BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

DOCKET NO. 2016-223-E - ORDER NO. 2016-794

NOVEMBER 28, 2016

IN RE:	Petition of South Carolina Electric & Gas Company for Updates and Revisions to Schedules Related to the Construction of a Nuclear Base Load Generation Facility at Jenkinsville, South Carolina	)))))	ORDER APPROVING SCE&G'S REQUEST FOR MODIFICATION OF SCHEDULES

I. INTRODUCTION

This matter comes before the Public Service Commission of South Carolina (the "Commission") on the Petition of South Carolina Electric & Gas Company ("SCE&G" or the "Company") for an order approving an updated capital cost schedule and an updated construction schedule for the construction of two 1,117 net megawatt ("MW") nuclear power units to be located at the V.C. Summer Nuclear Station near Jenkinsville, South Carolina (the "Project" or "Units"). SCE&G filed the Petition in this docket (the "Petition") on May 26, 2016, pursuant to S.C. Code Ann. § 58-33-270(E) (2015). Under that provision of the Base Load Review Act (the "BLRA"), a utility "may petition the commission…for an order modifying any of the schedules, estimates, findings, class allocation factors, rate designs, or conditions that form part of any base load review order." S.C. Code Ann. § 58-33-270(E). Further, "[t]he commission shall grant the relief requested if, after a hearing, the commission finds…that the evidence of record justifies a finding that the changes are not the result of imprudence on the part of the utility." *Id.*

The Project has been the subject of a number of previous proceedings before this Commission. In Order No. 2009-104(A), dated March 2, 2009, the Commission approved an initial capital cost schedule and construction schedule for the Units. As approved in that order, the capital cost for the Units was $4.5 billion in 2007 dollars.[1] With forecasted escalation, this resulted in an estimated cost for the Units at completion of $6.3 billion in future dollars. The construction schedule approved in Order No. 2009-104(A) anticipated that Unit 2 would be completed by April 1, 2016, and the project as a whole would be completed by January 1, 2019. In 2009 SCE&G filed its first petition under S.C. Code Ann. § 58-33-270(E) (an "update proceeding") seeking an update to Project cost schedules. In Order No. 2010-12, dated January 21, 2010, the Commission approved the updated schedules. Subsequent update proceedings were filed in 2010 (approved by Order No. 2011-345) and in 2012 (approved in Order No. 2012-884).

Prior to this proceeding, the last Petition filed by SCE&G pursuant to S.C. Code Ann. § 58-33-270(E) was filed on March 12, 2015. In that Petition, SCE&G sought an order approving an updated construction schedule and updated capital cost schedule for the Units. In Order No. 2015-661, dated September 10, 2015, the Commission approved an updated construction schedule with new substantial completion dates for Units 2 and 3 of

[1] Unless otherwise noted, all dollar amounts used in this Order reflect the cost associated with SCE&G's 55% share of the ownership of the Units. Unless otherwise noted, amounts other than those associated with the October 2015 Amendment to the Engineering, Procurement and Construction Agreement (or "EPC Contract") and the option it contains are expressed in 2007 dollars. For those two items, amounts are expressed in future (*i.e.*, escalated) dollars.

June 19, 2019, and June 16, 2020, respectively, and an updated capital cost estimate of $5.2 billion in 2007 dollars.

II. UPDATE PETITION IN THIS DOCKET

The updated Petition under consideration in this docket has been modified from what was proposed in SCE&G's Petition by a settlement ("Settlement Agreement") entered into by a number of parties (and discussed below), and entered into the record as Hearing Exhibit 1. The updated construction schedule under review here was Exhibit 1 to the Settlement Agreement. This updated schedule revises the substantial completion date of Unit 2 to August 31, 2019, and of Unit 3 to August 31, 2020, a delay of approximately two and one-half months for each Unit compared to the dates established in Order No. 2015-661.

The updates to the cost schedule which result from the settlement are set out in Exhibit 2 to the Settlement Agreement. This schedule increases the anticipated cost of the Units by $831.3 million in future dollars to $7.658 billion or by approximately 12.2% compared to the forecast of $6.8 billion reflected in Order No. 2015-661. These increases in anticipated costs are related to:

(a) Adjustments to the EPC Contract price associated with the October 27, 2015, Amendment to the EPC Contract (the "Amendment");

(b) The additional costs associated with the exercise by SCE&G and Santee Cooper of the option to transfer to the Fixed Cost categories all but a limited set of costs to be paid under the EPC Contract after June 30, 2015 (the "Option");

(c) Eleven individual change orders under the EPC Contract which involve such things as site physical security upgrades and security system upgrades, the construction of additional shop and office space for support personnel who will operate the Units, and additional personnel to train operations and maintenance personnel;

(d) Increases in Owner's Costs principally associated with the extension of the completion dates for the Units and additional project oversight resources to ensure the safety and quality of the work, and

(e) Associated escalation and Allowance for Funds Used during Construction ("AFUDC").

The cost forecast presented in Hearing Exhibit 11 also reflects the reversal of a credit for future liquidated damages payments of $85.5 million. This credit had been included in the cost projections approved in Order No. 2015-661, but was no longer applicable because of revisions in the Guaranteed Substantial Completion Dates ("GSCDs") of the Units. Chart A below details the elements of the current request as per the Settlement Agreement:

Chart A

	SUMMARY OF COST ADJUSTMENTS ($000,000)	
	EPC Contract Cost	
1	Amendment	137.5
2	Fixed Price option	505.5
3	Liquidated Damages (LDs) (Reverse Credit)	85.5
4	Change Orders	32.6
5	Credit – Service Building Transfer	(5.02)
6	**Total EPC Cost Changes**	**756.1**
	Owner's Costs	
7	Principally Associated with Amendment and Service Building Transfer	30.0
8	**Total Request (EPC and Owner's Costs)**	**786.1**
9	Escalation	3.7
10	AFUDC	41.5
11	**Increase in Gross Construction Cost (Current $)**	**831.3**

Note: Totals may not add due to rounding

The anticipated cost schedule for the Units as approved in various dockets filed under the BLRA is set forth in Chart B below:

Chart B

Summary of BLRA Cost Schedule (billions of $)

Forecast Item	**Order No. 2009-104(A)**	**Order No. 2010-12**	**Order No. 2011-345**	**Order No. 2012-884**	**Order No. 2015-661**	**Current Petition**
Capital Cost, 2007 Dollars	$4.535	$4.535	$4.270	$4.548	$5.247	$6.805
Escalation	$1.514	$2.025	$1.261	$0.968	$1.300	$0.532
Total Project Cash Flow	$6.049	$6.560	$5.531	$5.517	$6.547	$7.337
AFUDC	$0.264	$0.316	$0.256	$0.238	$0.280	$0.321
Gross Construction Cost (future dollars)	$6.313	$6.875	$5.787	$5.755	$6.827	$7.658
Difference in gross amounts from Order No. 2009-104(A)	--	$0.562	(-$0.526)	(-$0.558)	$0.514	$1.345

Note: Chart B totals may not add due to rounding

III. NOTICE, INTERVENTIONS, AND HEARING

In compliance with S.C. Code Ann. § 58-33-270(E), SCE&G provided timely notice of the Petition in this docket to the South Carolina Office of Regulatory Staff ("ORS"). Pursuant to S.C. Code Ann § 58-4-10 (2015), ORS is automatically a party to this proceeding. By letter dated June 2, 2016, the Commission's Clerk's Office instructed the Company to publish by June 17, 2016, a Notice of Filing and Hearing in newspapers of general circulation in the area where SCE&G serves retail electric customers (the "Newspaper Hearing Notices"). The Clerk's Office also instructed SCE&G to provide proof of newspaper publication by July 8, 2016. On June 20, 2016, the Company timely filed affidavits with the Commission demonstrating that the Newspaper Hearing Notices had been duly published in accordance with the instructions of the Clerk's Office.

By letter dated September 15, 2016, the Commission's Clerk's Office instructed the Company by September 21, 2016, to publish a Notice of Public Night Hearing to be held on Tuesday, October 4, 2016, as a display ad in the local section of the following newspapers: *The State*, *The Aiken Standard*, *The Post and Courier*, and *The Beaufort Gazette/Island Packet* (the "Newspaper Night Hearing Notices"). The Clerk's Office also instructed SCE&G to provide proof of publication of the Newspaper Night Hearing Notices by September 23, 2016. On September 22, 2016, the Company filed with the Commission affidavits demonstrating that the Newspaper Night Hearing Notices had been duly published in accordance with the instructions of the Clerk's Office.

Uncontested Petitions to Intervene in this docket were received from Frank Knapp, Jr., Central Electric Power Cooperative, Inc. ("Central Electric"); The Electric

Cooperatives of South Carolina, Inc. ("The Cooperatives"); Sandra Wright; Sierra Club; the South Carolina Energy Users Committee ("SCEUC"), South Carolina Coastal Conservation League ("CCL") and CMC Steel South Carolina. These Petitions were granted by this Commission. However, by Order No. 2016-525, Mr. Joseph Wojcicki was denied intervention on the ground that he is not a customer of SCE&G.

A hearing was held beginning on October 4, 2016, at 10:30 AM in the Commission's hearing room. SCE&G was represented by K. Chad Burgess, Esquire, Matthew W. Gissendanner, Esquire, Belton T. Zeigler, Esquire, and Mitchell Willoughby, Esquire. SCE&G presented the testimony of Kevin B. Marsh, Stephen A. Byrne, Jimmy E. Addison, W. Keller Kissam, Kevin R. Kochems, and Joseph M. Lynch. The Electric Cooperatives of South Carolina and Central Electric Power Cooperative, Inc. were represented by Frank R. Ellerbe, Esquire, and John H. Tiencken, Jr., Esquire. These two parties presented the testimony of Michael N. Couick. Ms. Sandra Wright intervened in the case and represented herself at the hearing. Ms. Wright presented no witnesses. The South Carolina Energy Users Committee was represented by Scott Elliott, Esquire. SCEUC presented no witnesses. Frank Knapp, Jr. intervened in the case and represented himself at the hearing. Mr. Knapp presented no witnesses. CMC Steel South Carolina did not appear at the hearing, but was otherwise represented by Damon E. Xenopoulos, Esquire, and Eleanor Duffy Cleary, Esquire. The Sierra Club was represented by Robert Guild, Esquire. The Sierra Club presented no witnesses. The South Carolina Coastal Conservation League was represented by J. Blanding Holman, IV, Esquire, and Gudrun Elise Thompson, Esquire. CCL presented the testimony of Alice Napoleon. The Office of

Regulatory Staff was represented by Shannon Bowyer Hudson, Esquire, and Jeffrey M. Nelson, Esquire. ORS presented the testimony of Gary C. Jones and Allyn H. Powell. An evening public hearing was also held on October 4, 2016, for input from members of the public.

IV. SETTLEMENT AGREEMENT

In September of 2016, after the pre-filing of direct testimony by SCE&G and after all parties had been afforded a full opportunity to conduct discovery in this matter, ORS filed the Settlement Agreement with the Commission. It was executed by ORS, SCE&G, Central Electric, the Cooperatives, Frank Knapp, Jr. and SCEUC (the "Settling Parties"). The remaining parties, the Sierra Club, South Carolina Coastal Conservation League, Sandra Wright, and CMC Steel South Carolina, did not sign the Settlement Agreement. The Settlement Agreement is attached to this Order as Order Exhibit No. 1.

The Settling Parties propose that the Settlement Agreement and the modified construction schedule and capital cost schedule attached to it "should be accepted and approved by the Commission as a fair, reasonable and full resolution of all issues" in this proceeding. Hearing Exhibit No. 1 at 14. These schedules reflected the new GSCDs for the Units as contained in the Amendment. The modified construction schedule is attached as Exhibit 1 to the Settlement Agreement. The Settlement Agreement also reflected the Settling Parties' agreement to an adjustment in the capital cost schedules for the Units of $831.3 million, which is a reduction of $20.45 million from the adjustment requested in the Petition in this matter. The modified capital cost schedule that results from the Settlement Agreement is described in the testimony of ORS witness Powell and set out in

Exhibit AHP-1, entered into the record as Hearing Exhibit 11. The resulting adjustment would create a BLRA approved capital cost for the Units of $7.658 billion.

In the Settlement Agreement, SCE&G agreed to several terms that are not reflected in the attached construction or cost schedules. First, SCE&G agreed to fix the price to consumers for EPC Contract costs according to the terms of the Settlement. To accomplish this, SCE&G agreed not to file for approval of additional capital costs associated with the construction of the Units unless the requests are related to certain specifically enumerated exceptions listed at the bottom of page 10, paragraph 12 of the Settlement Agreement. *See also* Tr. at 93-94. SCE&G also agreed that it will not seek recovery for any increase in Owner's Costs associated with transfer of scopes of work from Fixed Cost Categories under the EPC Contract to Owner's Costs categories. Tr. at 92. This prohibition will not apply if the scope of work transferred is to be completed under a fixed price agreement which is less than or equal to the credit (reduction) to the fixed EPC Contract price provided by Westinghouse as a result of the transfer. This provision provides the Settling Parties assurance that transfers of EPC Costs to Owner's Costs will not result in cost increases in categories that are now subject to fixed prices under the Option.

These commitments in the Settlement Agreement will operate as a type of "Guarantee" by SCE&G shareholders of the Option, which is intended "to fix the price to consumers of the EPC Contract costs according to the terms of the Settlement [Agreement]." Settlement Agreement at ¶12. ORS's witness Gary Jones testified that "the Guarantee is the most important aspect of the Settlement Agreement because that provision encourages accountability for construction costs and preserves the benefits to ratepayers

from electing the Option." Tr. at 936. For that reason, the Guarantee "mitigates the risks associated with electing the Option." *Id.* All witnesses who discussed the matter were clear that the terms of the Guarantee are as set forth in Paragraph 12 of the Settlement Agreement, and a definitive statement of its terms is to be found there.

Second, SCE&G agreed not to file new petitions to update the BLRA capital cost schedules for the Units prior to January 28, 2019. Tr. at 90. SCE&G also agreed that, prior to January 28, 2019, it will not seek revised rates reflecting capital costs greater than those approved in this Order. Both commitments are collectively referred to as the "Moratorium." The January 28, 2019, date corresponds to the date on which SCE&G would expect to make its final revised rates filing prior to Unit 2 going into service. Furthermore, the Settlement also provides that the end date for the Moratorium will track the completion date for Unit 2 and will be extended day for day if the completion date is extended. As SCE&G witness Marsh indicated, capital costs that are not reflected in revised rates due to the Moratorium will continue to accrue AFUDC as envisioned under the BLRA. Tr. at 95.

Third, SCE&G agreed to place a $20 million cap on any BLRA recovery for amounts associated with the items listed as unresolved matters on Exhibit C to the Amendment. Tr. at 91. These were disputed items the parties were not in a position to resolve at the time the Amendment was concluded. This $20 million cap excludes two change orders related to Plant Security Systems Integration and Plant Layout Security, Phase 3. The $20 million cap provides the Settling Parties assurance that the additional costs of the Exhibit C items will not exceed a reasonable and quantified amount.

Fourth, SCE&G will calculate future revised rates filings using a return on common equity ("ROE") of 10.25% rather than the ROE of 10.5% that SCE&G agreed to in the settlement underlying Order No. 2015-661. Tr. at 92-93. This new ROE will be used in revised rates filings made on or after January 1, 2017, and prospectively thereafter until the Units are complete.

In support of the Moratorium, the Settlement Agreement revises the milestone schedule for the project to include only two uncompleted milestones. In support of this milestone change, the Settlement Agreement provides for greatly expanded and highly detailed reporting on schedule matters in the quarterly filings required under S.C. Code Ann. § 58-33-277(A) (2015). The milestones discussed in the Settlement Agreement are the substantial completion dates of the two Units. Reducing the remaining milestones in this way recognizes the fact that the substantial completion dates are the key milestone dates going forward and that customers are protected so long as those dates are met. However, if those dates are not met, protection for the customers is found in the form of new provisions governing liquidated damages, which cap liquidated damages at $371.8 million in aggregate for both Units. The current maximum is $86 million. The $371.8 million amount includes $137.5 million per Unit that Westinghouse must pay SCE&G if a Unit does not qualify for Federal Production Tax Credits. Completion incentives of $165 million are also included in the Amendment. Tr. at 418-419; 430. In addition, the Company intends to exercise the "Fixed Price" option for the EPC, agreeing to "fix the price to consumers for EPC Contract costs, according to the terms of the settlement." Settlement Agreement at 10, ¶12. According to Company witness Lynch, the Fixed Price option will

save customers between 10.9% and 29.3% of the cost of the project. Tr. at 783. In addition, Westinghouse has made a corporate commitment to complete these Units successfully to protect its AP1000 business worldwide. Tr. at 418. Also, Westinghouse's parent company, Toshiba Corporation, reaffirmed its guaranty of Westinghouse's payment obligations under the EPC Contract. Tr. at 419. These terms are in addition to SCE&G's commitment to "fix the price to consumers for EPC Contract costs, according to the terms of the settlement," and the other terms of the Moratorium. Settlement Agreement at 10-12, ¶¶ 12-13.

Pursuant to S.C. Code Ann. § 58-33-270(G) (2015), the Settling Parties asked the Commission to hold a hearing on the Settlement Agreement along with the hearing for the Petition. They agreed that "the terms of the Settlement Agreement are reasonable, in the public interest and in accordance with the law and regulatory policy," and that they "comport with the terms of the BLRA." Settlement Agreement at 14-15. The Settling Parties asked the Commission to adopt the Settlement Agreement as part of its order in this proceeding. The Commission will rule on that request at the conclusion of its consideration of the evidence and issues raised in this proceeding.

V. STATUTORY STANDARDS AND REQUIRED FINDINGS

S.C. Code Ann. § 58-33-270(E) governs proceedings to update capital cost schedules and construction schedules that have been previously approved under the BLRA. Under this statute, the Commission must grant the relief requested if, after a hearing, the Commission finds "as to the changes in the schedules, estimates, findings or conditions, that the evidence of record justifies a finding that the changes [in previously approved

schedules] are not the result of imprudence on the part of the utility." S.C. Code Ann. § 58-33-270(E)(1) (2015).

VI. FINDINGS RELATED TO COST AND SCHEDULE UPDATES

A. The 2015 Amendment to the EPC Contract

The amendment to the EPC Contract dated October 27, 2015, is attached to SCE&G witness Byrne's testimony and is a part of Hearing Exhibit No. 10. The Option to transfer costs to the Fixed Cost category is set forth in a document pre-signed by Westinghouse that was attached as Exhibit D to the Amendment. Hearing Exhibit No. 10 at 23. The Amendment and the Option are of primary importance here because they represent more than 90% of the adjustments to the Project's cost schedule that are proposed in this docket.

B. Overview of the Amendment and the Option

The Amendment and the Option were the result of negotiations involving SCE&G, Santee Cooper, Westinghouse, and Chicago Bridge & Iron (CB&I) that took place during September and October of 2015. Tr. at 56-57. Westinghouse requested a meeting with SCE&G and Santee Cooper during the first week of September 2015. At that meeting, Westinghouse disclosed that CB&I had decided to exit the new nuclear construction business and was requesting terms on which it could be released from its contractual commitments to this project and the sister project at the Vogtle site in Georgia. Tr. at 56.

At the September meeting, Westinghouse also said that, if CB&I were released from the project, Westinghouse would hire the Fluor Corporation ("Fluor") to assume lead construction responsibilities as a subcontractor to Westinghouse. Fluor would not become a member of the Consortium. Tr. at 57. In order for Westinghouse to remove CB&I from

the project, SCE&G and Santee Cooper had to release CB&I from the direct parental guarantees that CB&I had provided to them. In response, SCE&G and Santee Cooper negotiated provisions (a) increasing liquidated damages, (b) restricting the grounds for future change orders, (c) eliminating calendar-based progress payments, (d) establishing a dispute review board and prohibiting litigation while construction was ongoing, (e) extending major equipment warranties to match the new GSCDs of the Units, and (f) resolving all but a limited number of the outstanding change order requests and other claims between the parties.

SCE&G and Santee Cooper also demanded and obtained from Westinghouse the unilateral and irrevocable Option to transfer all but a limited amount of work under the EPC Contract to the Fixed Price cost category. The Option would set a price of $3.345 billion for all EPC Contract invoices paid after June 30, 2015. Tr. at 432. That price would be subject to future change orders and a limited number of excluded scopes of work in the Time and Materials cost category. By terms of the Amendment, the exercise of this Option is subject to Commission approval, which SCE&G has requested in this proceeding.

The Amendment was signed on October 27, 2015. Effective January 1, 2016, Fluor assumed responsibility for construction work on site and began transferring CB&I's craft workers to Fluor's employment rolls. On July 1, 2016, SCE&G and Santee Cooper provided Westinghouse with an executed copy of the Option agreement subject to review and approval by the Commission. Tr. at 60.

In this proceeding, SCE&G is presenting the cost changes associated with both the Amendment and the Option for incorporation in the updated BLRA cost forecasts. As to

both sets of costs, the determinative question is whether the Commission can determine that "the evidence of record justifies a finding that the changes are not the result of imprudence on the part of the utility." S.C. Code Ann. § 58-33-270(E). For the reasons stated below, the Commission finds that SCE&G has met this statutory standard and that these changes have been shown not to be the result of imprudence on the part of SCE&G. Under the terms of the BLRA, they are properly included in the updated cost forecasts for the Units.

C. The Decision to Incur $137.5 Million to Procure the Amendment was not the Result of Imprudence on the Part of SCE&G.

The record shows that SCE&G assessed the value of the Amendment as a single integrated package of costs and benefits. Based on the testimony of SCE&G witnesses and those presented by the ORS, in addition to the provisions of the Settlement Agreement, the Commission finds that this approach was reasonable. While it is known and quantifiable at this time that the cost of the Amendment for which approval is sought is $137.5 million, the terms of the Amendment are primarily intended to control *future* costs and improve the likelihood of meeting *future* schedule commitments. These forward-looking benefits can only be specifically quantified, if at all, when the Units are complete and the intervening circumstances are known. At the hearing in this matter, SCE&G adduced evidence that multiple benefits secured by the Amendment would be sufficient individually to justify the cost paid for it. This is cogent evidence that SCE&G was not imprudent in negotiating it. In sum, there is no basis in this record to conclude that the provisions of the Amendment or its costs are the result of imprudence by SCE&G.

SCE&G pursued two principal goals in negotiating the Amendment. One was to restructure the EPC Contract to support the timely completion of the Units. The second was to limit SCE&G's and Santee Cooper's exposure to future price increases under the EPC Contract. Tr. at 59-60. Each of the principal terms of the Amendment supports one or both of these goals. The provisions in the Amendment that principally support the timely and efficient completion of the Units include those (a) ending the divided structure of the Consortium, (b) allowing Fluor to become the construction lead for the project, (c) restructuring and increasing liquidated damages and completion incentives, (d) eliminating calendar-based progress payments, (e) resolving current disputes, (f) limiting future litigation, and (g) minimizing the grounds for future disputes. The principal provisions in the Amendment that limit the exposure of SCE&G and Santee Cooper to future price increases include provisions (a) amending the change in law provision of the EPC Contract, (b) specifying Design Control Document (DCD) Revision No. 19 to be the controlling document for purposes of the project, (c) providing an irrevocable Option to transfer most remaining EPC Contract costs to the Fixed Price category, and (d) resolving most of the payment disputes between the parties. The Commission finds that there is no evidence of imprudence regarding SCE&G's decision to incur costs of $137.5 million in order to secure these benefits.

D. Approval of the Decision to Exercise the Option

In its Petition in this matter, SCE&G requested a ruling from the Commission affirming its decision to exercise the Option. In the Settlement Agreement the Settling Parties also urge that the Option be approved. SCE&G presented testimony by Dr. Lynch

showing that, in the most likely scenarios, the Option will save SCE&G's customers between $118 million and $981 million. *See* Hearing Exhibit No. 12.

SCE&G's witnesses testified that Westinghouse understands that it likely will incur costs under the Option that it cannot recover from SCE&G and Santee Cooper. Certain intervenors raised concerns about whether these costs are so great that Westinghouse might be driven to default on its obligations under the EPC Contract or seek to renegotiate the terms of the Option. Tr. at 566-67. That latter concern underlies ORS's view that additional protections in the form of the Guarantee were required for ORS to accept the terms of the Settlement Agreement. Clearly, ensuring the benefits of the Option are not lost due to the magnitude of the obligation incurred by Westinghouse is a principal goal of ORS in negotiating the Guarantee. Of course, under any circumstance, it is best for SCE&G and its shareholders for Westinghouse to hold this risk.

A related question is what would happen if Westinghouse were to default on the EPC Contract and then prove to be insolvent. In that case, SCE&G would have recourse to the Westinghouse parental guarantee from Toshiba, which Toshiba has reaffirmed as part of the Amendment. Tr. at 419. Today, that guarantee would secure approximately $1 billion in SCE&G's EPC Costs--or about a third of the amount currently remaining to be paid--against Toshiba's publicly reported market capitalization of approximately $15 billion. In addition, approximately 85% of the equipment needed to complete the Units is now stored on site. Tr. at 414. SCE&G is currently implementing the rights it negotiated under the EPC Contract to place key software, design data and other intellectual property necessary to complete the Units in a third party escrow. Tr. at 458. The Settlement

Agreement requires SCE&G to complete this transfer. Furthermore, as a result of the Amendment, Fluor is now fully integrated into the project, managing the on-site construction work and insulated from direct Consortium liability. Even in the direst circumstances with reference to Westinghouse, SCE&G would not be without options to complete the project.

In the end, it is in the best interest of the project, SCE&G and its customers for SCE&G to exercise the Option and transfer to Westinghouse the price risk that the Option represents. The Commission hereby approves the exercise by SCE&G of the Option. The Commission further recognizes that the Guarantee further protects customers from the benefits of the Option being eroded by future events.

E. The Updated Owner's Costs are not the Result of Imprudence On the Part of SCE&G

In its Petition and testimony, SCE&G identified an increase of $20.8 million in Owner's Costs to complete construction of these Units. Tr. at 459. Owner's Costs include all of the costs SCE&G must bear as owner of the project to oversee construction and engineering on the project. As the holder of active NRC Combined Operating Licenses ("COLs") for the Units, SCE&G is directly responsible for ensuring the quality and safety of all work on-site and at suppliers worldwide. SCE&G also pays license fees to the NRC to cover its costs for inspection and oversight of the project and for maintaining the multiple NRC resident inspectors on site. Under the EPC Contract, SCE&G is contractually obligated to provide security and certain utilities for the site, as well as builder's risk insurance and workers compensation insurance. Tr. at 825-26. To protect its commercial interests and those of its customers, SCE&G audits and reviews all invoices and requests

for payment associated with the project and bears the cost of disputing invoices and change order requests and enforcing its rights under the EPC Contract. As the prospective operator of the Units, SCE&G must recruit, train, and license the personnel needed to operate the Units and must draft and adopt the operating, maintenance and safety plans and procedures for the Units. SCE&G must accept the turnover of individual systems as they are completed by WEC and must test, operate, and maintain them pending completion of the Units. SCE&G must provide the facilities, Information Technology (IT) and other support required by these functions. The New Nuclear Development ("NND") team comprises approximately 600 SCE&G, SCANA and Santee Cooper personnel who fulfill these tasks. Tr. at 530.

As a result of the Settlement Agreement, the Settling Parties agreed upon the inclusion of an increase of $30 million in Owner's Costs. No party has presented any testimony challenging approval of SCE&G proposed updates to Owner's Costs or the process by which the Owner's Costs budgets are compiled. In the Settlement Agreement, the Settling Parties support approval of the proposed update to Owner's Costs. The evidence of record clearly supports the finding by this Commission that the increase in Owners Costs is not a result of imprudence by SCE&G.

F. The Additional Costs Associated with Change Orders are not the Result of Imprudence.

The Company has identified 11 change orders and related matters that were not resolved through the Amendment. In its Petition, SCE&G requested an adjustment of $52.5 million to the EPC Contract cost for these 11 change orders. As a result of the

Settlement Agreement, the Settling Parties agreed upon the inclusion of $32.6 million of those costs. See Order Exhibit No. 1, ¶ 6.

The Company's witnesses, Mr. Byrne and Mr. Kochems, provided detailed testimony concerning the justification, purpose and necessity for each of these 11 change orders and their associated costs. They affirmatively testified that the costs associated with each of the 11 change orders represent reasonable and prudent costs of completing the Units. Tr. at 396, 790, 815-24. In addition, ORS witness Powell testified in detail about the change orders and explained the ORS recommendation that this Commission should accept the Change Order costs of $32.6 million reflected in the Settlement Agreement. Tr. at 729-730.

The Commission finds that the increase to the EPC Contract of $32.6 million for the 11 change orders discussed above is not the result of imprudence by SCE&G. Therefore, these costs are properly included in the anticipated capital cost schedule for the Units as approved in the Settlement Agreement.

G. Approval of Updates to the Construction Schedule

The updated construction schedule presented in the Petition reflects the approximately two and one-half month change in the GSCD for each of the Units and other adjustments to intervening milestones. SCE&G witness Byrne testified that these milestone changes and the new substantial completion dates are based on extensive construction data WEC provided to SCE&G, and that SCE&G's construction experts carefully reviewed and found the new schedule logical and appropriate. Tr. at 415-16. Mr. Byrne also testified that, in its role as the new construction manager for the project, Fluor

is conducting a full review of the construction schedule to ensure the GSCDs can be met and that any needed mitigation plans are put in place to support the schedule. Mitigation plans are being formulated to ensure that those dates are met. Mr. Byrne further testified that Westinghouse and Fluor have a reasonable construction plan in place to achieve the GSCDs. Tr. at 416. ORS witness Mr. Jones recommended that the Commission approve the proposed revised GSCDs, recognizing that these are contractual dates and accurately reflect what is included in the Amendment, subject to certain conditions regarding the BLRA milestone schedule. Tr. at 926.

Based on this evidence of record, the Commission finds that the revisions to the construction schedules for the Units presented in the Petition are reasonable forecasts of the time required for completing the Units and supported by the evidence of record in this proceeding. They are appropriate schedules for the project under the provisions of the BLRA both in their more detailed form as filed and as modified according to the terms of the Settlement Agreement and they are not the result of any imprudence on the part of SCE&G.

Recognizing, however, that Fluor's fully resource-loaded construction schedule is still outstanding, this Commission directs SCE&G to report on the results of Fluor's review and revision to the resource-loaded integrated project schedule when it is completed.

VII. COMMISSION ACCEPTANCE OF THE SETTLEMENT AGREEMENT

As discussed throughout this Order, this Commission has been presented with a comprehensive Settlement Agreement, joined by a number of parties who have asked that

the Settlement Agreement be approved under S.C. Code Ann. § 58-33-270(G). That provision, which is a part of the BLRA, provides the following:

> The commission promptly shall schedule a hearing to consider any settlement agreement entered into between the Office of Regulatory Staff, as the party representing the public interest in the proceedings, and the utility applicant, provided that all parties shall have been given a reasonable opportunity to conduct discovery in the docket by the time the hearing is held. The commission may accept the settlement agreement as disposing of the matter, and issue an order adopting its terms, if it determines that the terms of the settlement agreement comport with the terms of this act.

The Commission finds that the Settlement Agreement was entered after all parties had a full opportunity to conduct discovery on the matters at issue in this case, and after SCE&G had submitted approximately 326 pages of prefiled testimony and exhibits, setting out in detail the reasons for the changes in the construction schedule and anticipated cost schedules for the project. Furthermore, the direct and settlement testimony of the ORS's witnesses, Ms. Allyn Powell and Mr. Gary Jones, shows that the ORS's participation in the Settlement Agreement is based on extensive oversight of costs and construction schedules for the project. Tr. at 717-36, 935-37. Santee Cooper witness Michael N. Couick stated that "[t]he detailed understanding that ORS has developed through its work has allowed it to negotiate a tough settlement that required SCE&G to make some significant concessions that we think will make it more likely that the project will be completed on schedule and without additional cost increases. Keeping the project on schedule and reducing the likelihood of additional cost increases should directly benefit the nearly 1.5 million Cooperative members who will be served by our stake in the project." Tr. at 695-A. This Commission believes that these benefits would be equally applicable to SCE&G customers.

Based on these facts, the Commission finds that the Settlement Agreement meets the statutory requirements for adoption under S.C. Code Ann. § 58-33-270(G). In this context, the Commission's task is to review the evidence of record presented by the utility and ORS to ensure that this evidence supports the Settlement Agreement and the terms it encompasses. *See* S.C. Code Ann. § 58-33-270(G).

As indicated above, the evidence adduced at the hearing in this matter establishes that the proposed changes in estimated capital costs are not the result of any imprudence on the part of SCE&G. Collectively, these items represent the $831.3 million adjustment in the capital cost forecasts for the Units as reflected in the Settlement Agreement and create the total schedule of estimated capital costs for the Units of $7.658 billion.

As to changes in the construction schedules for the project, the Commission recognizes that the substantial completion dates are now the key milestones remaining to be accomplished and the important milestones to be measured. Changes in other milestones would only be relevant in relation to any resulting changes that they cause in those substantial completion dates. The Settlement Agreement will require extensive reporting of multiple milestone schedules, including all of the milestones contained in the schedules presented in Order No. 2015-661, the milestones that will be contained in the forthcoming resource loaded integrated construction schedule being prepared by Fluor, as well as the new milestone payment schedule being formulated under the auspices of the Dispute Resolution Board. As a result, there will be extensive reporting and transparency concerning construction progress going forward.

In this regard, ORS's statutory oversight and review authority is clear and extensive:

> The Office of Regulatory Staff shall conduct on-going monitoring of the construction of the plant and expenditure of capital through review and audit of the quarterly reports under this article, and shall have the right to inspect the books and records regarding the plant and the physical progress of construction upon reasonable notice to the utility.

S.C. Code Ann. § 58-33-277(B) (2015). To support this on-going monitoring, ORS has retained full-time staff, supplemented by an outside nuclear construction expert, who oversee the plant construction for ORS and ensure that the public interest is protected. *See* S.C. Code Ann. §§ 58-33-230(F), 58-33-295 (2015).

The Settlement Agreement contains the Moratorium, the prospective ROE reduction and the cap on remaining Amendment Exhibit C costs. In this regard, the Commission finds SCE&G witness Marsh's settlement testimony to be persuasive concerning the value of settlements in communicating to investors and financial markets that regulation in South Carolina is fair, predictable and reasonable. The Commission believes that settlements of this sort may lower the perceived regulatory risk faced by utilities and therefore improve their ability to raise capital to invest in their utility systems on reasonable terms.

Based on these facts, the Commission finds that the terms of the Settlement Agreement are reasonable, in the public interest and in accordance with the law and regulatory policy. The Commission adopts the Settlement Agreement under the terms of S.C. Code Ann. § 58-33-270 (G).

VIII. PROCEDURAL MATTERS

A. The South Carolina Coastal Conservation League's Testimony

Prior to the hearing in this matter, SCE&G filed a motion to strike the prefiled direct testimony of the CCL's witness Alice Napoleon on the grounds that the testimony was not relevant to the issues in this proceeding. Mrs. Napoleon's testimony analyzed the Company's energy efficiency efforts, discussed changes or additions to energy efficiency programs that SCE&G could potentially implement, and energy efficiency programs that CCL recommended the Company adopt. Tr. at 305. The sole subject of her testimony was energy efficiency programs.

The Commission deferred a ruling on this motion until after the hearing in this matter. In response to Ms. Napoleon's testimony, SCE&G filed rebuttal testimony of Keller Kissam. Ms. Napoleon filed surrebuttal testimony in response. The testimony Ms. Napoleon presented lacks any discussion of the changes to the cost or construction schedules for completing the Units or whether there was any imprudence on the Company's part related to these changes. Although the energy efficiency testimony is likely better presented in the Company's DSM proceeding, it may suggest methods by which an increase in capital costs to the Company's customers may be mitigated to some degree. Accordingly, we hold that the testimony may have some relevance in this proceeding, so the Company's Motion to Strike should be denied.

B. Intervenor Sandra Wright's Motions

The Intervenor, Sandra Wright, filed a Synopsis with this Commission that contained several Motions. The gravamen of two of these motions is that this Commission

should re-open the original Base Load Review Act determination and terminate any increases granted since.. We cannot grant such relief. Our original rulings are the law of the case and are final and binding determinations. *See* S.C. Code Ann. Section 58-33-275. Ms. Wright also moves that we place a "cap" on increases. We have discussed the "Fixed Price" option above that limits future ratepayer increases under conditions stated in the Settlement Agreement. Other than approval of this option, no other "cap" on increases is appropriate at this time. These Motions must be denied. Finally, Ms. Wright asks us to remove ORS's signature from an Agreement. This Commission has no such authority. Accordingly, this Motion must also be denied.

C. Post Hearing Memorandum of the Sierra Club

Counsel for the Sierra Club states that the Commission should reject the requested additional capital costs claimed by the Company where such costs are not sufficiently known and measurable values but are merely values negotiated by the Company and its contractor in settlement of disputed claims. Many of these costs appear in the "Amendment" and in the "Fixed Price Option." Commission Order No. 2015-661 at 57-61 contained an extensive discussion of the lack of applicability of the "known and measurable" standard to cases under the Base Load Review Act where the use of forecasts was at issue.

As was the case addressed in Order No. 2015-661, the Sierra Club erroneously refers to S.C. Code Ann. Section 58-33-275 (E), the section referring to a utility's material and adverse deviations from approved schedules. In formulating its challenge to SCE&G's petition, the Sierra Club confuses the statutory standard that applies to this proceeding. In

proceedings to amend cost or construction schedules that have been previously approved under the BLRA, the statutory standard is found in S.C. Code Ann. § 58-33-270(E). *See South Carolina Energy Users Committee v. South Carolina Electric and Gas, et al*, 410 S.C. 348, 764 S.E. 2d 913 (2014). This section requires the Commission to approve the request unless the record supports a finding that the changes in cost or construction schedules are the result of imprudence on the part of the utility. The language used by the Sierra Club in its Post Hearing Memorandum refers to a different part of the statute, S.C. Code Ann. § 58-33-275(E). That section applies where a utility seeks revised rates or other relief and it is shown that there has been a material and adverse deviation from the previously approved schedules. The present proceeding is not such a proceeding. The schedules themselves are before the Commission for review and revision. If the requested relief is granted, there will be new approved schedules and the current costs and negotiated values will conform to them.

In the end, however, both statutory provisions reference a common standard for judging prudence. As pointed out in Order No. 2015-661, prudence in all cases is judged based on what a reasonable person, in this case a utility, would do given the information available to the utility at the time it could take action to anticipate and avoid an unfavorable outcome. Where prudency is concerned, reasonableness of action is measured based on the information available at the time meaningful action is possible, not based on information that becomes available later when the unfavorable outcome has already begun to materialize. In this case, the evidence clearly shows that SCE&G identified risks in a timely fashion and took reasonable and timely action to counter them. There is no basis for a

finding of imprudence. The Commission finds that the cost schedules proposed here fully comply with the decision of the South Carolina Supreme Court in *South Carolina Energy Users Comm. v. South Carolina Pub. Serv. Comm'n*, 388 S.C. 486, 697 S.E.2d 587 (2010).

Under the circumstances of this case, if actual costs were not available, negotiated values include the best evidence available today as to anticipated future costs. Also, as discussed in Order No. 2015-661, the Commission found that the known and measurable standard applies when utility rates are being set based on historical test period data. That standard defines the type of out-of-period adjustments that are permitted to the actual test period data.

Under test period ratemaking methodology, an historical test period is selected to measure revenues and expenses to ascertain what rates are appropriate to allow a utility the reasonable opportunity to recover its costs of serving customers and its cost of capital. Pro forma adjustments may be allowed to the actual test period data to reflect changes that will occur after the test period but only if the events they represent are known with certainty to occur and the effects of them are measurable. The integrity of the historical test period data is a key consideration in this approach to rate making. The known and measurable standard ensures that only a limited set of adjustments are made to the test period data and that those adjustments meet a very high standard of certainty. For example, if a utility were to sign a binding wholesale contract that would take effect after the test period closes, and that contract were to be known to reduce the operating costs of the utility to be borne by retail customers, the effect of that contract could be recognized by a pro forma adjustment to actual test period results. The fact of the contract coming into force would be known and

not speculative and its effects on retail expenses and revenues would be measurable and not uncertain.

Here, as in Order No. 2015-661, we conclude that making changes to the schedule of projected costs under the BLRA is not analogous to supplementing actual test year results. The BLRA specifically permits estimates of anticipated costs. Where forward-looking construction cost schedules under the BLRA are concerned, the anticipated costs are all forecasted costs, they are prospective, and in most cases have some degree of uncertainty as to timing and amount.

Applying the known and measurable standard to BLRA cost forecasts would make the BLRA unworkable, since few if any of the costs of prospective base load construction projects are both known and measurable as those terms are understood in historical test period rate regulation. The known and measurable concept simply does not apply in this context.

The Sierra Club quotes with approval the Direct Testimony of Gary C. Jones, an engineer testifying for the Office of Regulatory Staff. Jones testified that certain figures presented by the Company lacked objective documentation, and were merely negotiated values. Despite these statements in Direct Testimony, Mr. Jones later presented Settlement Testimony in which he supported the Settlement Agreement, stating that it was reasonable, and that it represented a collaborative effort to address the concerns raised by ORS and the Settling Parties during their review of the Petition. Tr. at 934-937. If Mr. Jones expressed doubt in his Direct Testimony, he certainly tempered that doubt by his endorsement of the Settlement Agreement in later testimony. As stated above, Mr. Jones testified that “the

Guarantee is the most important aspect of the Settlement Agreement because that provision encourages accountability for construction costs and preserves the benefits to ratepayers from electing the Option." Tr. at 936.

As previously stated, in this proceeding, SCE&G is presenting the cost changes associated with both the Amendment and the Option for incorporation in the updated BLRA cost forecasts. As to both sets of costs, the determinative question is whether the Commission can determine that "the evidence of record justifies a finding that the changes are not the result of imprudence on the part of the utility." S.C. Code Ann. § 58-33-270(E).

We cannot say that the Company's actions were imprudent in negotiating values in this case. Clearly, the BLRA specifically permits estimates of anticipated costs. The negotiated values were reasonable estimates of such costs. Under the terms of the BLRA, they are properly included in the updated cost forecasts for the Units.

In Order No. 2009-104(A), which was the original BLRA ruling on the construction of V.C. Summer Units 2 and 3, the record showed that the risks of proceeding with construction of these Units include licensing and regulatory risks, which include the risk that the NRC or other licensing agencies might delay the project by delaying the issuance of necessary permits, or might change regulatory or design requirements so as to increase costs or create construction delays. Risks of the project considered in that Order also included the risks related to the design and engineering that remains to be done on the Units; risks of procurement, fabrication and transportation related to equipment and components for the Units; construction and quality assurance risks generally; risks related to hiring, training and retaining the personnel needed to construct and operate the Units;

financial and inflation risks; and disaster and weather-related risks. Many of these risks were not quantifiable at the time of the issuance of that Order in 2009.

In ruling on whether the decision to construct Units 2 and 3 was reasonable and prudent in Order 2009-104(A), the Commission had to evaluate the risks of constructing these units compared to the risks of meeting the energy needs of SCE&G's customers by other means. As Mr. Byrne and Mr. Marsh testified in the original Base Load proceeding, the risks related to other alternatives included the uncertainty as to future CO2 emissions cost; the uncertainty as to future coal and natural gas prices and supplies; the relatively large amount of coal and gas-fired generation already included in SCE&G's generation mix; the uncertainty as to the future costs and availability of AP1000 units or other nuclear units; the loss of special federal tax incentives if construction is delayed and other factors.

The Commission concluded in Order No. 2009-104(A) that there was no risk-free means to meet the future energy needs of SCE&G's customers or of the state of South Carolina. Based on the evidence of record, the Commission found that it was reasonable and prudent to proceed with the construction of Units 2 and 3 in light of the information available at that time and the risks of the alternatives, although many of the risks were not specifically quantifiable. A similar principle applies to this Commission's consideration of the Amendment, the Fixed Price Option, and many of the other costs in the present case. The Company quantified the areas that it could, but formulated a way to present other costs for approval so as to recover prudent costs while protecting the utility's customers from the responsibility for imprudent costs, in this case, by way of a Settlement Agreement. Order 2009-104(A) at 90-91.

As stated in the *South Carolina Energy Users* case, the purpose of the Base Load Review Act "is to provide for the recovery of the prudently incurred costs associated with new base load plants…when constructed by investor-owned electrical utilities, while at the same time protecting customers of investor-owned electrical utilities from the responsibility for imprudent financial obligations or costs." S.C. Code Ann. Section 58-33-210 (2015). Both goals are met in this case. As discussed above, this Commission's adoption of the Settlement Agreement provides for the recovery of the prudently incurred costs associated with the new V.C. Summer units. Adoption of the Settlement Agreement also protects customers of SCE&G from the responsibility for imprudent financial obligations or costs. SCE&G witness Marsh testified as to several features of the Settlement Agreement designed to increase protection of customers: 1) New Liquidated Damages that are four times larger than contained in the original EPC contract; 2) Price Certainty which minimizes SCE&G's exposure to future cost increases and shifts multiple categories of price risk to Westinghouse; 3) Reduction in Future Disputes by adoption of the Fixed Price Option; and 4) Clarification as to when a change in law will be recognized as supporting a Change Order. Tr. at 57-62.

For all of these reasons, the arguments expressed in the Post-Hearing Memorandum of the Sierra Club must be rejected.

IX. FINDINGS OF FACT AND CONCLUSIONS OF LAW

1. The updated capital cost schedule contained in Order Exhibit No. 1 reflects $831.3 million in costs that have not previously been presented to the Commission for review and approval.

2. The evidence in the record demonstrates that $831.3 million in newly identified and itemized costs are not the result of imprudence on the part of SCE&G.

3. The specific components of the $831.3 million in newly identified and itemized costs represent costs that, along with other provisions of the Settlement Agreement, will provide benefits to customers and the project, and include costs which SCE&G must reasonably be expected to pay for completing the Units and preparing to operate them safely, efficiently and reliably.

4. The additional costs that SCE&G is incurring as Owner of the project are not the result of imprudence on the part of SCE&G.

5. The updated milestone construction schedule contained in Order Exhibit No. 1 reflects the delay in the substantial completion dates of Unit 2 until August 31, 2019, and of Unit 3 to August 31, 2020. The evidence shows that SCE&G was not imprudent in its management of this aspect of the project.

6. The Settlement Agreement fully conforms to the terms of S.C. Code Ann. § 58-33-270(G) and its terms comport with the terms of the BLRA and are supported by the evidence.

7. The Motion to Strike the Direct Testimony of CCL witness Napoleon and the Motions contained in the Sandra Wright Synopsis should be denied.

8. The arguments presented in the Post Hearing Memorandum of the Sierra Club should be rejected.

Now, therefore,

IT IS HEREBY ORDERED:

1. That the Settlement Agreement attached hereto as Order Exhibit No. 1, is approved and the terms therein shall be accepted and adopted by this Order pursuant to S.C. Code Ann. § 58-33-270(G).

2. That it is this Commission's expectation that SCE&G will provide updates to this Commission regarding the progress of the V.C. Summer project through the Commission's allowable ex parte procedure no less than twice a year until further notice.

3. That the construction milestones schedule set forth in Exhibit 1 to the Settlement Agreement shall be the approved construction milestone schedule for the Units for purposes of the administration of the Base Load Review Act unless and until such time as the Commission approves a substitute schedule pursuant to S.C. Code Ann. § 58-33-270(E). The Company shall report on the results of Fluor's review and revision to the resource-loaded integrated project schedule when completed.

4. That the capital cost schedule set forth in Exhibit 2 to the Settlement Agreement shall be the approved capital cost schedule for the Units for purposes of the administration of the Base Load Review Act unless and until such time as the Commission approves a substitute schedule pursuant to S.C. Code Ann. § 58-33-270(E).

5. That the future quarterly reports filed by SCE&G under S.C. Code Ann. § 58-33-277 shall reflect the modified schedules approved in this Order and the additional information required by the Settlement Agreement. The Company shall also include in its future quarterly reports data regarding both production and productivity as compared to

what is forecasted in Fluor's revised fully resource-loaded integrated construction schedule, as well as construction progress towards the milestone payments that are contained in the milestone payment schedule.

6. That SCE&G is encouraged to take all actions available to ensure that it qualifies for production tax credits.

7. That the Motion to Strike the direct testimony of CCL witness Napoleon and the Motions contained in the Synopsis of Sandra Wright are denied.

8. That the arguments presented in the Post Hearing Memorandum of the Sierra Club are rejected.

9. That this Order shall remain in full force and effect unless and until modified by a subsequent order of the Commission.

BY ORDER OF THE COMMISSION:

Swain E. Whitfield, Chairman

ATTEST:

Comer H. Randall, Vice Chairman