestones that are scheduled to be or have been completed during the 1st Quarter 2013. This is based on the schedule approved by the Commission in Order No. 2012-884.
Green highlighting represents Future Milestones that are scheduled to be completed in the 2nd Quarter of 2013. This is based on the schedule approved by the Commission in Order No. 2012-884.
Red highlighting represents "Caution Milestones." Caution Milestones are

Red highlighting represents "Caution Milestones." Caution Milestones are those that are delayed by 10 months or greater.

Appendix B

Construction Site Photographs

Unit 2 Nuclear Island



Unit 2 Turbine Island



Unit 2 Condenser



Cooling Tower 2A



Unit 3 Nuclear Island

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03/15/2013

Appendix C

License Amendment Requests

Appendix C

NRC LAR No.	Summary	LAR Submittal Date	LAR Status	LAR Approval Date	PAR Status	PAR No Objection Letter Date
12-01	Stud Spacing around Electrical Penetrations	8/29/2012	Pending			
12-02	Definition of Wall Thickness in Table 3.3.1	9/26/2012	Pending	5/30/2013	Approved	1/16/2013
13-01	Basemat Shear Reinforcement Design Spacing	1/15/2013	Approved	2/26/2013	Approved	1/29/2013
13-02	Basemat Shear Reinforcement Design Details	1/18/2013	Approved	3/1/2013	Approved	1/29/2013
13-03	Turbine Building Eccentric and Concentric Bracing	2/7/2013	Pending			
13-04	Reconciliation of Tier 1 Value Differences	2/7/2013	Pending			
13-05	Structural Module Shear Stud Size and Spacing	2/14/2013	Approved	5/23/2014		
13-06	Primary Sampling System Changes	2/7/2013	Pending			
13-07	Changes to Chemical and Volume Control System	3/13/2013	Pending			
13-08	Module Obstructions and Details	2/28/2013	Withdrawn			
13-09	Reserved					
13-10	Human Factors Engineering Integrated Plan	3/13/2013	Pending			
13-11	Nuclear Island Walls Reinforcement Criteria	3/26/2013	Approved	6/6/2013	Approved	4/10/2013

Appendix D

NRC Annual Assessment Letter VCS Units 2 & 3



UNITED STATES NUCLEAR REGULATORY COMMISSION REGION II 245 PEACHTREE CENTER AVENUE NE, SUITE 1200 ATLANTA, GEORGIA 30303-1257

March 4, 2013

Mr. Ronald A. Jones Vice President, New Nuclear Operations South Carolina Electric and Gas P.O. Box 88 (Mail Code P40) Jenkinsville, SC 29065-0088

SUBJECT: ANNUAL ASSESSMENT LETTER FOR VIRGIL C. SUMMER NUCLEAR STATION UNITS 2 & 3 (REPORT 05200027/2012001 AND 05200028/2012001)

Dear Mr. Jones:

On February 11, 2013, the NRC completed its end-of-cycle performance review of Virgil C. Summer Nuclear Station Units 2 & 3 (V. C. Summer 2 & 3). The NRC reviewed inspection results and enforcement actions from January 1, 2012, through December 31, 2012. This letter informs you of the NRC's assessment of your facility during this period and the NRC's plans for future inspections at your facility.

The NRC determined that overall, V. C. Summer 2 & 3 were being constructed in a manner that preserved public health and safety and met all cornerstone objectives. The NRC determined the performance at V. C. Summer 2 & 3 during the most recent quarter was within the Licensee Response Column of the NRC's Construction Reactor Oversight Process Action Matrix because all inspection findings had very low (i.e., green) safety significance. Therefore, the NRC plans to conduct Construction Reactor Oversight Process baseline inspections at your facility. Based on this assessment, the NRC plans to include design control and receipt inspection as focus areas during upcoming baseline inspections. However, an Unresolved Item involving the anchorage and spacing of the t-headed shear reinforcement in the nuclear island was identified by the NRC in Inspection Report 05200027/2012004 and 05200028/2012004. The determination of the significance of this issue could affect the licensee's position in the construction matrix. This in turn could impact future inspection activities at the V.C. Summer Units 2 & 3.

This letter also summarizes the NRC's assessment of the corrective action program (CAP) used to identify and correct issues associated with the construction of V. C. Summer 2 & 3. Since the beginning of safety related construction in April 2012, the NRC has inspected multiple aspects of the CAPs in use at V.C. Summer 2 & 3 during various inspections. These inspections include several quality assurance and technical team inspections, a team inspection focused on the CAP, and inspections performed by the resident inspectors including daily CAP reviews and detailed reviews of a sample of issues entered into the CAP.

During these inspections, the NRC evaluated the adequacy of the CAP documents and the effectiveness of their implementation. These inspections included a review and assessment of the South Carolina Electric & Gas CAP and the CAPs established by those contractors, entities, or agents to whom South Carolina Electric & Gas delegated the engineering, procurement, and

construction of V. C. Summer 2 & 3 (Westinghouse Electric Company and CB&I – formerly Shaw).

Based on these inspections, the NRC determined that South Carolina Electric & Gas has developed and implemented an adequate CAP for use during the performance of construction activities authorized by the combined license. This conclusion is based on the criteria established in Section 6.03 of Inspection Manual Chapter 2505P, "Periodic Assessment of Construction Inspection Program Results, Revision 1 – Pilot." Specifically, the inspectors did not identify: any findings related to the adequacy of procedures intended to implement the requirements of 10 CFR Part 50 Appendix B, Criterion XVI; any findings with more than very low safety significance related to the CAP; or a substantive cross-cutting aspect related to the CAP. Therefore, the staff is now authorized to issue non-cited violations in lieu of severity level IV violations in accordance with Section 2.3.2 of the NRC Enforcement Policy.

The enclosed inspection plan lists the inspections scheduled through September 30, 2013. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed are tentative and may be revised based on construction activities at the site. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <u>http://www.nrc.gov/reading-rm/adams.html</u> (the Public Electronic Reading Room).

Please contact me at (404) 997-4540 with any questions you have regarding this letter.

Sincerely,

/RA by George Khouri Acting for/

Michael E. Ernstes, Chief Construction Project Branch 4 Division of Construction Projects

Docket Nos.: 52-00027, 52-00028 License Nos.: NPF-93, NPF-94

Enclosure: V.C. Summer Units 2 & 3 Inspection Plan

cc w/encl.: (See next page)

cc: Mr. Jeffrey B. Archie Sr. Vice President, Nuclear Operations South Caroline Electric & Gas Company MC D304 220 Operation Way Cayce, SC 29033-3172

Chairman Fairfield County Council Drawer 60 Winnsboro, SC 29180

Ms. Shannon Bowyer Hudson Office of Regulatory Staff State of South Carolina 1401 Main Street Suite 900 Columbia, SC 29201

Mr. George McKinney Director South Caroline EMD 1100 Fish Hatchery Road West Columbia, SC 29172

Ms. Gidget Stanley-Banks Director Allendale County EPA 426 Mullberry Street Allendale, SC 29810

Email abynum@scana.com (Al Bynum) amonroe@scana.com (Amy Monroe) APAGLIA@Scana.com (Al Paglia) APH@NEI.org (Adrian Heymer) April.Rice@scana.com (April Rice) arice@scana.com (April R. Rice) awc@nei.org (Anne W. Cottingham) bedforbj@westinghouse.com (Brian Bedford) Bill.Jacobs@gdsassociates.com (Bill Jacobs) bmccall@santeecooper.com (Bill McCall, Jr.) charles.baucom@cbi.com (Charles T. Baucom) christina.barnett@scana.com (Christina Barnett) CumminWE@Westinghouse.com (Edward W. Cummins) cwaltman@roe.com (C. Waltman) david.lewis@pillsburylaw.com (David Lewis) delongra@westinghouse.com (Rich DeLong) dgriffin@scana.com (Donna S. Griffin) ed.burns@earthlink.net (Ed Burns) ewingja@westinghouse.com (Jerrod Ewing) fbelser@regstaff.sc.gov GeerTC@westinghouse.com (Thomas Geer) gzinke@entergy.com (George Alan Zinke) hutchiwe@westinghouse.com (william Hutchins) iarchie@scana.com (Jeffrev B. Archie) jenkinse@dhec.sc.gov (Susan Jenkins) jflitter@regstaff.sc.gov Joseph Hegner@dom.com (Joseph Hegner) karlg@att.net (Karl Gross) kasslc@westinghouse.com (Leslie Kass) kinneyrw@dhec.sc.gov (Ronald Kinney) KSutton@morganlewis.com (Kathryn M. Sutton) kwaugh@impact-net.org (Kenneth O. Waugh) Ichandler@morganlewis.com (Lawrence J. Chandler) maria.webb@pillsburylaw.com (Maria Webb) mark.beaumont@wsms.com (Mark Beaumont) matias.travieso-diaz@pillsburylaw.com (Matias Travieso-Diaz) mcintyba@westinghouse.com (Brian McIntyre) media@nei.org (Scott Peterson) MSF@nei.org (Marvin Fertel) nirsnet@nirs.org (Michael Mariotte) Nuclaw@mindspring.com (Robert Temple) patriciaL.campbell@ge.com (Patricia L. Campbell) Paul@beyondnuclear.org (Paul Gunter) pbessette@morganlewis.com (Paul Bessette) porterhj@dhec.sc.gov (Henry Porter) randall@nexusamllc.com (Randall Li) rclarv@scana.com (Ronald Clarv) RJB@NEI.org (Russell Bell) Ronald.Jones@scana.com (Ronald Jones)

russpa@westinghouse.com (Paul Russ) sabinski@suddenlink.net (Steve A. Bennett) sburdick@morganlewis.com (Stephen Burdick) sbyrne@scana.com (Stephen A. Byrne) sfrantz@morganlewis.com (Stephen P. Frantz) shudson@regstaff.sc.gov (Shannon Hudson) stephan.moen@ge.com (Stephan Moen) TGATLIN@scana.com (Thomas Gatlin) threatsj@dhec.sc.gov (Sandra Threatt) tom.miller@hq.doe.gov (Tom Miller) TomClements329@cs.com (Tom Clements) Vanessa.quinn@dhs.gov (Vanessa Quinn) vcsnrc@scana.com (NRC Senior Resident Inspector Wanda.K.Marshall@dom.com (Wanda K. Marshall) William.Cherry@scana.com (William Cherry) wmcherry@santeecooper.com (Marion Cherry)

V.C. Summer Units 2 & 3 Inspection Plan

	Programmatic Inspections (IMC 2504)						
Est. Date	Description						
2Q 2013	Quality assurance semiannual implementation – construction						
2Q 2013	Annual corrective action program inspection						
4Q 2013	Reporting of defects and noncompliance - construction						

	ITAAC Inspections (IMC 2503)
Est. Date	Description
2013	The majority of ITAAC related inspections, in 2013, are expected to be associated with the following construction and fabrication activities:
	 Nuclear island construction Containment vessel fabrication Structural and mechanical module fabrication
	The NRC staff will also inspect miscellaneous ITAAC and Design Acceptance Criteria activities (e.g. Protection and Safety Monitoring System and Human Factors Engineering development, type tests, and other ITAAC related work on site and at vendor facilities).
1Q-2Q 2013	Rebar Work Associated with:
	 The nuclear island Unit 2 containment vessel CR-10
1Q 2013	Nuclear island basemat pour
1Q-2Q 2013	Unit 3 waterproofing membrane installation
1Q-3Q 2013	Submodule fabrication in the Modular Assembly Building
1Q-3Q 2013	Unit 2 & 3 containmnet vessel fabrication
3Q 2013	Reactor pressure vessel on-site inspection

Note: Inspection schedule is subject to change based on licensing and construction activities.

Appendix E

CB&I Lake Charles NRC Fine Press Release



No. 13-031

April 19, 2013

NRC PROPOSES \$36,400 CIVIL PENALTY ON CHICAGO BRIDGE & IRON, CITES POOR SAFETY CULTURE AT SHAW GROUP SUBSIDIARIES

The Nuclear Regulatory Commission has issued a notice of violation and proposed a civil penalty of \$36,400 against Chicago Bridge & Iron (CB&I) for discrimination by one of its newly purchased Shaw subsidiaries against an employee who raised a safety concern. The NRC also requested CB&I take action to improve safety culture at a second former Shaw subsidiary.

CB&I completed a takeover of the Shaw Group of companies in February. These separate actions, issued April 18, stem from complaints filed with the NRC before the takeover was effective.

The notice of violation, issued by NRC's Office of Enforcement, describes two violations of NRC employee protection requirements at Shaw Nuclear Services. A quality assurance supervisor was fired in May 2011 for notifying Shaw and Louisiana Energy Services, an NRC licensee, of some potentially faulty rebar that may have been shipped to its National Enrichment Facility in New Mexico by a third-party vendor. The second violation related to language in Shaw's Corporate Code of Conduct that could prohibit, restrict, or otherwise discourage employees from participating in protected activities, including providing information to the NRC.

Because Shaw did not identify the violations or take corrective action once the NRC identified them, the NRC doubled the normal civil penalties, for a total fine of \$36,400. The company is to respond within 30 days describing corrective actions it intends to implement, and it may request alternative dispute resolution to explore settlement options.

In a separate letter to Philip K. Asherman, president and chief executive officer of CB&I, the NRC cited a "chilled work environment" at CB&I's facility in Lake Charles, La., formerly known as Shaw Modular Solutions. Workers hesitant to raise safety concerns through company channels have reported them directly to the NRC.

While there are more than 600 vendors supplying safety-related goods and services to the nuclear industry, approximately 35 percent of all vendor-related safety allegations received by the NRC from January 2010 through January 2013 involved the Lake Charles facility. The NRC's review of these complaints did not identify any specific quality issues with parts supplied

by Shaw or CB&I; however, the significant number of employee concerns reported to the NRC suggests a poor environment for raising safety concerns within the company.

The NRC's expectations in this area are described in policy statements addressing <u>safety</u> <u>culture</u> and maintenance of a <u>safety-conscious work environment</u>.

"The NRC takes seriously the ability of employees to raise safety concerns without fear of retaliation, and employee protection from discrimination," Glenn M. Tracy, director of the Office of New Reactors, said in the letter. He acknowledged that CB&I was already implementing management changes at the former Shaw companies and said, "It is vital to assess the work environment and address unresolved conflicts."

Tracy requested CB&I respond within 30 days and explain corrective actions it intends to take to improve the safety-conscious work environment at the Lake Charles facility. The company is also to inform employees about the letter and corrective actions.

NRC licensees are ultimately responsible for the safety of their facilities and the quality of the safety-related goods and services they procure for their sites. The NRC inspects licensee and vendor performance to assure that licensees are verifying the quality of goods and services they receive.

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Appendix F

NRC Green Finding Determination



UNITED STATES NUCLEAR REGULATORY COMMISSION REGION II 245 PEACHTREE CENTER AVENUE NE, SUITE 1200 ATLANTA, GEORGIA 30303-1257

May 16, 2013

EA-13-009

Mr. Ronald A. Jones Vice President, New Nuclear Operations South Carolina Electric and Gas P.O. Box 88 (Mail Code P40) Jenkinsville, SC 29065-0088

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION UNIT 2, FINAL SIGNIFICANCE DETERMINATION OF A GREEN FINDING (INSPECTION REPORT 05200027/2013-010)

Dear Mr. Jones:

The purpose of this letter is to provide you the final results of our significance determination of the preliminary White finding (i.e., a finding with low to moderate safety significance) discussed in U.S. Nuclear Regulatory Commission's (NRC) Inspection Report number 05200027/2013-008, dated March 26, 2013 (ADAMS Accession # ML13085A058). The inspection examined construction activities associated with the Design/Engineering Cornerstone of the Construction Baseline Inspection Program. We identified a finding during the inspection, identified as Apparent Violation (AV) 05200027/2013-008-01, Anchorage and Spacing of Headed Shear Reinforcement in Structural Components of the Nuclear Island. The finding involved the failure to assure that applicable regulatory requirements were correctly translated into design specifications, drawings, procedures, and instructions. The inadequacy resulted in multiple instances where the design of anchorage and spacing of the headed shear reinforcement for structural components of the nuclear island (NI) did not comply with the provisions of the "Code Requirements for Nuclear Safety Related Concrete Structures (ACI 349-01)," as required by the Updated Final Safety Analysis Report (UFSAR). The finding was assessed using the Construction Significance Determination Process and was preliminarily characterized as White.

At your request, a Regulatory Conference was held on April 30, 2013, to discuss your views on this issue. A Meeting Summary that included a copy of the slide presentation made by you, was issued on May 8, 2013 (ADAMS Accession # ML13128A298).

During the meeting, you described your assessment of the significance of the finding and the corrective actions taken to resolve it. In addition, you also informed the NRC that a root cause analysis was in process and that additional corrective actions would be developed as needed. Based on your presentation, you indicated that while the design of portions of the nuclear island basemat and wall structures failed to meet the requirements of the UFSAR and ACI 349-01 for the design and spacing for shear reinforcement, the design function of the impacted structure was not impaired, even if completed as initially proposed. That is, the structures would have still performed their intended safety function.

The NRC has reviewed the information you provided on April 23, 2013, and the information discussed during the regulatory conference on April 30, 2013; and we have also conducted independent calculations. Based on these we have concluded that the finding should be characterized as Green, a finding of very low safety significance. The NRC has also determined that the finding is a violation of Criterion III, "Design Control" as discussed in inspection report 05200027/2013-008. The circumstances surrounding the violation were described in detail in that inspection report. The reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date for full compliance were well communicated to the agency during the Regulatory Conference held on April 30, 2013. Because this violation was of very low safety significance and it was entered into your corrective action program as PIP 0-L-12-0610, this violation is being treated as a non-cited violation (NCV), consistent with the Enforcement Policy. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position for the NCV 05200027/2013-010-01, Anchorage and Spacing of Headed Shear Reinforcement in Structural Components of the Nuclear Island.

For administrative purposes, this letter is issued as NRC Inspection Report Number 05200027/2013-010. Accordingly, AV 05200027/2013-008-01, Anchorage and Spacing of Headed Shear Reinforcement in Structural Components in the Nuclear Island, is being updated consistent with the regulatory positions described in this letter as NCV 05200027/2013-010-01 with a safety significance of Green.

You have 30 calendar days from the date of this letter to appeal the staff's significance determination for the Green finding or the NCV. An appeal of the Green finding will be considered to have merit only if it meets the criteria given in NRC Inspection Manual Chapter 2519P, Construction Significance Determination Process - Pilot.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and your response (if you choose to provide one), will be made available electronically for public inspection in the NRC Public Document Room or from ADAMS, accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

/RA/

Jimi T. Yerokun, Director Division of Construction Inspection

Docket Nos. 05200027 License Nos. NPF-93 cc: Mr. Jeffrey B. Archie Sr. Vice President, Nuclear Operations South Carolina Electric & Gas Company MC D304 220 Operation Way Cayce, SC 29033-3172

Chairman Fairfield County Council Drawer 60 Winnsboro, SC 29180

Ms. Shannon Bowyer Hudson Office of Regulatory Staff State of South Carolina 1401 Main Street Suite 900 Columbia, SC 29201

Mr. George McKinney Director South Carolina EMD 1100 Fish Hatchery Road West Columbia, SC 29172

Ms. Gidget Stanley-Banks Director Allendale County EPA 426 Mullberry Street Allendale, SC 29810 Email: abynum@scana.com (Al Bynum) amonroe@scana.com (Amy Monroe) APAGLIA@Scana.com (Al Paglia) APH@NEI.org (Adrian Heymer) April.Rice@scana.com (April Rice) arice@scana.com (April R. Rice) awc@nei.org (Anne W. Cottingham) bedforbj@westinghouse.com (Brian Bedford) Bill.Jacobs@gdsassociates.com (Bill Jacobs) charles.baucom@cbi.com (Charles T. Baucom) christina.barnett@scana.com (Christina Barnett) CumminWE@Westinghouse.com (Edward W. Cummins) cwaltman@roe.com (C. Waltman) david.lewis@pillsburylaw.com (David Lewis) delongra@westinghouse.com (Rich DeLong) ed.burns@earthlink.net (Ed Burns) dgriffin@scana.com (Donna S. Griffin) ewingja@westinghouse.com (Jerrod Ewing) fbelser@regstaff.sc.gov gzinke@entergy.com (George Alan Zinke) hutchiwe@westinghouse.com (William Hutchins) jarchie@scana.com (Jeffrey B. Archie) jenkinse@dhec.sc.gov (Susan Jenkins) jflitter@regstaff.sc.gov Joseph Hegner@dom.com (Joseph Hegner) karlg@att.net (Karl Gross) kinneyrw@dhec.sc.gov (Ronald Kinney) KSutton@morganlewis.com (Kathryn M. Sutton) Ichandler@morganlewis.com (Lawrence J. Chandler) maria.webb@pillsburylaw.com (Maria Webb) mark.beaumont@wsms.com (Mark Beaumont) matias.travieso-diaz@pillsburvlaw.com (Matias Travieso-Diaz) mcintyba@westinghouse.com (Brian McIntyre) media@nei.org (Scott Peterson) MSF@nei.org (Marvin Fertel) nirsnet@nirs.org (Michael Mariotte) Nuclaw@mindspring.com (Robert Temple) patriciaL.campbell@ge.com (Patricia L. Campbell) Paul@beyondnuclear.org (Paul Gunter) pbessette@morganlewis.com (Paul Bessette) porterhj@dhec.sc.gov (Henry Porter) randall@nexusamllc.com (Randall Li) RJB@NEI.org (Russell Bell) Ronald.Jones@scana.com (Ronald Jones) russpa@westinghouse.com (Paul Russ) sabinski@suddenlink.net (Steve A. Bennett) sburdick@morganlewis.com (Stephen Burdick) sbyrne@scana.com (Stephen A. Byrne) sfrantz@morganlewis.com (Stephen P. Frantz) shudson@regstaff.sc.gov (Shannon Hudson)

stephan.moen@ge.com (Stephan Moen) TGATLIN@scana.com (Thomas Gatlin) threatsj@dhec.sc.gov (Sandra Threatt) tom.miller@hq.doe.gov (Tom Miller) TomClements329@cs.com (Tom Clements) Vanessa.quinn@dhs.gov (Vanessa Quinn) vcsnrc@scana.com (NRC Senior Resident Inspector William.Cherry@scana.com (William Cherry) wmcherry@santeecooper.com (Marion Cherry) DCRM-EDMS@SCANA.COM (SCE&G Records) dgriffin@scana.com (Donna Griffin)

Appendix G

SCE&G Analyst Day Presentation



Analyst Day 2013



Kevin Marsh – Chairman & CEO

Safe Harbor Statement/Regulation G Information

Statements included in this presentation which are not statements of historical fact are intended to be, and are hereby identified as, "forward-looking statements" for purposes of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include, but are not limited to, statements concerning key earnings drivers, customer growth, environmental regulations and expenditures, leverage ratio, projections for pension fund contributions, financing activities, access to sources of capital, impacts of the adoption of new accounting rules and estimated construction and other expenditures. In some cases, forward-looking statements can be identified by terminology such as "may," "will," "could," "should," "expects," "forecasts," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential" or "continue" or the negative of these terms or other similar terminology. Readers are cautioned that any such forward-looking statements are not guarantees of future performance and involve a number of risks and uncertainties, and that actual results could differ materially from those indicated by such forward-looking statements. Important factors that could cause actual results to differ materially from those indicated by such forward-looking statements include, but are not limited to, the following: (1) the information is of a preliminary nature and may be subject to further and/or continuing review and adjustment; (2) regulatory actions, particularly changes in rate regulation, regulations governing electric grid reliability, environmental regulations, and actions affecting the construction of new nuclear units; (3) current and future litigation; (4) changes in the economy, especially in areas served by subsidiaries of SCANA; (5) the impact of competition from other energy suppliers, including competition from alternate fuels in industrial markets; (6) the impact of conservation and demand side management efforts and/or technological advances on customer usage; (7) growth opportunities for SCANA's regulated and diversified subsidiaries; (8) the results of short- and long-term financing efforts, including prospects for obtaining access to capital markets and other sources of liquidity; (9) changes in SCANA's or its subsidiaries' accounting rules and accounting policies; (10) the effects of weather, including drought, especially in areas where the generation and transmission facilities of SCANA and its subsidiaries (the Company) are located and in areas served by SCANA's subsidiaries; (11) payment and performance by counterparties and customers as contracted and when due; (12) the results of efforts to license, site, construct and finance facilities for electric generation and transmission; (13) maintaining creditworthy joint owners for SCE&G's new nuclear generation project; (14) the ability of suppliers, both domestic and international, to timely provide the labor, components, parts, tools, equipment and other supplies needed, at agreed upon prices, for our construction program, operations and maintenance; (15) the results of efforts to ensure the physical and cyber security of key assets and processes; (16) the availability of fuels such as coal, natural gas and enriched uranium used to produce electricity; the availability of purchased power and natural gas for distribution; the level and volatility of future market prices for such fuels and purchased power; and the ability to recover the costs for such fuels and purchased power; (17) the availability of skilled and experienced human resources to properly manage, operate, and grow the Company's businesses; (18) labor disputes; (19) performance of SCANA's pension plan assets; (20) changes in taxes; (21) inflation or deflation; (22) compliance with regulations; (23) natural disasters and man-made mishaps that directly affect our operations or the regulations governing them; and (24) the other risks and uncertainties described from time to time in the periodic reports filed by SCANA or SCE&G with the United States Securities and Exchange Commission. The Company disclaims any obligation to update any forward-looking statements.

During this presentation, certain non-GAAP measures (as defined by SEC Regulation G) may be disclosed. A reconciliation of those measures to the most directly comparable GAAP measures is included on our website at www.scana.com in the Investor Relations section under Regulation G Information.



SCANA's Mission and Vision

Our Mission

• To provide energy and related products to retail markets in the Southeast.

Our Vision

 SCANA is a company of committed people, working together professionally to serve our customers reliably and shareholders profitably.



Strategic Planning Process

- Aligns the business units' strategies and objectives to achieve the Company's financial and operational goals
 - New Nuclear Generation Strategy
 - Environmental Strategy
 - Gas LDC Strategy
- Allows the Company to address major challenges and risks and adjust during the year
 - Georgia weather in 2012
- Employees have a track record of achieving Company goals
 - Employees own 11% of outstanding common stock
 - Senior Management has an average of 24 years of service with SCANA

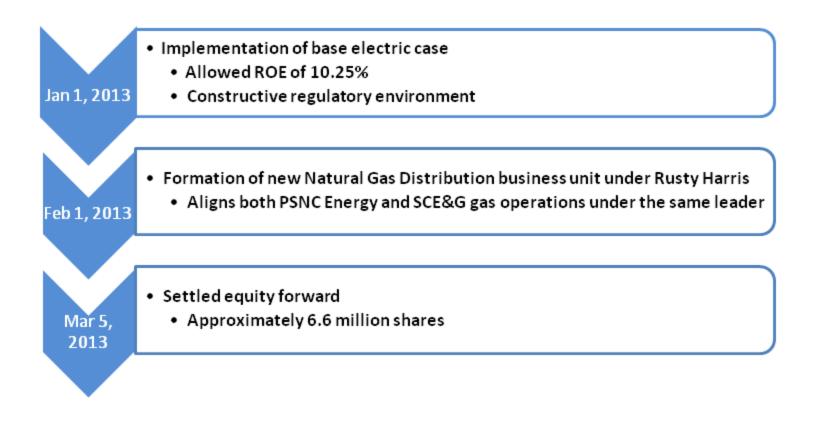


2012 Achievements



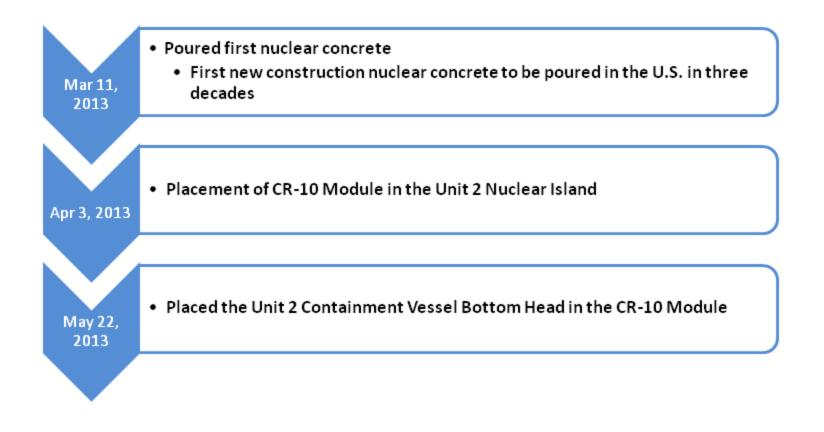


Company Milestones



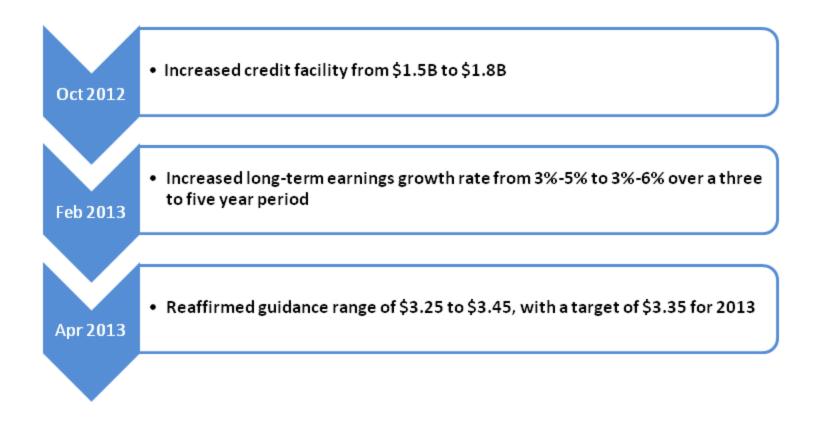


Nuclear Milestones





Financial Milestones





Analyst Day 2013 - Schedule

Jeff Archie

Chief Nuclear Officer

Lasse Petterson

Executive Vice President & Chief Operating Officer – CB&I

Jeff Merrifield

Senior Vice President, Global Business Development – CB&I's Power Business Unit

Steve Byrne

Chief Operating Officer - SCE&G

Break

Rusty Harris Senior VP of Gas Distribution

Jimmy Addison

Chief Financial Officer

Kevin Marsh – Closing remarks and Q&A

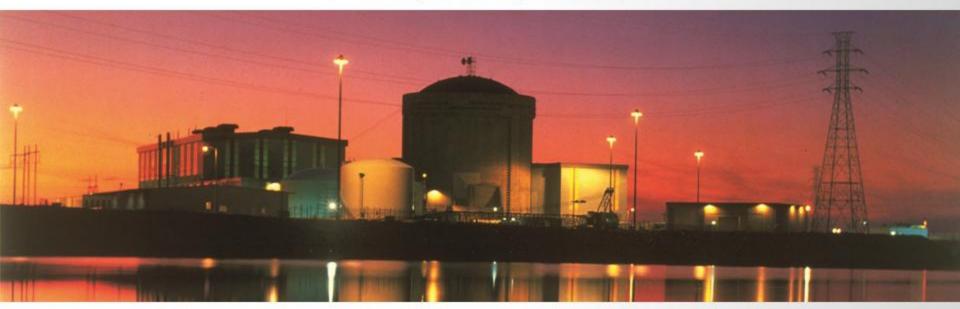
Lunch







Analyst Day 2013



Nuclear Operations

Jeff Archie – Chief Nuclear Officer

Safety – Unit 1

SCE&G Personnel

- 2013 YTD No lost time or restricted cases
 > Ten million safe work hours
- One OSHA recordable injury in March 2013 after 650 days with no recordables

Supplemental Personnel

- 2013 YTD No Lost Time Injuries
- Two OSHA recordable injuries in 2013



Safe Work Hours Continuous Clock

see 18, 2	278,681
	288,118
AS	176,037
BARTLETT	108,534
0 – Own ha U – Underst N – Never ri	nsafe behaviors zard posting and repair and Safety Procedures sk your safety time to be safe

Unit 1

J.C Summer Nuclear Station



Everyone COUNTs with Safety

- C Coach unsafe behaviors
- O Own hazard posting and repair
- U Understand Safety Procedures
- N Never risk your safety
- T Take the time to be safe



Safety – Units 2/3 Construction

• <u>S</u>	 <u>Safety Performance</u> 		<u>PTD</u>
-	 No lost time accidents 	0	2
-	 OSHA recordable 	1	11
 First aid cases 		27	239
-	– Near misses	31	237

YTD = Year to Date PTD = Project to Date

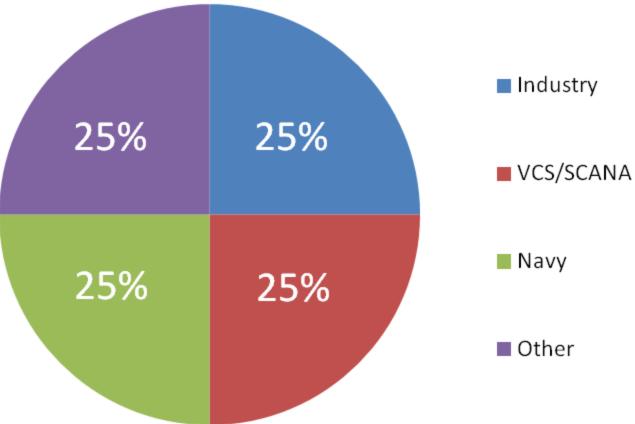


- Organizational culture
 - Strong nuclear safety culture
 - SACRED values shared by all employees
- Leadership
 - Diversity of experience
 - Dynamic succession planning
- Highly skilled and competent workers
 - Diversity of workforce
 - Investment in training



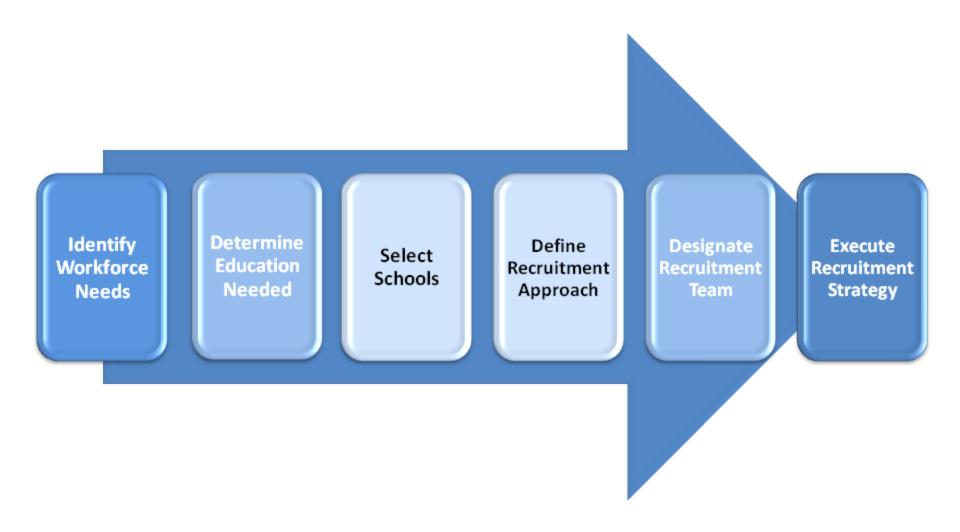
Growth while Sustaining Culture

Staffing Strategy for New Nuclear



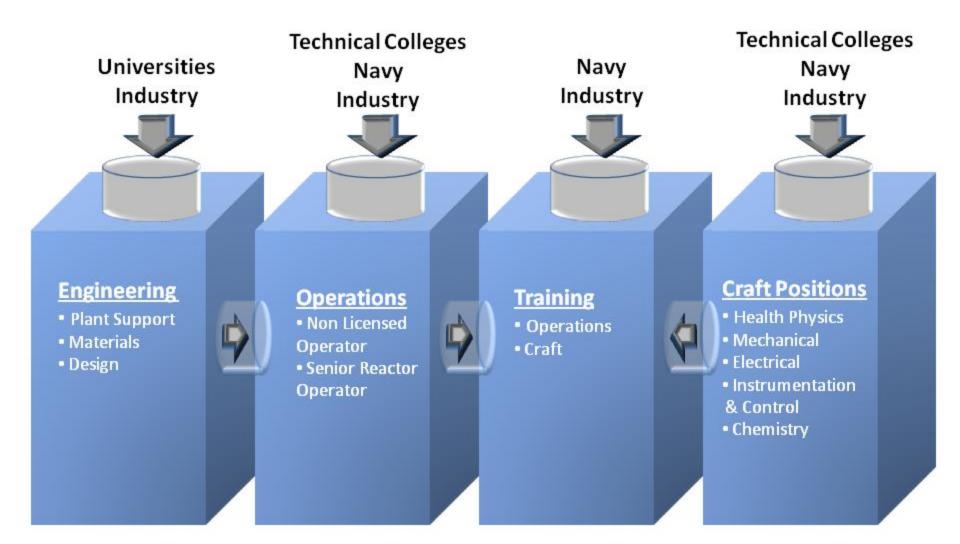


Strategy for "Other" pipeline





Staffing Pipeline Strategy





Partnerships







To strengthen the development of SCANA's nuclear workforce, we have partnered with schools throughout the Southeast, including:





- South Carolina State University
- Florence-Darlington Technical College
- North Carolina State University
- Spartanburg Community College
- Francis Marion University
- Clemson University
- University of South Carolina
- Georgia Institute of Technology
- Orangeburg-Calhoun Technical College
- Aiken Technical College
- Midlands Technical College



University

Francis Marion









NC STATE UNIVERSITY

New Employee Orientation

- Corporate Orientation
 - SACRED Values
 - Code of Ethics
 - Company Policies

SCANA Values Serve our community Achieve Communicate openly and honestly Respect diversity and care for each other Excel in customer service and safety Do what is right



- Station Orientation
 - Events that Shaped the Industry
 - Engagement of Management Team

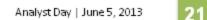


Competent and Skilled Workforce

Training and Qualification

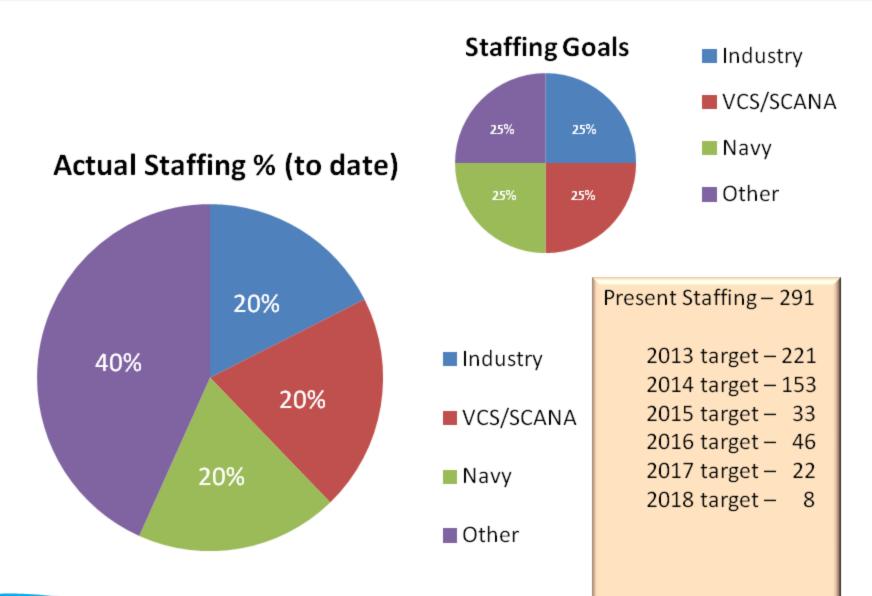
- Initial and Continuing Training
 - Performance Based Training Programs (SAT)
 - 12 Training Programs are Accredited by the National Academy
- The NRC Licenses station Reactor and Senior Reactor Operators
- Received initial accreditation for 6 operator programs in October 2012







How are we doing?











The Most Complete Energy Infrastructure Focused Company in the World

Lasse Petterson Chief Operating Officer CB&I

Jeff Merrifield Senior Vice President, Global Business Development CB&I's Power Business Unit



A World of Solutions



This presentation contains forward-looking statements regarding CB&I and represents our expectations and beliefs concerning future events. These forward-looking statements are intended to be covered by the safe harbor for forward-looking statements provided by the Private Securities Litigation Reform Act of 1995. Forwardlooking statements involve known and unknown risks and uncertainties. When considering any statements that are predictive in nature, depend upon or refer to future events or conditions, or use or contain words, terms, phrases, or expressions such as "achieve", "forecast", "plan", "propose", "strategy", "envision", "hope", "will", "continue", "potential", "expect", "believe", "anticipate", "project", "estimate", "predict", "intend", "should", "could", "may", "might", or similar forward-looking statements, we refer you to the cautionary statements concerning risk factors and "Forward-Looking Statements" described under "Risk Factors" in Item 1A of our Annual Report filed on Form 10-K filed with the SEC for the year ended December 31, 2012, and any updates to those risk factors or "Forward-Looking Statements" included in our subsequent Quarterly Reports on Form 10-Q filed with the SEC, which cautionary statements are incorporated herein by reference.





- Focus on safety: 0.01 LTI in 2012
- 50,000 employees worldwide
- Nearly 125 years of experience and expertise in reliable solutions
- Market Cap \$6.8 Billion (May 2013)
- \$25.5 Billion Backlog
 - 50% / 50%
 U.S. vs International
 - Approximately 50% / 50%
 Lump Sum vs
 Reimbursable



REFICAR Refinery, Cartagena, Colombia

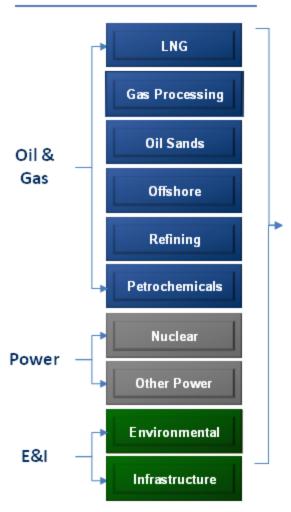


Diversification across Energy Infrastructure





Industries Served

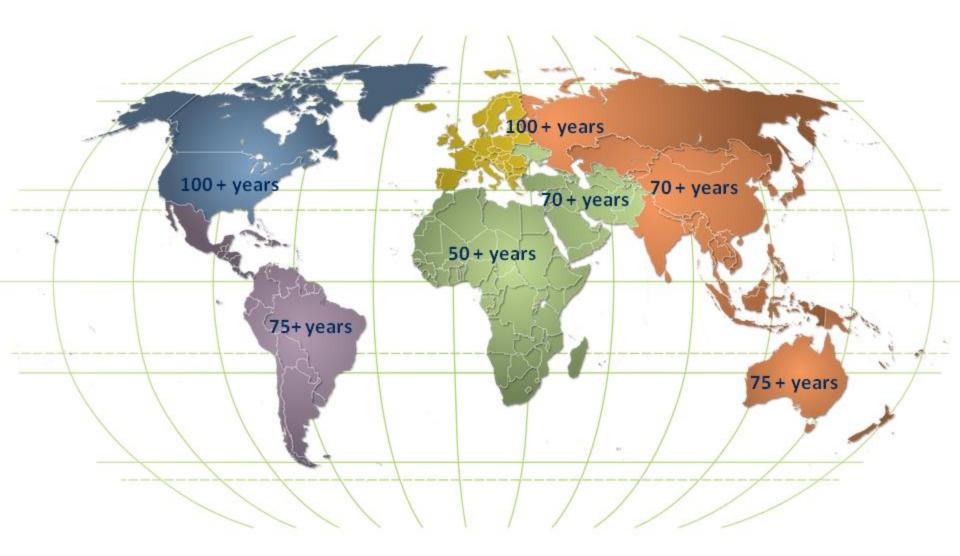


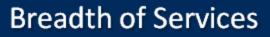
Integrated Capabilities Across the Energy Value Chain

- Approximately 50,000 employees
- Transferable employee skill sets
 - Business Development
 - Estimating
 - Detail Engineering
 - Procurement
 - Project Controls
 - Project Management
 - Fabrication Shop Management
 - Construction Management
 - Construction Craft Management and Supervision
 - Start-up and Commissioning
 - Quality Assurance and Control



Experience and Global Reach







Technology

- Licensed Technology
- Engineering / technical services
- Proprietary catalysts
- Specialty equipment

Fabrication Services

- Modularization
- Fabrication
- Erection
- Engineering
- Pipe fitting and distribution

Engineering, Construction and Maintenance

- Engineering
- Procurement
- Construction
- Commissioning

Government Solutions

- Program and project management
- EPC
- Remediation and restoration
- Emergency response and disaster recovery
- Environmental engineering and consulting















Capabilities

- Engineering, procurement, and construction (EPC) for the oil and gas, petrochemical and power markets
- Plant services, including operations and maintenance, upgrades and uprates, modifications and refueling

Differentiation

- Market position
- Contracting flexibility
- Global footprint







Capabilities

- Full-service engineering, procurement and construction
- Major component replacement, maintenance, and modification services
- Operating plant services
- Upgrades, uprates and plant restarts
- Spent fuel dry storage
- Decommissioning, dismantling

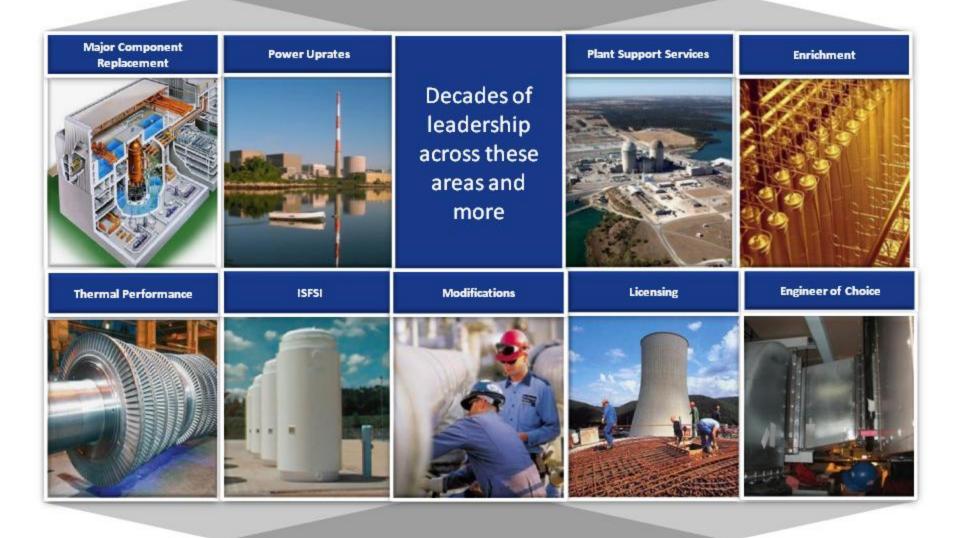
Nuclear Industry Leadership



- Engineer/constructor of 18 U.S. nuclear plants totaling 14,385 MW
- More than 3,600 MW in power uprates
- Industry-leading AP1000 and ABWR technologies
- Awarded first EPC contract for commercial nuclear power plant in U.S. in more than 30 years
- First nuclear island basemat placement in the U.S. in more than 30 years
- Design and construction of nuclear containment vessels, having built:
 - 130 worldwide
 - 75% of all operating nuclear power plant containments in the U.S.
 - 41 nuclear reactor vessels



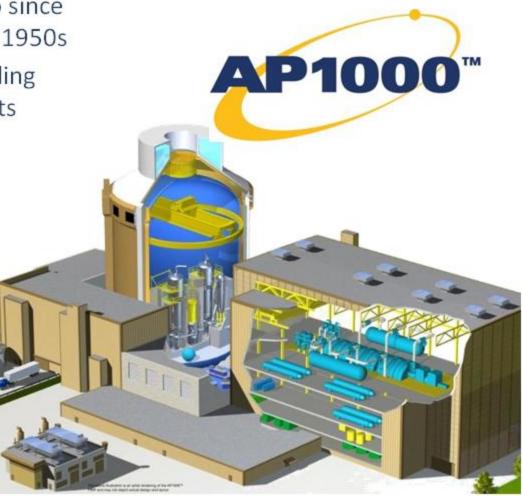




Westinghouse Alliance



- Mutually beneficial relationship since construction of Shippingport in 1950s
- Consortium partners on expanding portfolio of new AP1000 projects
 - Four units in U.S.
 - Six units in China
- Additional domestic and international opportunities





Areas of Responsibility



- Overall Consortium responsibility
- AP1000 design authority design, licensing, integration, configuration management, change control, and basic plant design
- Detailed design of 32 systems and containment and auxiliary buildings
- Procurement of major components and startup support for nuclear systems



- Detailed design of 29 balance-of-plant systems, site-specific systems, and the annex, radioactive waste and diesel generator buildings
- Design and construction of containment vessel
- Fabrication of structural and mechanical modules as well as piping systems
- Procurement of commodities and selected equipment
- Site specific design, construction and startup support







Analyst Day 2013



Generation and Nuclear Construction

Steve Byrne – Chief Operating Officer

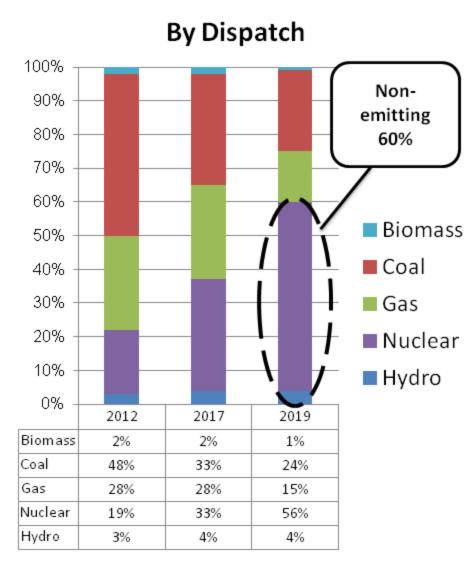
Generation Overview

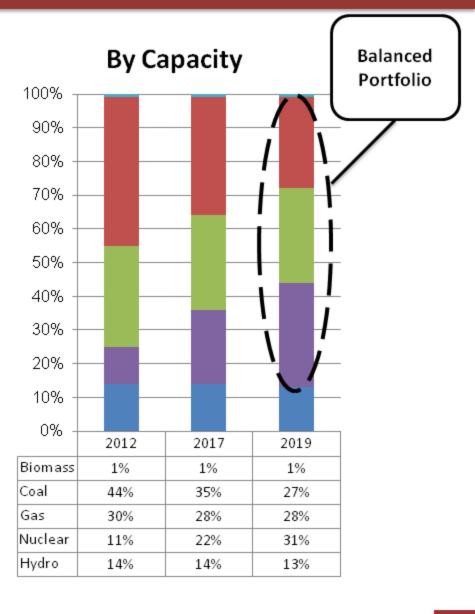
- Long-term strategy to ensure a diverse, affordable generation mix that can meet our customers' needs now and in the future.
- Changes to our generation mix, coupled with the addition of our two new nuclear units, will allow us to meet stringent environmental regulations.





Generation Mix by Dispatch and Capacity







Integrated Resource Plan

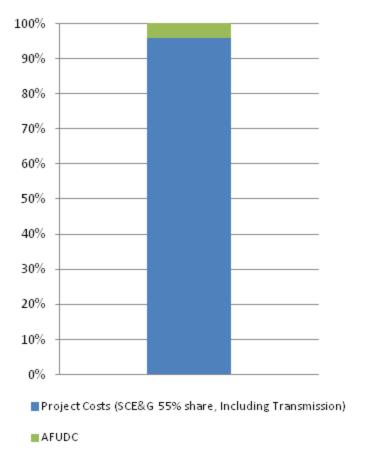
- Filed annually with the South Carolina Public Service Commission
- Retired one 90 MW coal fired unit and converted one 95 MW coal fired unit to natural gas during 2012
- Anticipate retiring two additional coal fired units by year end
- Solutions for remaining coal fired units that do not meet the EPA's Mercury and Air Toxic Standards to keep capacity available until 2018:
 - Acquire waivers to extend the MATS compliance deadline
 - Acquire firm gas transportation and run units on natural gas
 - Replace capacity with one or more power purchases

Electric Sales Forecast Average per year over next 15 years	
Baseline Sales	+1.8%
Energy Efficiency/DSM	-0.7%
Net Territorial Sales	+1.1%
Source: 2013 Integrated Resource Plan	



Project Costs

Gross Construction Costs: \$5.8 billion (escalated)



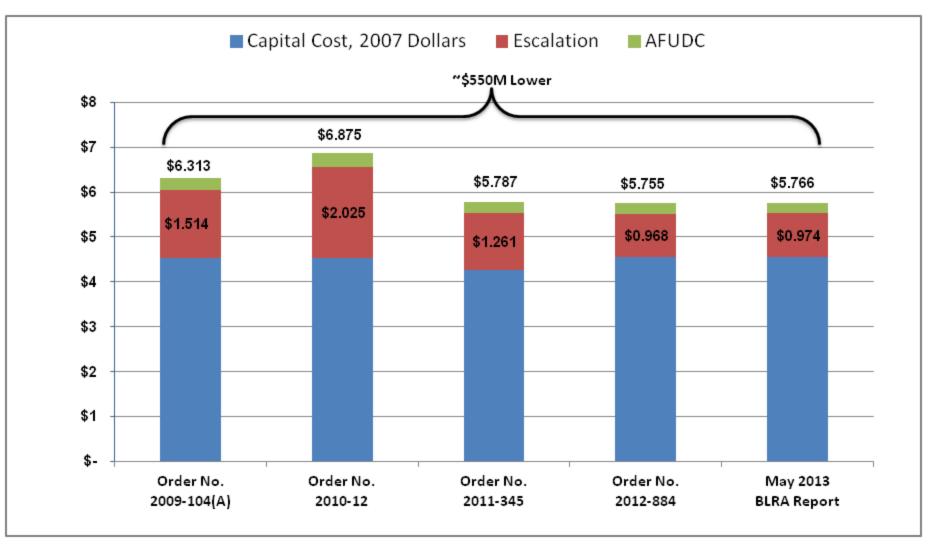
Note: Reflects nuclear capex as filed May 2013 in BLRA Quarterly Report

AGREEMENT WITH WESTINGHOUSE/ CB&I CONSORTIUM

- 7 EPC Cost Categories
 - 4 Fixed / Firm with escalation
 - 3 Variable Based on Actual Cost
- 2 Owners' Cost Categories
- 2/3 base EPC Costs Fixed/Firm with escalation



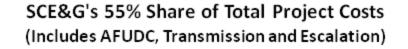
New Nuclear Projected Costs (in billions)

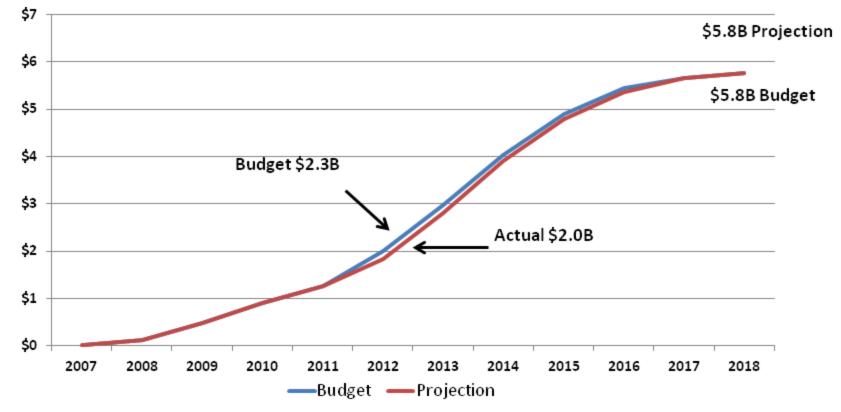


Note: Reflects new nuclear projected costs as filed May 2013 in BLRA Quarterly Report; SCE&G 55% share



Overview of Project Status





Note: Reflects nuclear capex as filed May 2013 in BLRA Quarterly Report



License Amendment Request (LAR)

- Process used for years in currently operating nuclear plants
- Required for plant change or modification from current licensing basis
- The LAR contains:
 - Detailed explanation of requested change
 - Technical justification for acceptability
 - "No Significant Hazards Consideration"
- Depending on complexity, review and approval can take generally 3 months to one year



Preliminary Amendment Request (PAR)

- New process
- Enables plants with combined construction and operating license to proceed with construction while LAR is under review
- Licensee can request notification of "No Objection" from NRC and proceed with proposed change, at their own risk, pending review
- "No Objection" determination does not imply any NRC approval



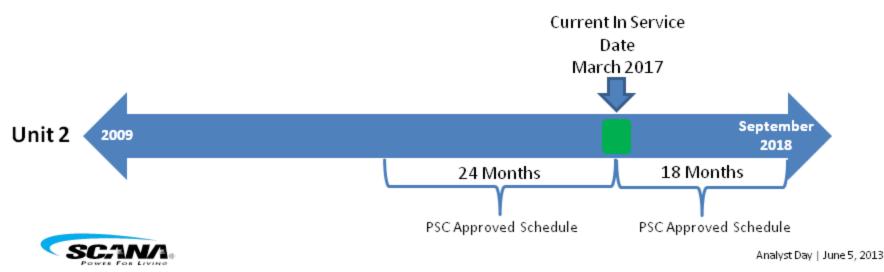
Areas of Focus

- Plant Reference Simulator
 - Continues to support the schedule for training and licensing reactor operators as required to allow the initial fuel load for Unit 2
- CB&I Lake Charles, formerly known as Shaw Modular Solutions
 SCE&G continues to devote resources to monitor this area



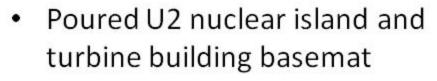
Unit 2 In Service

- SCANA requested new CB&I leadership:
 - Review the impact of Lake Charles issues
 - Provide a schedule in which they had confidence
- The preliminary review indicates the in-service:
 - For Unit 2 likely ranges from Q4 2017 Q1 2018 (due to delay in delivery of submodules)
 - Last few submodules from CB&I delivered early, but not yet a trend
- While we do not have a specific in-service date, we are confident this new range for Unit 2 is within the 18-month PSC allowed construction contingency



Activities at the Site

- World's largest derrick (crane) in use
- Training on simulators
- Placed CV lower bowl
- Welding U2 CV rings
- Switchyard energized
- Receiving CA-20 submodules
- Erecting cooling towers
- Assembling condensers
- Placed U3 mudmats and vapor barrier



- 90% of U2 turbine building lower level walls are complete
- Placed U2 CR-10 module on nuclear island basemat





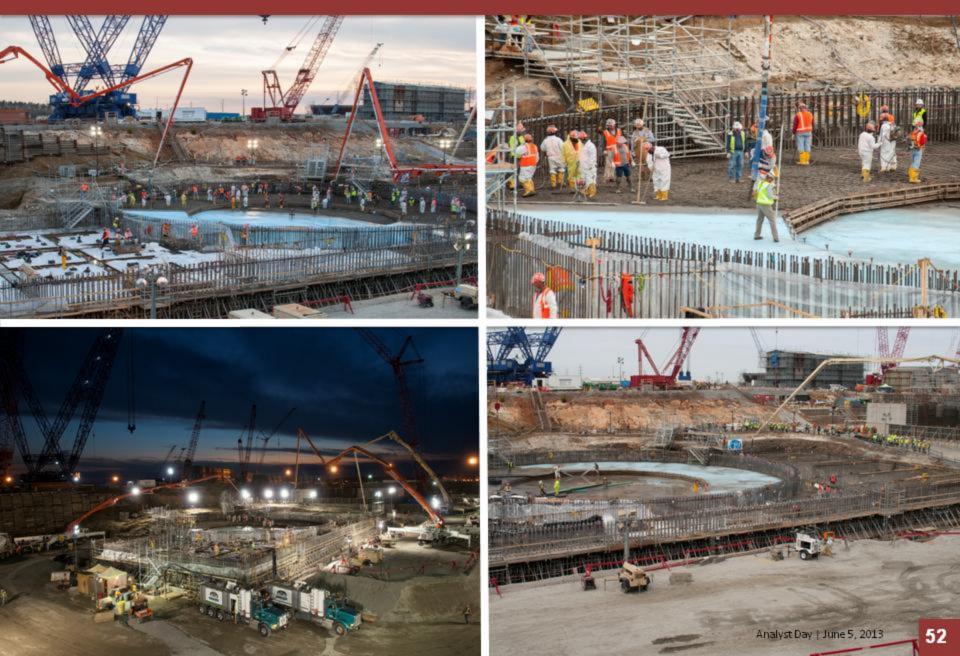
VCS 2 & 3 (Aerial View)



Unit 2 Nuclear Island (Pre 1st Nuclear Concrete Pour)

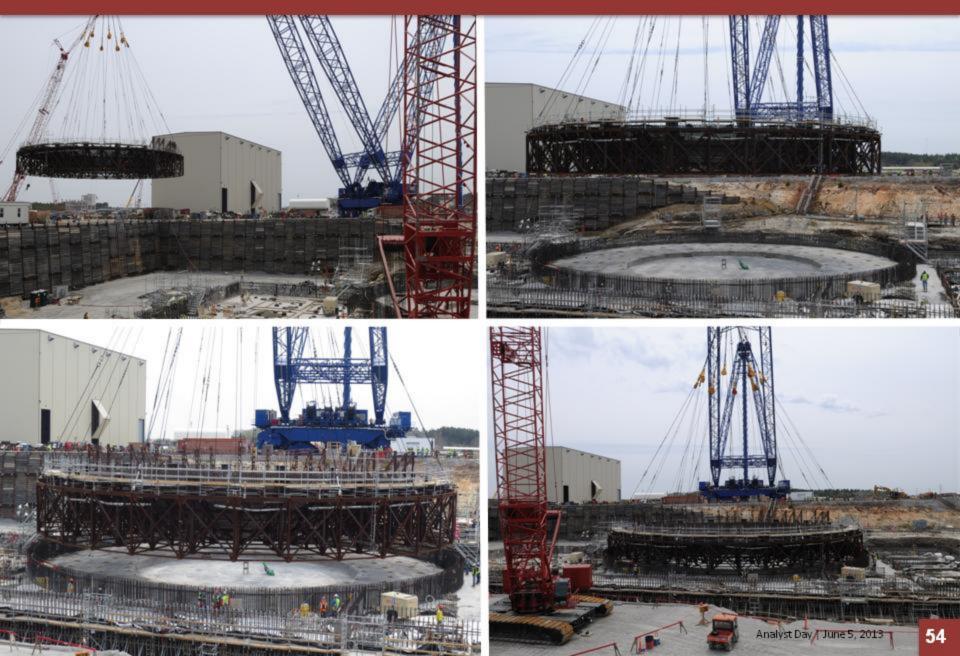


Unit 2 Nuclear Island (1st Nuclear Concrete Pour)



Unit 2 Nuclear Island (1st Nuclear Concrete Pour)

Placement of Unit 2 Module CR-10

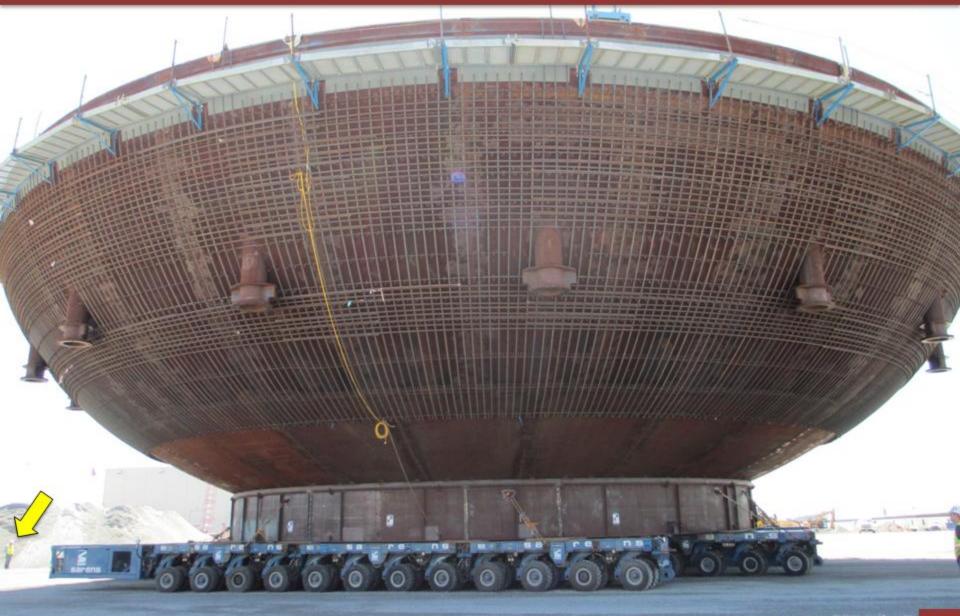


Placement of Unit 2 Module CR-10

Unit 2 Nuclear Island



Transport of Containment Vessel Bottom Head

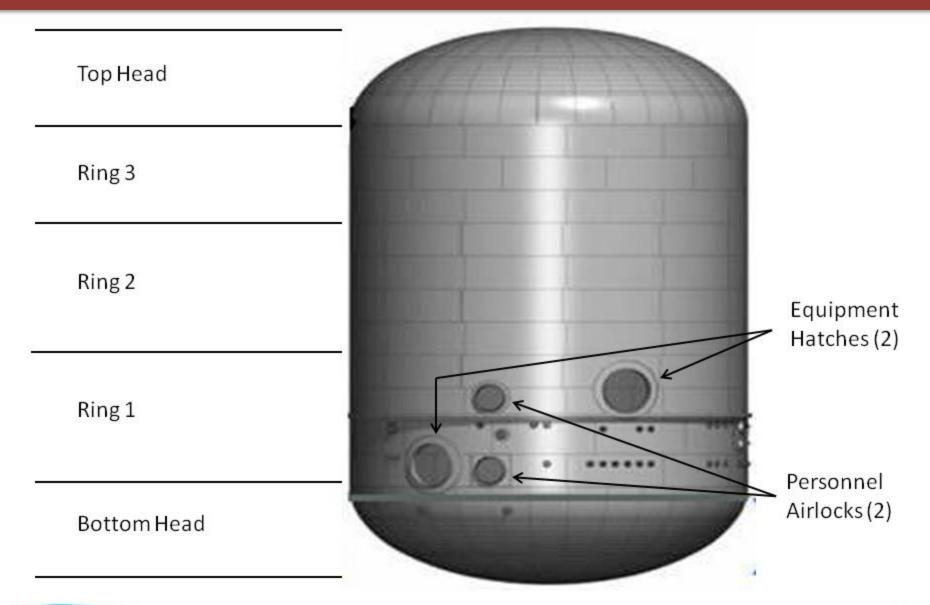


Placement of Containment Vessel Bottom Head

Unit 2 Nuclear Island



Containment Vessel





Unit 2 Containment Vessel Fabrication



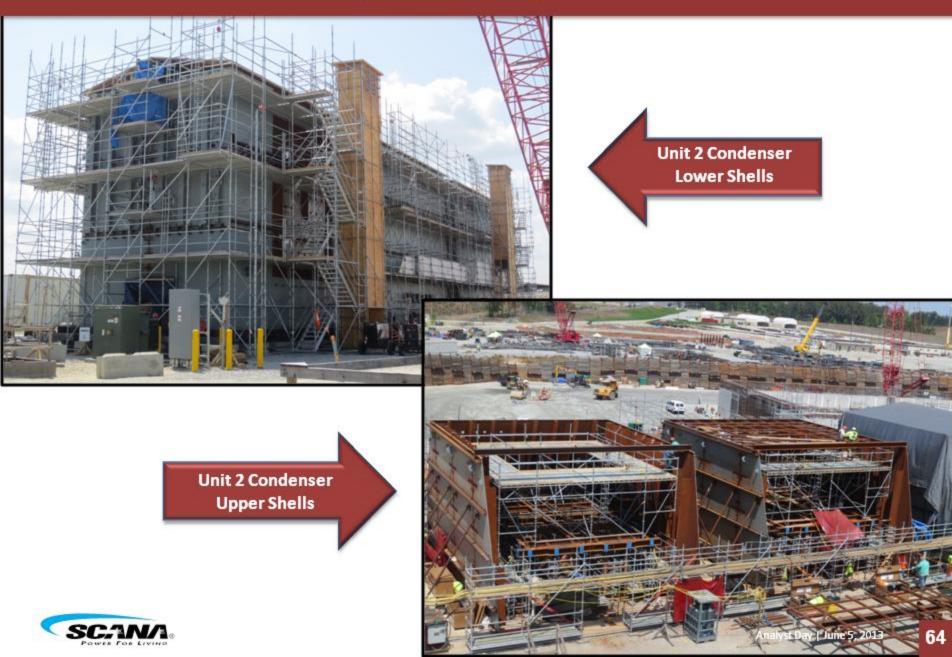
Unit 3 Nuclear Island



Unit 2 Turbine Building



Unit 2 Condenser



Unit 2 Cooling Tower





Mechanical & Shroud Installation

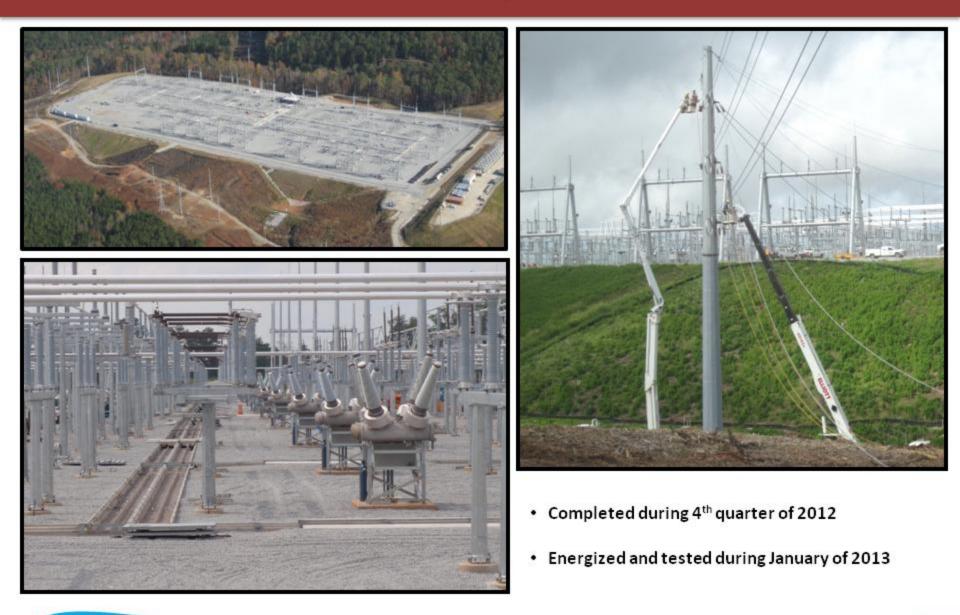




Unit 3 Cooling Tower Pump House Excavation

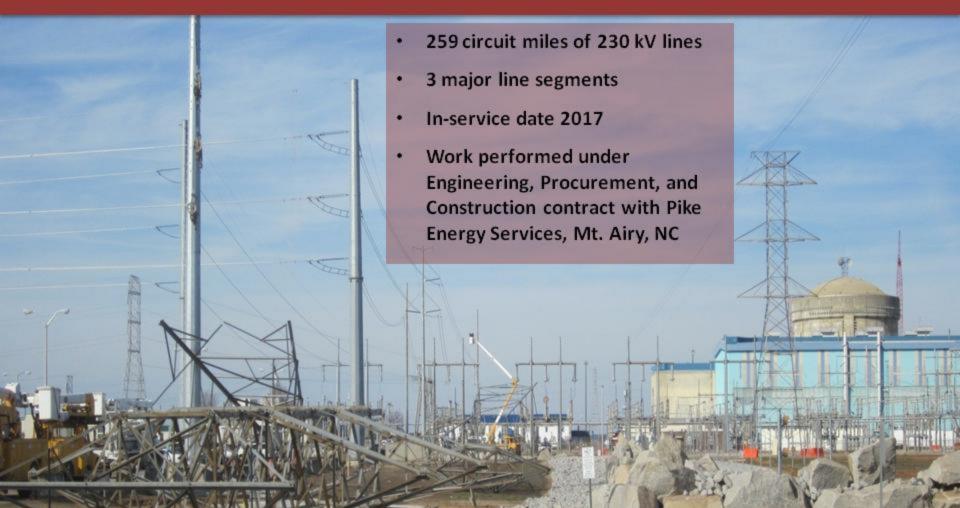


Switchyard





New Nuclear Transmission

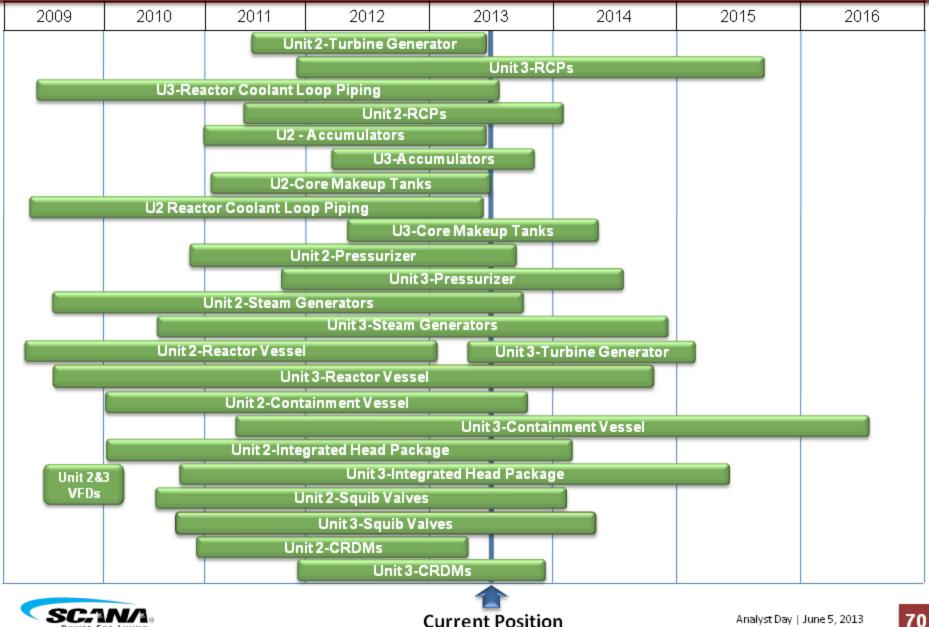


New Nuclear Transmission



- VCS-Killian 230 kV Line 95% complete.
- VCS-Lake Murray 230 #2 and Segment of the VCS2-St. George 230 #1 – 60% complete.
- The Remaining Segment of VCS-St. George 230 kV #1 and the VCS-St. George 230 kV #2 – Currently in Engineering and Design phase.

Manufacturing Schedule





VC Summer 2 & 3 – Suppliers



Premier Technologies - Idaho



Integrated Head Package Lift Rig





Doosan, South Korea

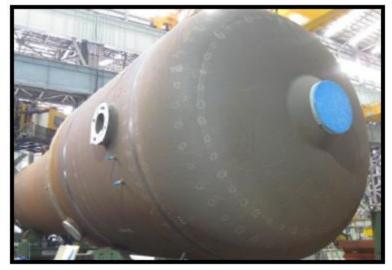




Unit 2 RV-Ready to Ship



Hydro test Complete for Unit 2A SG



Upper internal welding of Final Vessel for Unit 2B SG



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Mangiarotti - Italy



CMT – Unit 3 Upper Pedals



ACC-Unit 2-Tanks 1&2



CMT – Unit 2 Tanks 1 & 2



ACC - Unit 3 - Tank 2 - Shell to Lower Crown



Toshiba, Keihin - Japan



Generator Rotor



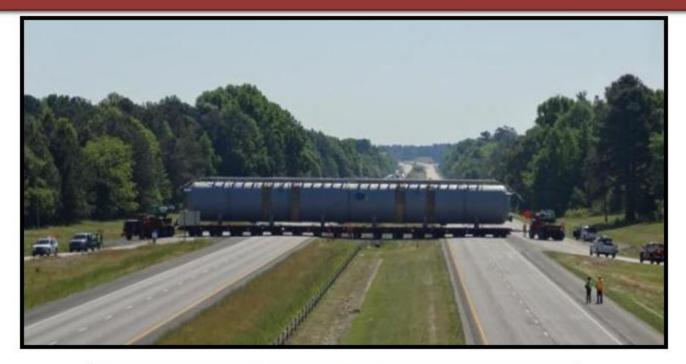
Low Pressure "A" Turbine



Low Pressure "B" Turbine – Prep for Blade Assembly



Deaerator Delivery







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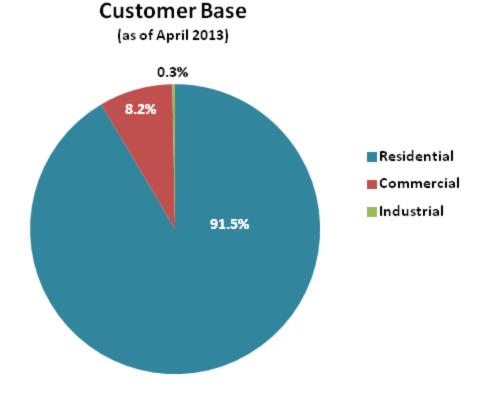
Growth and Construction/Gas Combination

Rusty Harris – Senior VP Gas Operations

PSNC Energy - Overview

Company Background

- Natural gas utility founded in 1938
- Acquired by SCANA in 2000
- Serves approximately 500,000 customers
- 11,075 miles of pipeline
 - 604 miles of transmission main
 - 10,471 miles of distribution main



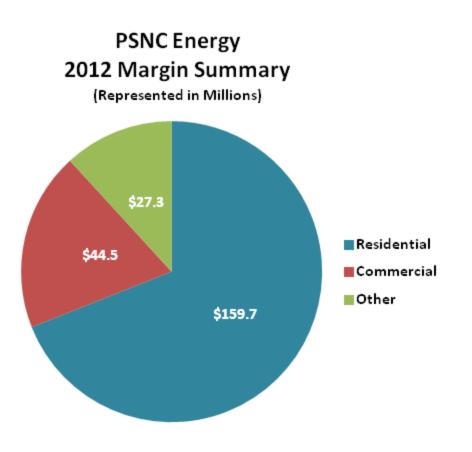
PSNC Energy



PSNC Energy – Rate Structure

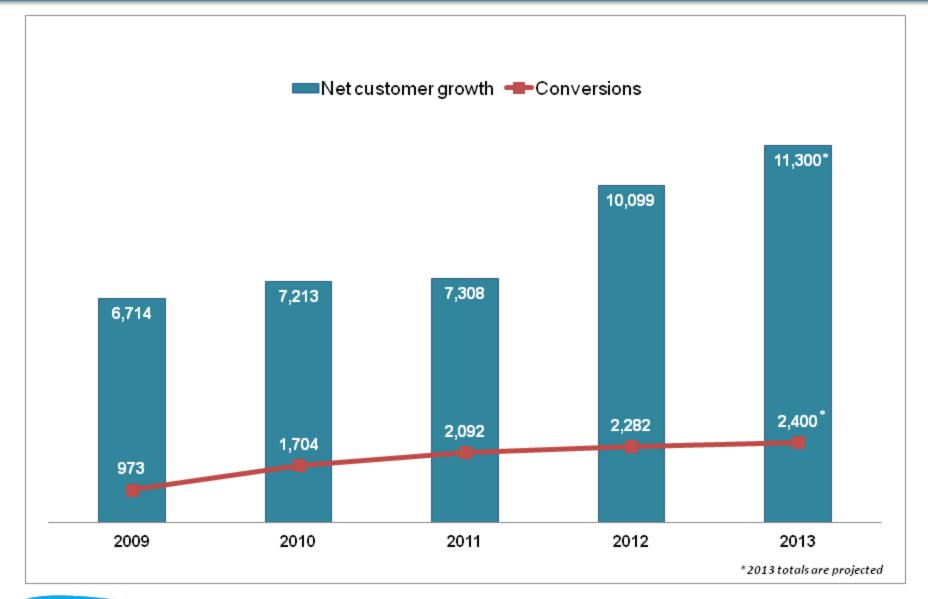
Customer Usage Tracker (CUT)

- Adopted in 2008
- Decouples residential and commercial customer usage from company margins
- Rates are adjusted semi-annually to true up margins and give back or collect any over or under-recovered amounts
- Removes the disincentive for the company to encourage conservation among customers



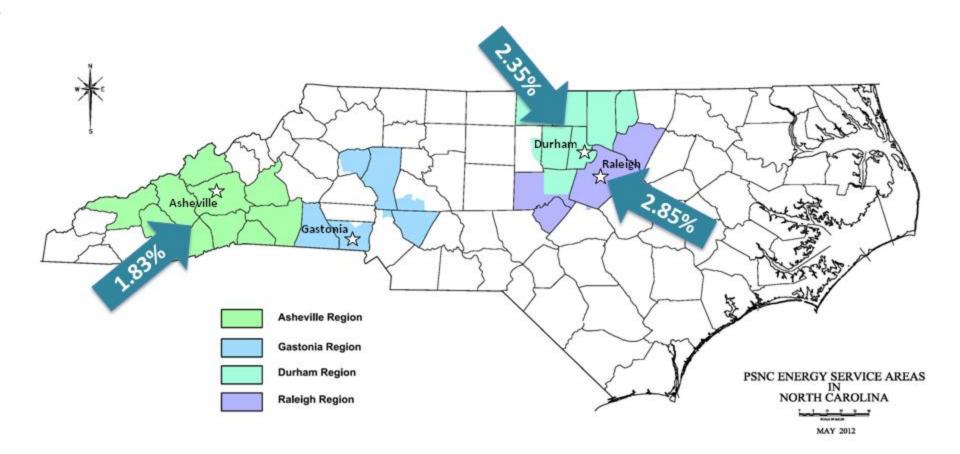


PSNC Energy – Growth Overview





PSNC Energy – Growth Rates by Market





Capital investment in pipeline assets

- Retrofit high priority pipelines for inline inspections
- Upgrade and extend pipelines to increase capacity and ensure reliability

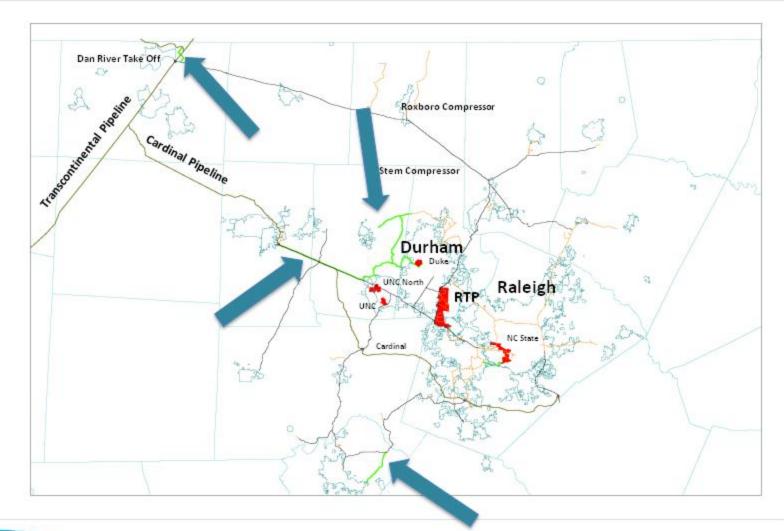
Why now

- Climate of increasing expectations for pipeline safety
- Financing costs are low
- Competitive price of natural gas



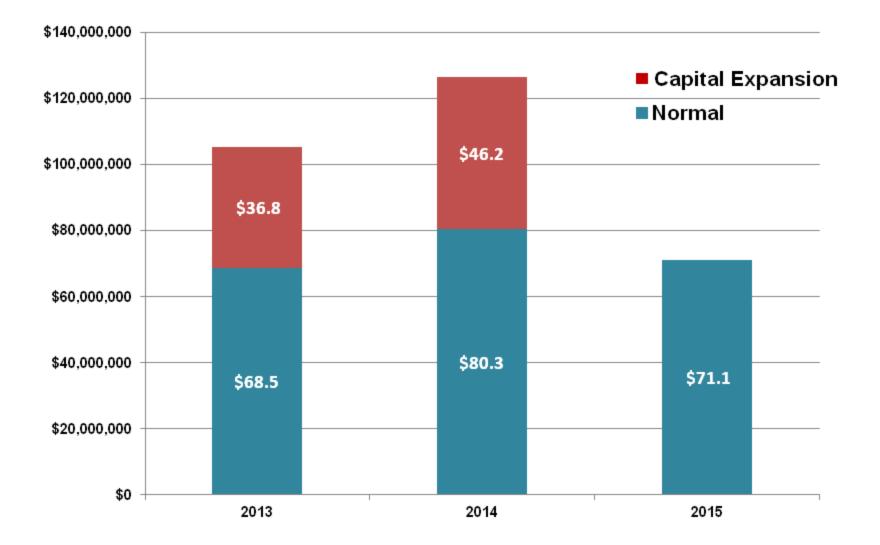
PSNC Energy – Construction Overview

System Upgrades and Expansions in Raleigh-Durham Area (Triangle)





PSNC Energy – Capital Expenditures Forecast

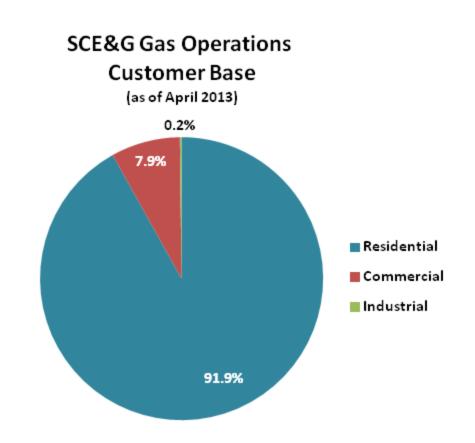




SCE&G Gas Operations - Overview

Company Background

- Gas operations began in 1846
- Serves approximately 325,000 customers
- 9,106 miles of pipeline
 - 445 miles of transmission main
 - 8,661 miles of distribution main





SCE&G Gas Operations – Rate Structure

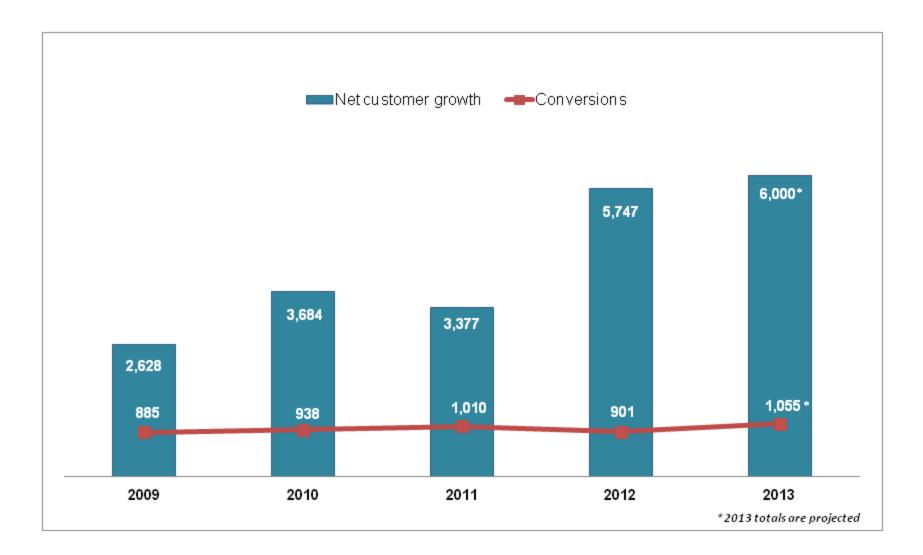
Rate Stabilization Act (RSA)

- Adopted in 2005
- Annual adjustment in rates to keep return within +/- 50 bps of allowed ROE of 10.25%
- Effectively deals with changing patterns of use and recovery of costs



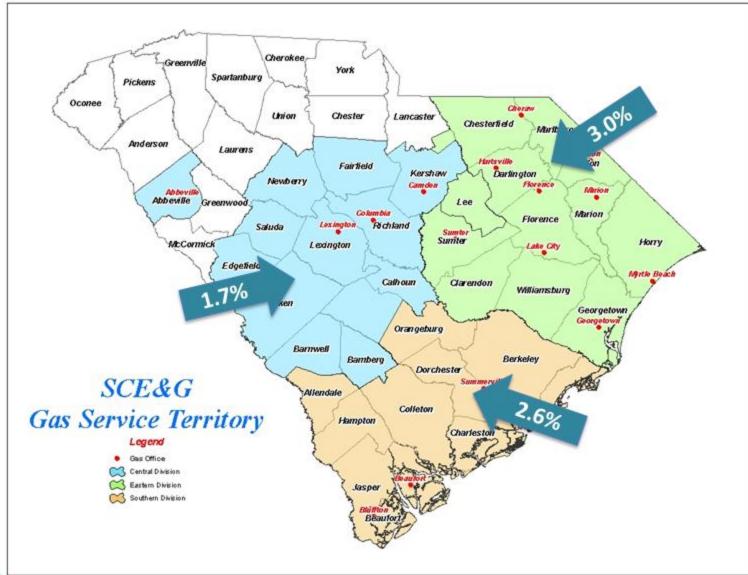


SCE&G Gas Operations – Growth Overview



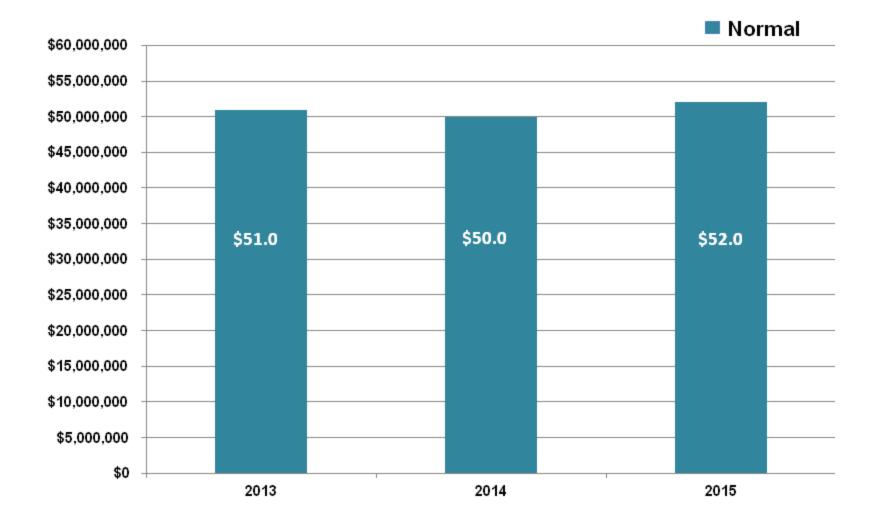


SCE&G Gas Operations – Growth Rates by Market





SCE&G Gas Operations – Capital Expenditures Forecast





New Gas Organization – Operational Highlights

Safety

- Top quartile in safety in Southern Gas Association rankings

Customer Service

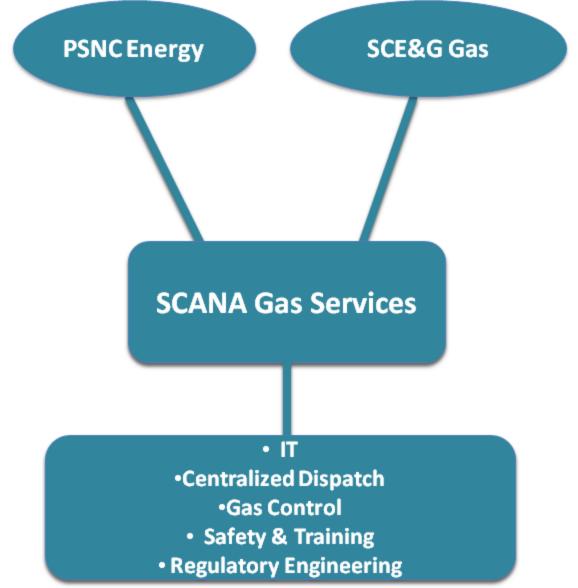
- Award-winning customer service

Customer Growth

- Sustained customer growth rates



New Gas Operations Organization - Overview





Emerging Trends for Natural Gas

CNG & NGVs

- Growing demand and increased supply

Recovering Housing Market

 Building permit totals continue to grow across service area



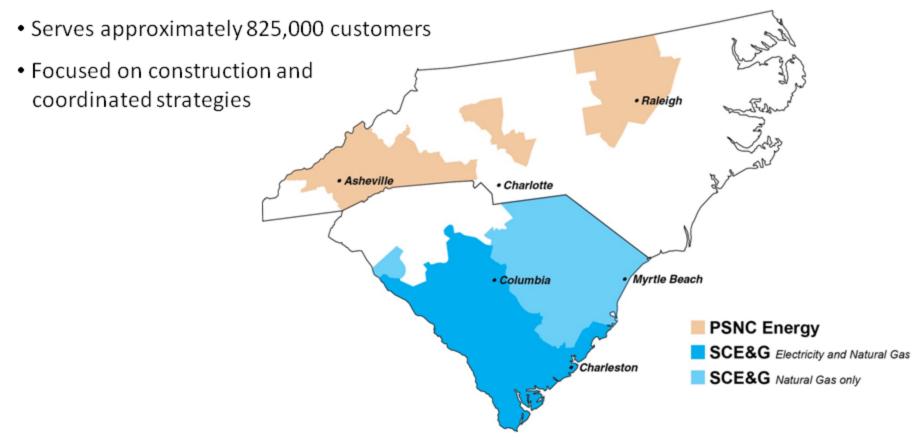
- Use of natural gas for electric/power generation
- Steady increases in demand in North Carolina & South Carolina



PSNC Energy and SCE&G Gas Operations - Summary

Combined LDC gas service areas:

• 20,181 miles of pipeline









Analyst Day 2013



Financial Update & The Economy

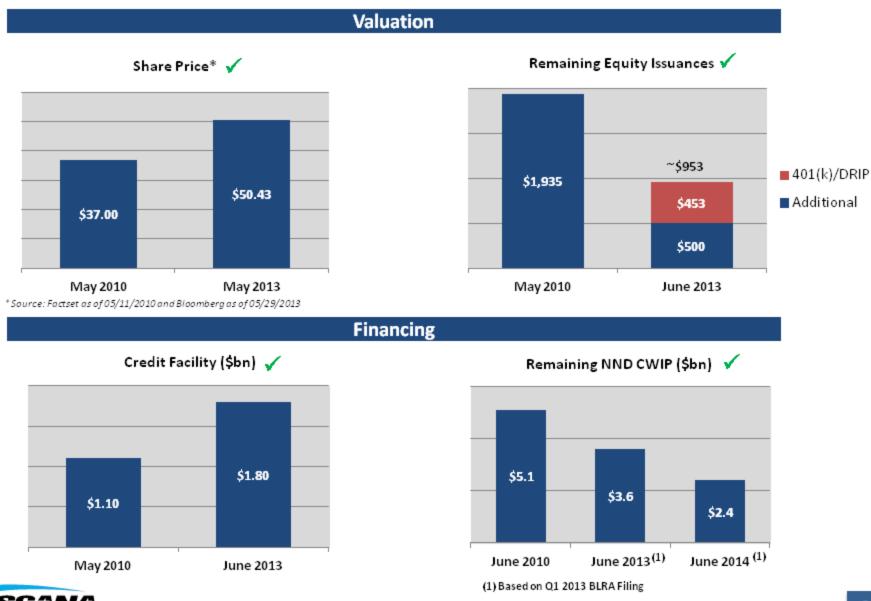
Jimmy Addison – Chief Financial Officer

Positive Developments

	Q1 2010	Q1 2013	Positioning
COL received	-	\checkmark	\checkmark
EPC settlement included in BLRA	-	✓	✓
First nuclear concrete	-	\checkmark	✓
Construction Stage	Awaiting COL Approval	Placement of Unit 2 CV Bottom Head	✓
CWIP invested (\$bn)	\$0.6	\$2.0	✓
Average BLRA rate increase	2.34%	2.35%	✓
# of BLRA rate increases	2	5	✓
Projected capital cost (\$bn)	\$6.9	\$5.8	\checkmark



Positive Developments

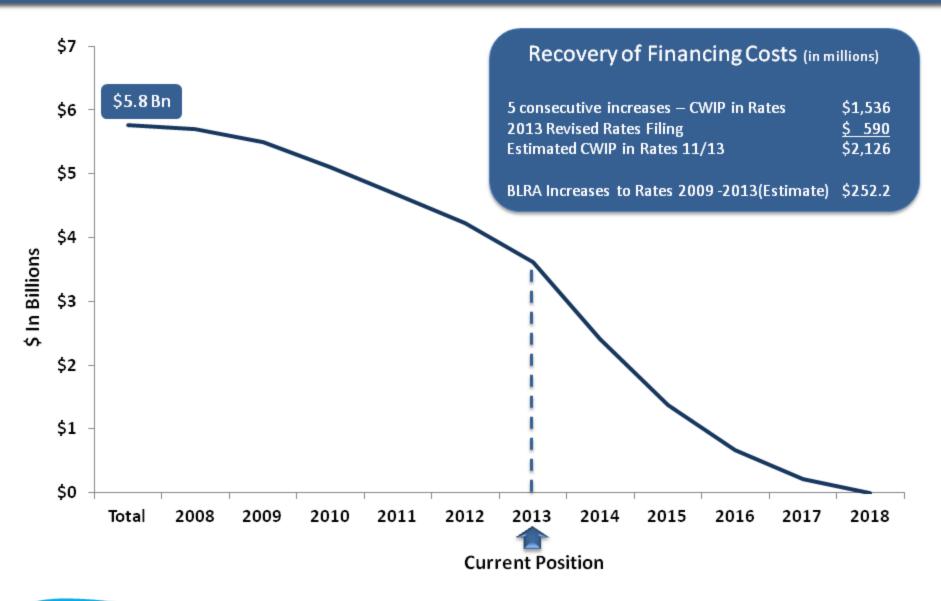


SCANA.

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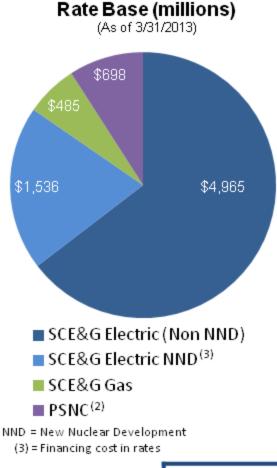
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NND CWIP Remaining





Retail Regulated Rate Base, Returns & Schedule



SCE&G Electric (Non NND) Regulatory Return

- Regulatory Allowed ROE = 10.25%
- ROE earned for 12 months ended 3/31/2013 = 9.87%

SCE&G Electric NND Regulatory Return

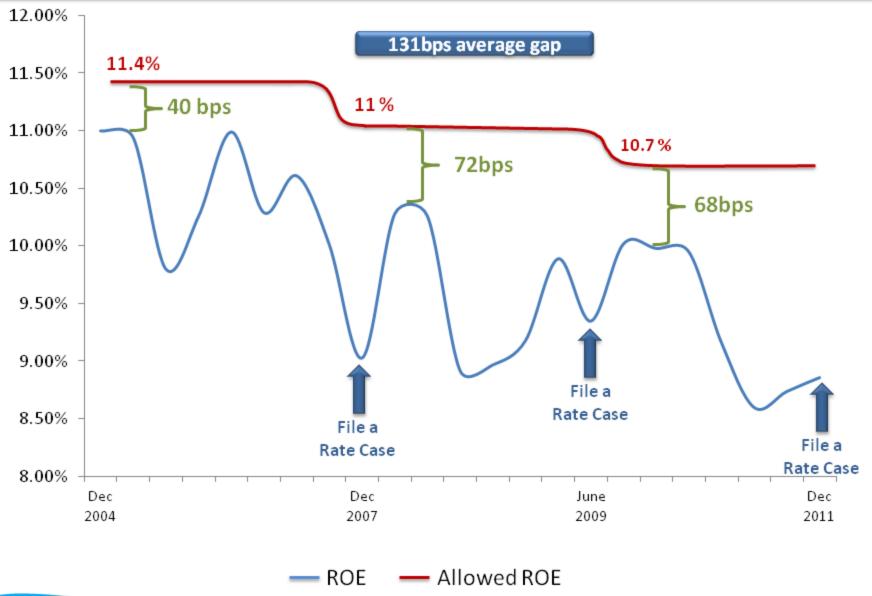
- Regulatory Allowed ROE = 11.00%
- Incremental CWIP of \$590M. Requested rate increase of 2.97%

Company	Regulatory Actual ROE ⁽¹⁾	Regulatory Allowed ROE ⁽¹⁾					
PSNC ⁽²⁾	11.23%	10.60%					
SCE&G Gas	10.12%	10.25%					
 As of 3/31/2013 regulatory filings Amounts represent perbook returns & may not reflect NCUC's determinations of rate base, capitalization and/or ROE 							

Regulatory Schedule for 2013	
1/31: Demand Side MgmtFiling	2/28: Integrated Resource Plan
3/21: Electric Fuel Cost Review	6/14: Gas RSA Filing
10/15: Gas RSA Order	Nov: Purchased Gas Cost Review

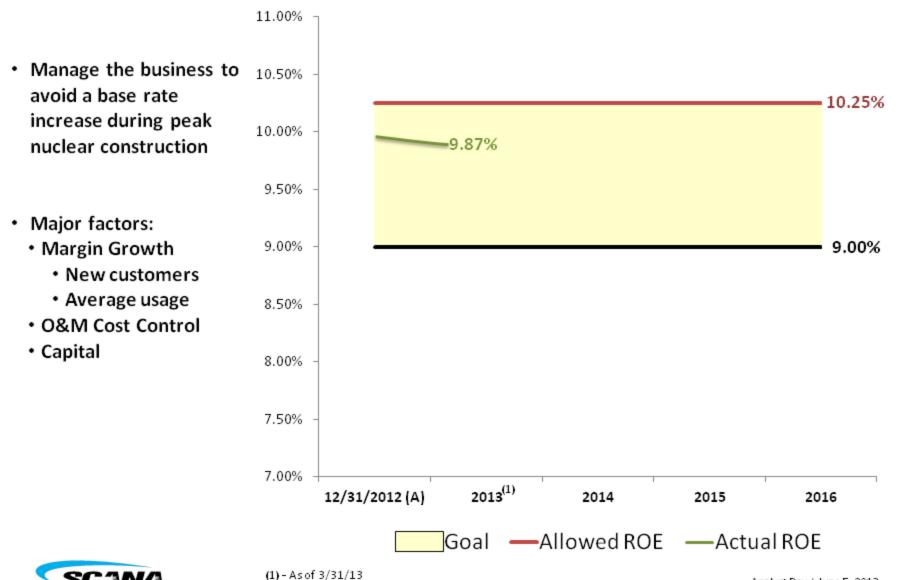


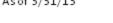
Base Electric ROE Trend





ROE Goal – Base Electric Business



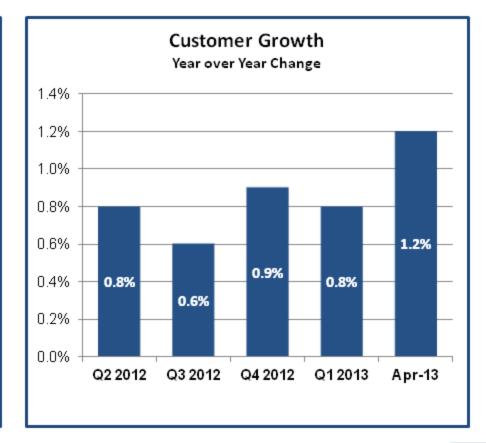


SCE&G Electric

- SCE&G is engaged in the generation, transmission, distribution and sale of electricity to approximately 673,000 customers in 24 counties and covers 17,000 square miles
- Weather Normalization Adjustment (eWNA)

Weather Normalized Sales Growth						
12 Months Ended						
	April 2013					
Weather Adjusted Change						
Sales:						
Residential	3.7%					
Commercial	0.2%					
Industrial *	(0.4)%*					
Other	1.2%					
Total Retail Sales	1.3%*					

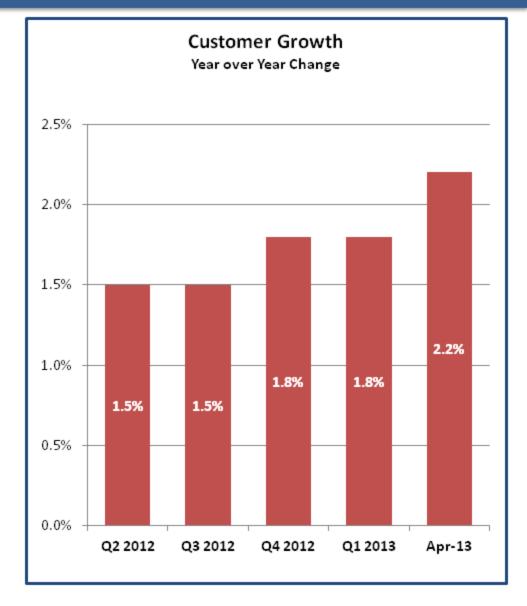
* Industrial sales are down due to decreased production by a major customer due to a fire at its facility. This customer came back online in October 2012. Excluding the impact of the fire, we estimate industrial sales would have increased approximately 0.1%, while total weather normalized retail sales would have increased approximately 1.5%.





SCE&G Gas

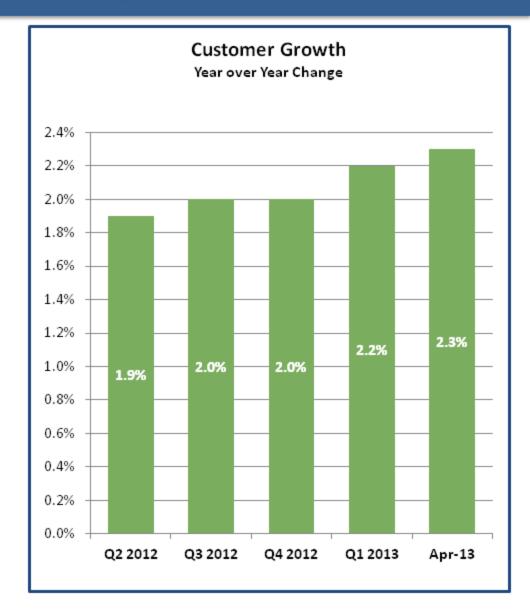
- Customer growth has returned to 2007 levels
- Weather Normalization Adjustment
- Annual Rate Stabilization Act (RSA) filing
- Project no RSA change for 2013
 - Customer growth
 - Expense management





PSNC Energy

- Customer Usage Tracker (CUT)
 - Decoupler
 - Semi-annual rate adjustment
- PSNC Energy has shown consecutive periods of 2% or greater customer growth
- Investing in capex to support customer growth

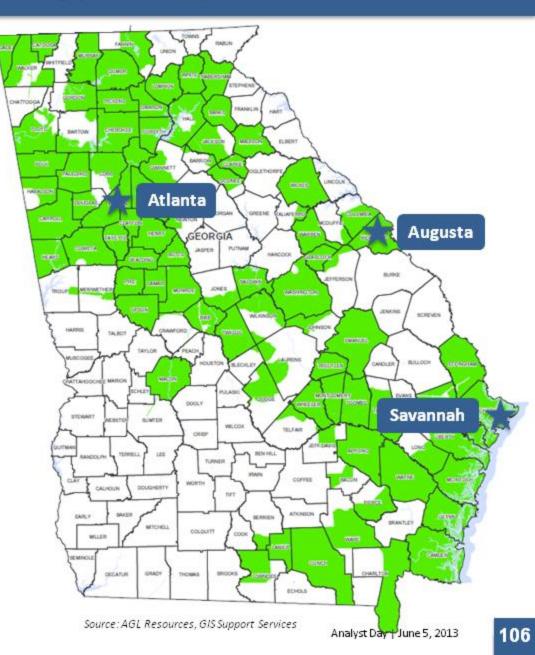




SCANA Energy - Georgia

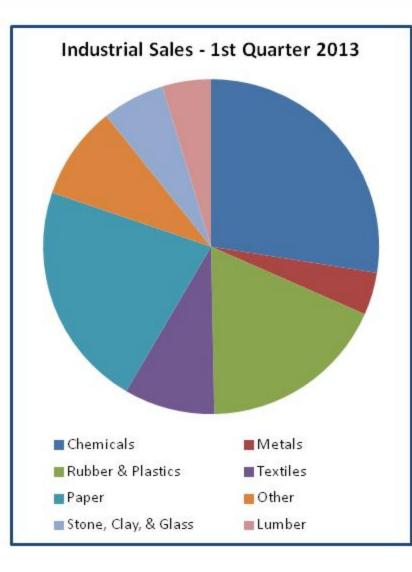
- SCANA Energy sells natural gas to approximately 450,000 customers
 - 375,000 Deregulated
 - 75,000 Regulated
- SCANA Energy's total customer base is 30% of the 1.5 million customers in Georgia's deregulated natural gas market

Deregulated Service Area





Electric Industrials



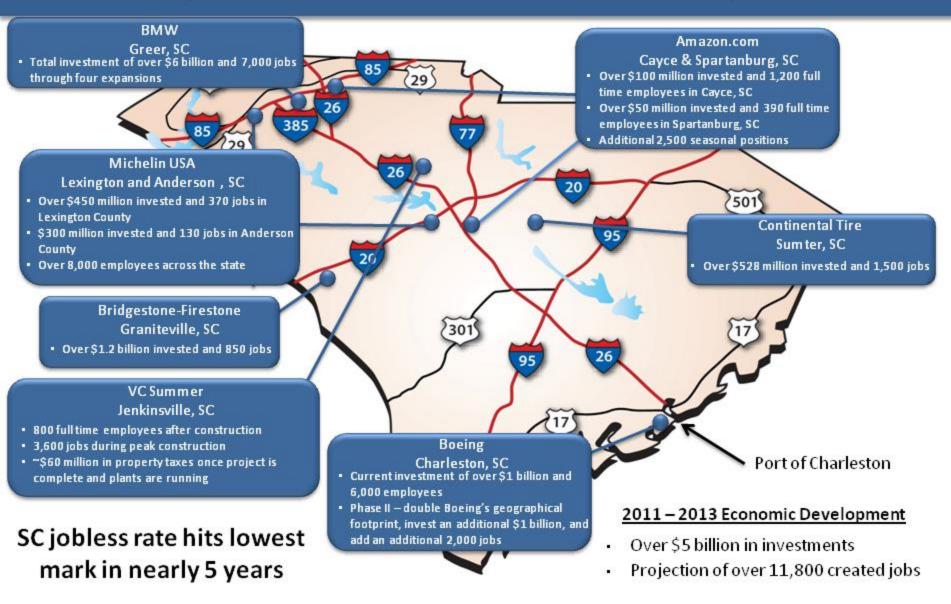
ATTRACTION OF SC:

- Favorable business environment
- Location
- Accessibility to transportation/ports
- Reliable, affordable, clean energy
- State clearly committed to energy expansion





Major South Carolina Economic Development





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South Carolina Unemployment

	National	SC	SCE&G Electric Territory*	SCE&G Electric Territory* vs. National
2008	7.3%	9.3%	5.7%	1.6%
2009	9.9%	1 2.0%	9.5%	0.4%
20 1 0	9.4%	1 0. 7 %	9.4%	
20 11	8.5%	9.6%	8.7%	(0.2%)
20 1 2	7.8%	8.4%	7.4%	0.4%
2013**	7.5%	8.0%	6.3%	1.2%

* Data for Charleston and Columbia metropolitan statistical areas only; not seasonally adjusted

** As of April 2013, preliminary



Major North Carolina Economic Development

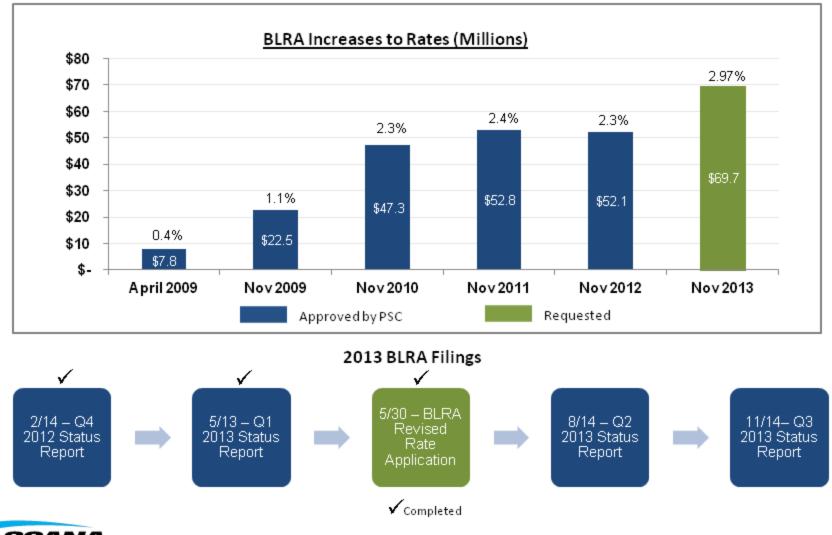




BLRA & Financings

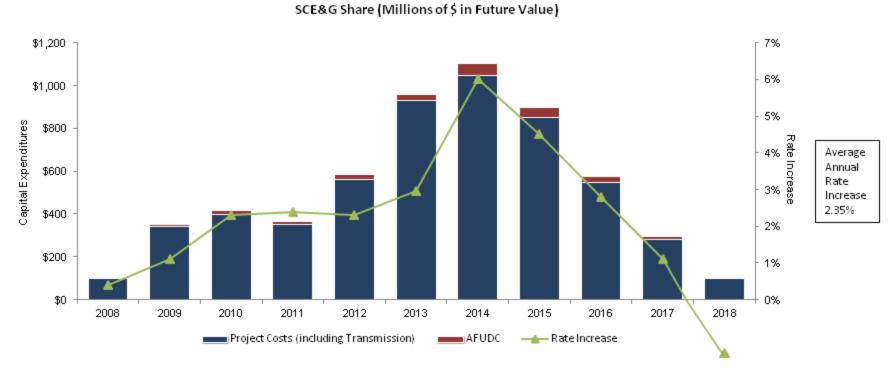
BLRA Filings & Rate Increases

- 5 Consecutive BLRA Increases approved
- · Recover financing costs on construction work in progress annually



New Nuclear CAPEX & Rate Increases

- New nuclear capex recovery independent of other SCE&G (base) rate case activity
- Annual new nuclear capex cost recovery is formulaic
- BLRA provides year over year rate increases, thus mitigating rate shock at commercial operation date



New Nuclear Capex, AFUDC, and Rate Adjustments

Note: Reflects nuclear capex as filed May 2013 in BLRA Quarterly Report and rate adjustments as filed May 2013 in Annual Request for Revised Rates.



CAPEX Estimated

(\$ in Millions)			20:	13E	20	14E	20	015E	T	otal
SCE&G - Normal										
Generation			\$	135	\$	127	\$	125	\$	387
Transmission & Distribution				218		216		270		704
Other				9		11		18		38
Gas				51		50		52		153
Common				8		7		5		20
Total SCE&G - Normal				421		411		470		1,302
PSNC Energy				106		127		72		305
Other				47		58		49		154
Total "Normal"				574		596		591		1,761
New Nuclear (BLRA 05/13)				928		1,046		850		2,824
Cash Requirements for Con	struction			1,502		1,642		1,441		4,585
Nuclear Fuel				108		55		39		202
Total Estimated Capital Exp	enditures		\$	1,610	\$	1,697	\$	1,480	\$	4,787
	Note: Reflects	new nuclear cape:	x as file d	May 2013 in B	LRA Qu	arterly Report				
\$ in Millions)	2013E	2014E		2015E		2016E		2017E	:	2018E
Incremental New Nuclear CWIP as of 6/30	\$590	\$1,233		\$1,037		\$695		\$468		\$207

Note: Reflects new nuclear CWIP from July 1 through June 30



CAPEX Estimated Change

(\$ in Millions)			2013E	2014E	2015E	TOTAL
SCE&G - Normal						
Generation						
Transmission & Distribution						
Other						
Gas						
Common						
Total SCE&G - Normal						
PSNC Energy						
Other						
Total "Normal"						
New Nuclear (BLRA 05/13)			\$(29)	\$66	\$(17)	\$20
Cash Requirements for Const	truction		\$(29)	\$66	\$(17)	\$20
Nuclear Fuel						
Total Estimated Capital Expe	enditures		\$(29)	\$66	\$(17)	\$20
	Note: Reflects ne	w nuclear capex as f	iled May 2013 in BL	.RA Quarterly Report		
\$ in Millions)	2013E	2014E	2015E	2016E	2017E	2018E
Incremental New Nuclear CWIP as of 6/30	\$(167)	\$ 1 92	\$30	\$3	\$10	\$4

Note: Reflects new nuclear CWIP from July 1 through June 30



Projected Financing Plan

(\$ in Millions)	2013E	2014E	2015E	2016E- 2017E
<u>Debt</u>				
Refinancings:				
SCANA	\$ -	\$ -	\$ -	\$ -
SCE&G	150	-	-	-
New Issues:				
SCE&G	450	600	650	300
Total Debt	\$ 600	\$ 600	\$ 650	\$ 300
<u>Equity</u>				
401(k)/DRIP	\$ 100	\$ 100	\$ 100	\$ 200
Equity Forward	200 🗸	-	-	-
Additional (estimated)	-	275	125	100
Total Equity	\$ 300	\$ 375	\$ 225	\$ 300

Complete

Remaining follow-on offerings for construction period and may change between years



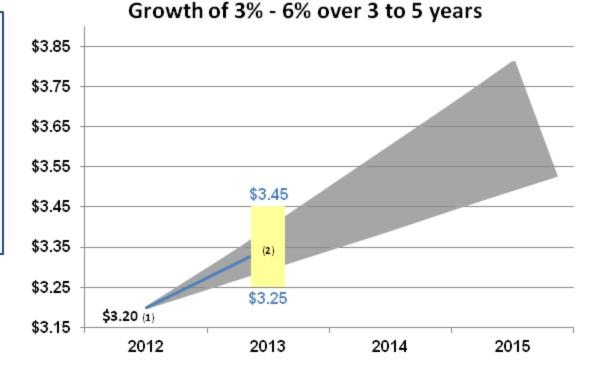
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OWER FOR LIVING

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Earnings Guidance

- Customer usage and growth are in line with plan
- 0&M:
 - In line with expectations
 - Variance is largely due to timing
- Nuclear spending:
 - Lower than forecast driven by sub-modules
 - Not a material impact to 2013 EPS



(1): 2012 GAAP EPS

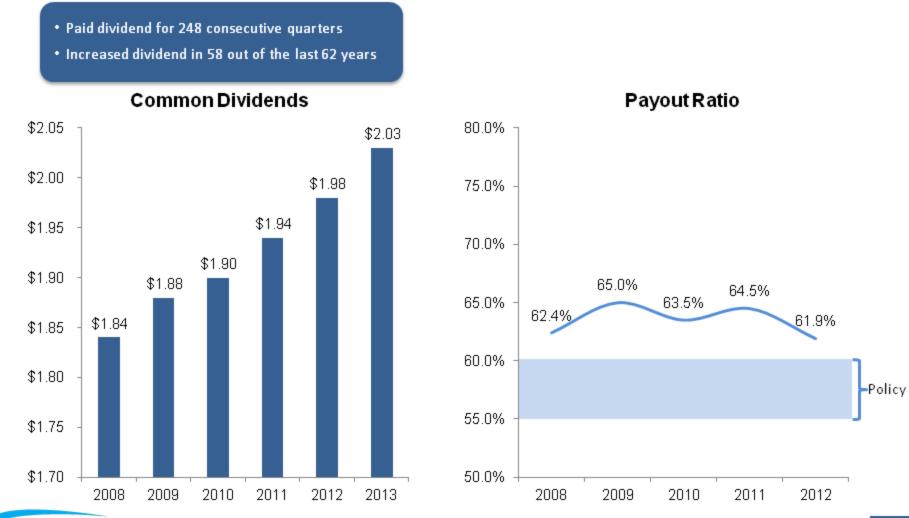
(2): 2013 EPS Guidance, Internal target \$3.35



Dividend Growth

DIVIDEND POLICY:

To increase the annual cash dividend at a rate that reflects the earnings growth in the Company's businesses, while maintaining a payout ratio of 55-60%





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Questions?