THE OFFICE OF REGULATORY STAFF

SETTLEMENT AND DIRECT TESTIMONY
& EXHIBITS

OF

ALLYN H. POWELL

SEPTEMBER 1, 2016

DOCKET NO. 2016-223-E

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
SETTLEMENT AND DIRECT TESTIMONY OF

ALLYN H. POWELL

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2016-223-E

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

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Allyn Powell. My Business Address is 1401 Main Street, Suite 900, Columbia, South Carolina 29201. I am employed by the State of South Carolina as the Manager of Nuclear Programs in the Energy Policy Division of the South Carolina Office of Regulatory Staff ("ORS").

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I hold a Bachelor’s Degree in Physics from the University of South Carolina and a Master’s Degree in Physics from the College of William and Mary. My research focus while at the College of William and Mary was experimental nuclear and particle physics, and I am credited as co-author on several professional publications resulting from my research. I was previously employed as Director of State Budgeting and Finance with the Ways and Means Committee of the South Carolina House of Representatives ("WMC"). I joined WMC in 2002 as a Research Analyst, focusing on sales tax, income tax, higher education and cultural issues. I was responsible for providing background research, summarizing legislation before WMC and drafting portions of the Appropriations Act.

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Throughout my career at WMC I served as lead staff for a variety of issue areas, including K-12 education, property tax, and budget policy. I was promoted to Director of State Budgeting and Finance in 2007. As Director of State Budgeting and Finance, I was responsible for overseeing the State budget process for WMC and the production of the Appropriations Act. In 2009, I joined the South Carolina Energy Office at the South Carolina Budget and Control Board as a Program Manager. There, I worked with issues relating to radioactive waste disposal and energy assurance planning. I also served as lead staff for the South Carolina Governor’s Nuclear Advisory Council. In 2011, I joined ORS as an Associate Program Manager. As Associate Program Manager my responsibilities included reviewing Base Load Review Act plant applications, managing efforts relating to energy assurance planning and serving as ORS’s lead contact for demand side management and energy efficiency programs. In 2013, I left ORS to take a position as the Capital Budgeting Manager for the State of South Carolina in the State Budget Office. In that role I was responsible for reviewing applications by state agencies to establish and modify construction projects, approving projects under a certain threshold and summarizing larger projects for approval by members of the Joint Bond Review Committee and the Budget and Control Board. I also testified as requested before both bodies and was responsible for producing monthly reports regarding capital project budget and expenditures. In 2015, I returned to ORS as the Manager of Nuclear Programs. My duties at ORS include managing the review of Base Load Review Act applications as well as managing the Radioactive Waste Disposal Program, which provides oversight for South Carolina’s low level radioactive waste disposal facility located in Barnwell, SC.
Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THE PUBLIC SERVICE
COMMISSION OF SOUTH CAROLINA ("COMMISSION")?
A. Yes. I have provided written and oral testimony with regard to the construction of
the nuclear base load facility at Jenkinsville, SC (the "Project" or "Units") by South
Carolina Electric & Gas Company (the "Company" or "SCE&G").

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?
A. The purpose of my testimony is to provide an overview of ORS’s findings regarding
SCE&G’s Petition for Updates and Revisions to Schedules Related to the Construction of
a Nuclear Base Load Generation Facility at Jenkinsville, SC ("Petition") and to discuss
the Settlement Agreement (the "Settlement" or "SA") dated August __, 2016 that was
entered into between ORS, SCE&G, Frank Knapp, the South Carolina Energy Users
Committee, Central Electric Power Cooperative, Inc., and the Electric Cooperatives of
South Carolina, Inc. (the "Settling Parties").

Q. WHAT IS THE COMPANY REQUESTING IN THIS PROCEEDING?
("BLRA"), SCE&G is requesting the Commission to modify the construction schedules
and accompanying BLRA milestones to reflect new guaranteed substantial completion
dates ("GSCDs") of August 31, 2019 and August 31, 2020 for Unit 2 and Unit 3,
respectively. SCE&G is also requesting an increase to the capital cost estimates of
approximately $852 million. This was reduced to approximately $846 million in SCE&G’s
testimony (Exhibit AHP-1). The largest portion of the increase is $781.1 million in
Engineering, Procurement and Construction Contract ("EPC Contract") cost increases,
comprised of $137.5 million in costs resulting from an amendment to the EPC Contract
executed on October 27, 2015 ("Amendment" or "EPC Amendment"), $505.5 million in costs resulting from SCE&G’s decision to exercise an option in the EPC Amendment that moves many of the EPC Contract costs to a fixed category ("Option"), $85.5 million resulting from a reversal of the credit for liquidated damages that SCE&G previously credited to its customers via Order No. 2015-661, and $52.5 million in increases due to Change Orders. As part of this proceeding SCE&G is also asking for approval of its decision to exercise the Option. The remaining cost increases are due to Owners Costs ($20.8 million), Escalation ($2.3 million) and an allowance for funds used during construction ("AFUDC") ($42.4 million).

Q. PLEASE DESCRIBE ORS'S ACTIVITIES IN RESPONSE TO SCE&G'S PETITION.

A. ORS has been actively reviewing documentation related to the Amendment since October 2015, and much of the information in the Petition was covered by several rounds of continuing information requests related to that review. ORS asked the Company to update its responses to these requests in light of the Petition. In addition, ORS met frequently with representatives from SCE&G’s construction, business and finance departments to discuss the details of the Petition and the supporting documentation. ORS also interviewed several SCE&G, Westinghouse Electric Company ("Westinghouse") technical experts and Fluor Corporation ("Fluor") technical experts to fully understand the various components of the Petition.

Q. PLEASE BRIEFLY DESCRIBE THE SETTLEMENT AGREEMENT.

A. In the Settlement, the Settling Parties negotiated the following key benefits for ratepayers:
1. An agreement by SCE&G to guarantee (the “Guarantee”) that the scopes of work covered by the Option remain fixed (SA paragraph #12). As part of the Guarantee, SCE&G agrees to fix costs to ratepayers for scopes of work covered by the Option by not seeking any future increases for these scopes of work in the cost schedules for the Units and by not seeking revised rates for such increases.

2. A moratorium (the “Moratorium”) on additional filings to increase cost schedules prior to January 28, 2019 with this date being extended day-for-day with any delay in the commercial operation date of Unit 2 (SA paragraph #13).

3. An agreement by SCE&G to reduce the return on equity (the “ROE Reduction”) rate used to compute revised rates filings after January 1, 2017 from 10.5% to 10.25% (SA paragraph #18).

4. A provision capping at $20 million the amount SCE&G can recover for the items listed in Schedule C of the Amendment (excluding Plant Layout Security, Phase 3 and Plant Security Systems Integration which are otherwise addressed in the Settlement) that were in dispute with Westinghouse at the time of the Amendment but were not resolved through the Amendment (i.e., the “Schedule C” items) (SA paragraph #12).

5. A requirement that all future requests to increase cost schedules due to Change Orders shall require a signed Change Order to be presented at the time of the request and disallowing future requests based on informal estimates of Change Order costs (SA paragraph #12).

6. Enhanced mandatory public reporting of schedule information, productivity and production metrics for construction, and issues related to the EPC Contract and the
1. Project going forward (SA paragraph #10).

2. In the context of these benefits, the Settling Parties agreed to the following:

3. An increase to the BLRA approved cost schedules to reflect the cost of the Amendment ($137.5 million) and the cost of the Option ($505.54 million) and approval of SCE&G’s decision to exercise the Option (SA paragraph #5).

4. A finding that SCE&G had justified Change Orders totaling $32.58 million (SA paragraph #6).

5. An agreement to allow a transfer of scope for the Service Building from the EPC Contract to Owner’s Costs for completion of the building under a separate fixed price contract with a commercial contractor other than Westinghouse, and a reduction to the Fixed Price category of $11.92 million, which includes the $6.9 million requested in the Petition for the Service Building, 3rd Floor and the $5.02 million already in the Fixed Price for the Service Building, 1st and 2nd Floors, and a corresponding increase in the Owner’s Cost for the Service Building of $9.2 million plus $1.3 million for escalation, in exchange for SCE&G’s agreement to cap the total cost of this building to ratepayers at the revised amount of $10.48 million (which includes escalation) (SA paragraph #6).

6. Approval of the revised GSCDs for the Units of August 31, 2019 and August 31, 2020 and simplification of the milestone schedule in light of the Moratorium and the fact that Fluor and Westinghouse are preparing a revised resource-loaded integrated project schedule which may revise and re-sequence the construction schedule (SA paragraph #10).

7. Enhanced mandatory public reporting of schedule information, productivity and
production metrics for construction, and issues related to the EPC Contract and the Project going forward. (SA paragraph #10).

12. In addition to the Owner’s Cost associated with the transfer of the Service Building, approval of an increase in Owner’s Cost of $20.83 million largely associated with the delay in the GSCDs and the restructuring of the EPC Contract under the Amendment (SA paragraph #7).

ORS supports this Settlement as reasonable because it commits SCE&G to ensuring that the terms of the Option are enforced, limits SCE&G’s ability to seek costs outside of the Option until Unit 2 is nearing completion and caps a number of important cost items.

Q. WHAT COMPONENTS OF THE SETTLEMENT AGREEMENT ARE MOST IMPORTANT TO ORS?

A. The Guarantee, Moratorium and the ROE Reduction.

Q. PLEASE BRIEFLY DESCRIBE THE AMENDMENT.

A. On October 27, 2015, SCE&G signed the Amendment, which modified the EPC Contract in several key ways. It released Chicago Bridge and Iron (“CB&I”) from its obligations as a member of the Consortium, leaving Westinghouse as the sole EPC Contract holder via its purchase of the Stone and Webster subsidiary from CB&I. Westinghouse later employed Fluor as a subcontracted construction manager to handle craft labor and day to day activities. It also moved the GSCD of Unit 2 from June 19, 2019 to August 31, 2019 and the GSCD of Unit 3 from June 16, 2020 to August 31, 2020. It resolved a number of outstanding disputes regarding whether some items were included in the scope of the EPC Contract, resolved outstanding disputes regarding invoices, and included more specific wording regarding the provision in the EPC Contract related to

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1401 Main Street, Suite 900
Columbia, SC 29201
changes in law. It also included an Option to move a large portion of the EPC Contract costs to a fixed cost category. The ability to exercise this Option is contingent on approval by the Commission and Santee Cooper.

Q. DOES THE OPTION MAKE THE EPC CONTRACT AN ENTIRELY FIXED PRICE CONTRACT?

A. No. The Option specifically excludes some items such as sales tax and insurance, as well as force majeure events. Exhibit C of the Amendment also includes a list of items not fully resolved by the Amendment. Some of these items are included in this Petition as Change Orders. While it does move many of the EPC Contract costs to a fixed price category, this fixed price is still subject to change via further EPC Contract amendments or Change Orders. It also does not prevent SCE&G from voluntarily removing items from the fixed price scope to the Owners Cost scope via a Change Order. However, in the Settlement, ORS insisted that such transfers not be recognized unless the work could be done as an Owner-directed item for a price fixed by SCE&G at an amount that is less than or equal to the amount that was formerly included in the fixed price scope. Therefore, under the terms of the Settlement, transfers may not result in any increase in the ultimate cost for SCE&G’s ratepayers.

Q. HOW IS THIS AMENDMENT DIFFERENT FROM PREVIOUS EPC CONTRACT AMENDMENTS?

A. Previous EPC Contract amendments were executed to incorporate Change Orders, revise GSCDs or clarify wording in the EPC Contract on one or two issues. These amendments had substantial calculations and backup documentation. The Amendment is different in that it served as a comprehensive settlement that substantially changed the EPC
contract by removing a member of the Consortium, settling outstanding disputes, substantially revising the bonus and liquidated damages provisions and modifying the GSCDs. While SCE&G does have documentation behind the potential cost of some of the items resolved in the dispute, in most cases these costs are not well supported and are not auditable. The revised contract amounts to a renegotiation of the price of the Units. This Amendment also included the Option, which changes the structure of much of the EPC Contract going forward by moving many costs to a fixed category. This capped the amount that Westinghouse can charge to complete the work within the scope of the Option at $3.345 billion. The Option includes within it a premium charged by Westinghouse for fixing these costs. While it is possible to calculate this number using the price from the Option for the remaining work, this remains a premium that is primarily associated with risk and is not supported by specific construction estimates.

**Q. PLEASE SUMMARIZE ORS’S ANALYSIS OF THE PETITION?**

**A.** ORS has concerns regarding both costs and construction schedules outlined in the Petition.

**Schedule**

While Westinghouse has indicated to ORS it has confidence in the logic behind the activities within the schedule, it has also indicated that they do not have Fluor’s full input on the resources needed to complete these activities. Westinghouse has further indicated that the current construction schedule cannot be met without substantial improvement in current production and productivity rates. The current schedule requires the simultaneous use of numerous mitigation strategies, which are worked outside of the main schedule and increase ORS’s concern regarding the uncertainty in the schedule. Meeting the current
construction schedule will require substantial improvements in both productivity and production. Throughout the course of this project, Westinghouse and its Consortium partner have presented aggressive schedules along with plans to make improvements to meet those schedules. Thus far, they have not been successful. ORS has seen positive changes recently, but with Fluor's fully resource-loaded construction schedule still outstanding a great deal of uncertainty remains. While ORS believes the sequence of construction activities to be valid, ORS has concerns these activities may take longer than previously estimated. There is only so much time that can be made up by increased staffing, especially due to the small spaces in which some of the work must take place. The GSCDs in the Petition accurately reflect the GSCDs in the Amendment, that is GSCDs of August 31, 2019 for Unit 2 and August 31, 2020 for Unit 3. ORS believes that it will take at least this long to complete the Units, and in fact it is likely to take longer. At this time, ORS is still of the opinion that the Units can be completed within the 18 month window from the GSCDs allowed under Order No. 2009-104(A). However, even a relatively small delay in Unit 3 would jeopardize the ability of SCE&G to obtain the production tax credits for that Unit. ORS does not object to the approval of revised BLRA milestone schedule and GSCDs, as ORS believes it will take at least this long to complete the Units, but ORS is concerned regarding the level of uncertainty in the schedule at this time. This uncertainty regarding the schedule has also impacted other areas of ORS's analysis. It is difficult to properly evaluate items such as Owner's Costs, Escalation and to a certain extent Change Orders - some of whose costs are dependent on durations and need dates- without an adequate understanding of the schedule to back these up.

Amendment
As to the $137.5 million requested for the Amendment, ORS has only found documentation to support approximately $64.6 million of the $224.4 million in value that SCE&G assigned to the Amendment. While ORS recognizes that the Amendment resolved a number of commercial disputes, both directly between SCE&G and the Consortium and by releasing a Consortium partner and thus reducing disputes within the Consortium, it is difficult to assign a valuation to this resolution. The Amendment also included changes to both the bonus and liquidated damages provisions in the EPC Contract, with which ORS has concerns. The Amendment served as a comprehensive settlement and ORS has not found adequate documentation to support the value of this settlement.

Option

Closely related to this is the issue of the $505.54 million cost for the Option. While ORS believes, based on SCE&G’s sensitivity study, that the Option on its surface represents a good value given current production and productivity trends, the determination of the Option’s true value is based entirely on an analysis of Westinghouse’s willingness to abide by the terms of the contract and SCE&G’s willingness to hold Westinghouse to those terms. Moving many of the costs to a fixed price category does simplify many areas where there were previously disputes. However, it also provides the opportunity for new disputes. The new fixed price Change Orders requests being provided by Westinghouse have been accompanied by a lower level of documentation, and changes to buildings or other items within the scope of the fixed price have proved so problematic that SCE&G has, in at least two cases, begun pulling these out of Westinghouse’s scope and into the Owner’s Cost. Based on previous experience with this contract and SCE&G’s sensitivity study, which at current production and productivity trends shows substantial potential
losses to Westinghouse, ORS is concerned that the Option will not truly fix this portion of
the cost of the Units. For this reason, in the Settlement ORS insisted that SCE&G agree to
stand behind the “fixed price” and provide a guarantee that no additional ratepayer dollars
will be requested for items in the scope of the “fixed price” in the Option. The Settlement
further protects ratepayers by placing caps on other items of particular concern, such as
many items associated with Exhibit C which were not resolved as part of the Option.
Absent these additional guarantees, ORS would be concerned that the ratepayers were not
adequately protected by the Option.

Liquidated Damages

As to the $85.53 million in liquidated damages that were previously credited to
ratepayers, ORS agrees that the Amendment does move the time frame for collecting these
damages out into the future and as such they are properly added back to the budget of the
Project.

Owner’s Costs

The $20.83 million in Owner’s Costs are well documented and track appropriately
with the current schedule and budget. As with all areas related to the construction schedule,
ORS has concerns that the time frames underlying this estimate are not yet mature and have
a high degree of uncertainty. However, as ORS believes that these estimates are in fact
lower, ORS does not oppose the use of this estimate of Owner’s Costs, recognizing that
there is still uncertainty in these costs related to the schedule.

Escalation and AFUDC

Similarly, SCE&G’s request for $2.3 million in Escalation and $42.4 million in
AFUDC as outlined in Kevin Kochems testimony are well documented and track
appropriately with the current schedule and budget. ORS does not oppose the use of these estimates, with the same caveats as applied to Owner’s Costs. As is recognized in the Settlement, escalation and AFUDC are not fixed, but vary according to the approved escalation indices and AFUDC rate calculation as they change from time to time. When the changes associated with the transfer of the Service Building from the Fixed Price to Owners Costs are included, the total estimate supported by the Settlement for Escalation and AFUDC is $45.18 million.

Transmission

SCE&G removed its original request in the Petition for an additional $4.3 Transmission dollars as the methodology for remedying those issues is still under review. ORS agrees with SCE&G’s assessment and does not recommend the inclusion of these dollars.

Change Orders

SCE&G’s Petition also included $52.5 million in Change Orders. When evaluating Change Orders, ORS expects that the documentation supporting them will include signed Change Orders, signed agreements with detailed documentation that will form the basis for future Change Orders, or at the very least a mature level of detailed documentation supporting a Change Order that is nearly ready to be signed. When the Petition was filed, such a level of documentation was only available for a few of the smaller Change Orders. SCE&G has done additional research and in some cases has received additional proposals from Westinghouse since that time. ORS’s review of the associated documentation supports the inclusion of $32.58 million for Change Orders at this time. ORS has worked with SCE&G to improve the level of documentation, and is now able to support at least a
portion of the costs associated with each of the Change Order requests included in the Petition. In some cases, this is lower than the amount requested as the latest Westinghouse estimates are below the amounts originally estimated by SCE&G in the Petition. It is the position of ORS that until a Change Order has been agreed to by both parties, the costs associated with it are not properly included in BLRA cost forecasts. Under the Settlement, only signed Change Orders will be allowed going forward. SCE&G will be prevented from presenting estimates of Change Order cost for inclusion in cost forecasts.

This Change Order total does not reflect increases related to the 3rd Floor of the Service Building. Subsequent to filing Direct Testimony, SCE&G made a decision to move the entire Service Building out of the scope of the EPC Contract and into Owner’s Costs. This decision was made to support the construction of the 3rd Floor, which was needed to allow consolidation of certain support staff within the protected area of the site, in a time frame which met SCE&G’s need date for the building. ORS had concerns regarding this decision, and the potential impact to ratepayers of moving this scope of work out of the fixed price category. Outside of the scope of the Settlement, ORS was unable to support this request. The Settlement reflects the fact that SCE&G has now decided to construct the Service Building as an Owner’s cost item and to do so under a fixed price contract with a commercial contractor. SCE&G will transfer the associated amount from the Fixed Price category to the Owner’s Cost category and the amounts shall be included in the BLRA-approved capital cost schedule along with any associated escalation and AFUDC. Specifically for the Service Building, including the Third Floor, SCE&G agrees to reduce the Fixed Price category in the amount of $11.92 million, which includes the $6.9 million requested in this Petition for the Service Building, 3rd Floor and the $5.02 million
already in the Fixed Price for the Service Building, 1st and 2nd Floor, and increase the Owners Cost category in the amount of $10.48 million (which includes escalation), and to not seek recovery from ratepayers in any future proceeding for any costs in excess of $10.48 million for the Service Building. After execution of the Change Order between SCE&G and Westinghouse regarding the Service Building, SCE&G will provide a copy of the Change Order to ORS and if necessary, SCE&G will adjust the Owners Cost category consistent with the terms of the Settlement.

Overall, ORS found the level of documentation offered in this Petition to be lower than that offered in previous petitions. ORS’s review was also hampered by the lack of availability of the fully resource-loaded integrated construction schedule. Time is money. Schedule and budget go hand in hand, and ORS is concerned regarding the timing of this Petition and its impact on the ability of ORS to properly evaluate budgets when the schedule is undergoing a major adjustments.

Summary of ORS Recommendations

In summary, ORS’s review supports the inclusion of $85.53 million for the reversal of the Liquidated Damages Credit, $32.58 million in Change Orders, $20.83 million in Owner’s Costs (in addition to the Owner’s cost associated with the transfer of the Service Building), $2.3 million in Escalation, and $42.4 million in AFUDC. These increases total $183.64 million of the $852 million requested by SCE&G in the Petition. ORS recognizes that the Escalation and AFUDC amounts in this review have been revised by the Settlement, and in the context of the Settlement ORS supports those increased amounts.

ORS’s review of the $137.5 million for the Amendment is less conclusive. ORS has been able to identify approximately $64.6 million in value associated with the
Amendment. While many of the changes associated with the Amendment were needed and represent a positive direction for the Project, ORS is not able to support this request using our normal standards of review as the $137.5 million increase was a settlement and cannot be traced back to individual disputed cost items. However, the amount requested is consistent with the Amendment, which has been executed. In the context of the Settlement, ORS is supportive of this amount.

SCE&G is also requesting that the Commission approve its decision to exercise the Option. Based on SCE&G’s sensitivity study and ORS’s concerns regarding the Project Schedule, ORS agrees that the Option could represent a good value for SCE&G and for ratepayers. With respect to the $505.54 cost for the Option, ORS is only supportive of this cost in the context of the Settlement and because SCE&G has guaranteed to its ratepayers that it will stand behind the Option and will not request any additional ratepayer dollars for items included in the scope of the “fixed price” in the Option as set forth in the Settlement.

In the context of the Settlement, ORS also supports the increases and transfers outlined above related to the Service Building.

With respect to the schedule, ORS is concerned regarding the degree of uncertainty remaining regarding the schedule. The GSCDs are consistent with the Amendment, and the BLRA milestone schedule is consistent with the logic within the project schedule when the Amendment was filed. ORS believes that these dates are optimistic, but that the Project is likely to be completed within 18 months of these dates. For this reason, ORS does not oppose the revised GSCDs and BLRA milestone schedule. However, the timing of the issuance of the Commission’s Order and the availability of the revised schedule present some challenges. As agreed in the Settlement, the Moratorium will be in place when
Westinghouse issues the new resource-loaded integrated project schedule for the Project.

In recognition of that fact, the Settlement provides that the only Commission-approved BLRA milestones going forward will be the GSCDs for the two Units. This does not reduce SCE&G’s reporting requirements regarding previous BLRA milestones and the Settlement imposes additional reporting requirements. The Settlement requires that SCE&G commit to immediately report the new fully resource-loaded integrated schedule when Westinghouse makes it available and that SCE&G provide updates on all milestone dates it contains in quarterly reports through the end of the Project. The Settlement also requires that SCE&G continue to provide updates on the status of any of the prior BLRA milestones and include updates on all of the construction milestones that are included in the milestone payment schedule in its quarterly reports through the end of the Project. The milestone payment schedule, when agreed to by SCE&G and Westinghouse, will represent what they believe are the key Project milestones and, as such, may provide an additional useful measure of progress for the Project. The milestone payment schedule is currently flowing through the EPC Contract’s dispute resolution process. The Settlement also requires SCE&G to include data on construction and craft staffing, productivity and production in its quarterly reports.

Exhibit AHP-1 summarizes the differences between the Petition, SCE&G’s Direct Testimony and the Settlement.

Q. WHAT ACTIVITIES DOES ORS PERFORM WITH RESPECT TO ITS ON-GOING MONITORING OF THE APPROVED MILESTONE CONSTRUCTION SCHEDULE?
A. The Company’s required quarterly reports provide a status of the approved BLRA milestone schedule. The BLRA milestone schedule consists of 146 milestone activities. ORS verifies the status of each milestone activity to ensure the activity is in accordance with previous Commission orders relating to this matter, Order Nos. 2009-104(A), 2010-12, 2011-345, 2012-884, and 2015-661. It should be noted that milestone activities are allowed by Commission order to be accelerated by up to 24 months or delayed by up to 18 months.

Q. WHAT OVERSIGHT ACTIVITIES DOES ORS PERFORM WITH RESPECT TO ITS ON-GOING MONITORING OF THE APPROVED CAPITAL COST ESTIMATES?

A. The Company’s quarterly reports provide a status of the approved capital cost estimates. ORS evaluates the Company’s quarterly reports with a focus on the capital cost estimates, project cash flow, AFUDC and escalation. Collectively, these focus areas determine the status of the project budget.

ORS compares the capital cost estimates approved by the Commission to the capital cost estimates in the Company’s quarterly reports. This comparison focuses on the major cost categories, which 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 evaluates cost variances which may be due to various project changes (e.g., shifts in work scopes, payment timetables, construction schedule adjustments, change orders, etc.) to determine if the cumulative amount of these changes impact the total approved capital cost of the project.

In a similar fashion, ORS compares the approved project cash flow to the project cash flow in the Company’s quarterly reports. This comparison focuses on any variance to annual cash flow requirements. Lastly, AFUDC and escalation rates are evaluated to determine if appropriate rates have been applied.

Exhibit AHP-2 tracks the updates to the capital cost schedules from Commission Order No. 2009-104(A) through the Company’s request in the Petition.

Q. WHAT OTHER ACTIVITIES DOES ORS PERFORM AS PART OF ITS ON-GOING MONITORING OF THE APPROVED CAPITAL COST ESTIMATES?

A. During on-site visits, the ORS staff reviews documents that may impact the project budget. Examples of such documents are contract amendments, change orders and notices from the holder of the EPC Contract, Westinghouse. The ORS staff also reviews invoices associated with completed milestone activities to ensure milestone payments are consistent with the EPC milestone payment schedules. In addition, ORS’s Audit Division further evaluates the Company’s actual project expenditures.

Q. WHAT OTHER ACTIVITIES DOES ORS PERFORM AS PART OF ITS ON-GOING MONITORING OF THE PROJECT?

A. ORS technical staff participate in monthly meetings with NND personnel, attend periodic meetings with Westinghouse and Fluor representatives, conduct periodic site tours
and attend Nuclear Regulatory Commission ("NRC") public meetings held near the site.
ORS staff also review documents related to the construction on an ongoing basis. These
documents include, but are not limited to: daily construction activities plans, a weekly
construction activities report, detailed construction schedules, schedule mitigation plans,
milestone activity schedules, major component fabrication status log and meeting minutes.
Also, ORS performs on-site evaluations to physically observe construction activities to
ensure construction progress is consistent with NND documentation. ORS staff regularly
witness key project milestones, such as the setting of major structural modules, and perform
site visits to companies manufacturing major components. Additionally, to keep informed
of NRC’s most recent policies and interpretations, ORS staff have attended the NRC’s
annual Regulatory Information Conference in Rockville, MD. Also, ORS performs on-site
evaluations to physically observe construction activities to ensure construction progress is
consistent with NND documentation. ORS routinely participates in NRC conference call
meetings to monitor activities related to the project.

Q. WHAT IS YOUR RECOMMENDATION?
A. ORS recommends that the Commission approve the Settlement Agreement.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?
A. Yes, it does.
### SCE Office of Regulatory Staff

**SCE&G Petition to Modify the Approved Schedule and Budget for VC Summer Units 2&3**

Docket No. 2016-223-E

**Revision to Capital Cost Estimates**

(2007 Dollars)

<table>
<thead>
<tr>
<th>a. EPC Contract Cost Increase</th>
<th>Petition (millions)</th>
<th>SCE&amp;G Testimony (millions)</th>
<th>Settlement (millions)</th>
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<td>Total Liquidated Damages Cost</td>
<td>$ 85.5</td>
<td>$ 85.5</td>
<td>$ 85.5</td>
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<tr>
<td>iii. Costs Due to Change Orders</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1 Plant Layout Security, Phase 3</td>
<td>$ 29.63</td>
<td>$ 29.63</td>
<td>$ 17.39</td>
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<tr>
<td>2 Plant Security Systems Integration</td>
<td>$ 7.11</td>
<td>$ 7.11</td>
<td>$ 6.32</td>
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<tr>
<td>3 Service Building, Third Floor</td>
<td>$ 6.93</td>
<td>$ 6.93</td>
<td>$ 0.03</td>
</tr>
<tr>
<td>4 Training Staff Augmentation</td>
<td>$ 4.41</td>
<td>$ 4.41</td>
<td>$ 4.41</td>
</tr>
<tr>
<td>5 Escrow - Software and Documentation</td>
<td>$ 2.96</td>
<td>$ 2.96</td>
<td>$ 2.96</td>
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<tr>
<td>6 Corrective Action Program Interface</td>
<td>$ 0.679</td>
<td>$ 0.679</td>
<td>$ 0.679</td>
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<tr>
<td>7 Classroom Simulator</td>
<td>$ 0.451</td>
<td>$ 0.451</td>
<td>$ 0.451</td>
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<tr>
<td>8 Potential Maximum Precipitation Analysis</td>
<td>$ 0.182</td>
<td>$ 0.182</td>
<td>$ 0.182</td>
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<tr>
<td>9 Inspections, Tests, Analyses and Acceptance Criteria Maintenance</td>
<td>$ 0.098</td>
<td>$ 0.098</td>
<td>$ 0.098</td>
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<tr>
<td>10 Primavera Access</td>
<td>$ 0.045</td>
<td>$ 0.045</td>
<td>$ 0.045</td>
</tr>
<tr>
<td>11 Transmission Structure Redesign/Wetlands</td>
<td>$ 0.005</td>
<td>$ 0.005</td>
<td>$ 0.005</td>
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<tr>
<td>Total Increase Due to Change Orders</td>
<td>$ 52.5</td>
<td>$ 52.5</td>
<td>$ 32.6</td>
</tr>
<tr>
<td>iv. Credit Due to Service Building Transfer:</td>
<td></td>
<td></td>
<td>(5.02)</td>
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<tr>
<td>Total EPC Contract Cost Increase</td>
<td>$ 781.1</td>
<td>$ 781.1</td>
<td>$ 756.1</td>
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</tbody>
</table>

| b. Owners Cost Increase                                          |                     |                           |                      |
| i. Owners Cost Associated with Amendment                         |                     |                           |                      |
| 1 Labor                                                          | $ 11.0              | $ 11.0                    | $ 11.00              |
| 2 Non-Labor                                                      | $ 4.6               | $ 4.6                     | $ 4.60               |
| 3 Service Building Transfer                                      |                     |                           | $ 9.17               |
| Total Owners Cost Revisions Due to Amendment                     | $ 15.6              | $ 15.6                    | $ 24.8               |
| ii. Owners Cost Associated with Schedule Improvement             | $ 8.0               | $ 8.0                     | $ 8.0                |
| iii. Other Owner's Costs                                         | $ (2.8)             | $ (2.8)                   | $ (2.8)              |
| Total Owner's Cost Increase                                      | $ 20.8              | $ 20.8                    | $ 30.0               |

| c. Transmission Increase - Removed per SCE&G's Testimony         | $ 4.3               | $ 0.7                     |                      |
| Switchyard Reconfiguration                                       |                     |                           |                      |
| Escalation Associated with Switchyard Reconfiguration             |                     |                           |                      |
| Total Transmission                                               | $ 5.0               | $ -                       | $ -                  |

| d. Escalation Increase                                           | $ 2.3               | $ 2.3                     | $ 3.7                |

| e. AFUDC Increase                                                | $ 42.6              | $ 42.4                    | $ 41.5               |

**Total Revision to Cost Forecast**

$ 851.8 $ 846.6 $ 831.3

**Note:** Totals may not add due to rounding

1 Settlement amount reflects actual costs incurred prior to transfer to Owner's Costs.
2 Transfer net $1.3 million in Escalation. Associated escalation is included below in item (d).
### Historical Cost Changes

#### Docket No. 2016-223-E

<table>
<thead>
<tr>
<th></th>
<th>Budget as Modified by Supreme Court&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Current Budget as Approved in Order No. 2015-661&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Budget as Requested in Docket No. 2016-223-E&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCE&amp;G’s Share Total Base Project Cost (2007$)</strong></td>
<td>$4.096 billion</td>
<td>$5.247 billion</td>
<td>$6.825 billion</td>
</tr>
<tr>
<td><strong>SCE&amp;G’s Share Gross Cost (including Escalation and AFUDC)</strong></td>
<td>$6.188 billion</td>
<td>$6.827 billion</td>
<td>$7.679 billion</td>
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<tr>
<td><strong>Estimated Total&lt;sup&gt;4&lt;/sup&gt; Santee Cooper &amp; SCE&amp;G Total Base Project Cost (2007$)</strong></td>
<td>$7.448 billion</td>
<td>$9.540 billion</td>
<td>$12.409 billion</td>
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<tr>
<td><strong>Estimated Total&lt;sup&gt;5&lt;/sup&gt; Santee Cooper &amp; SCE&amp;G Gross Cost (including Escalation and AFUDC)</strong></td>
<td>$11.251 billion</td>
<td>$12.413 billion</td>
<td>$13.962 billion</td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Increase from Supreme Court&lt;sup&gt;1&lt;/sup&gt; to New Request</th>
<th>Increase from Current Budget to New Request</th>
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</thead>
<tbody>
<tr>
<td><strong>SCE&amp;G’s Share Total Base Project Cost (2007$)</strong></td>
<td>$2.729 billion</td>
<td>$1.578 billion</td>
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<tr>
<td><strong>SCE&amp;G’s Share Gross Cost (including Escalation and AFUDC)</strong></td>
<td>$1.491 billion</td>
<td>$852 million</td>
</tr>
<tr>
<td><strong>Estimated Total&lt;sup&gt;4&lt;/sup&gt; Santee Cooper &amp; SCE&amp;G Total Base Project Cost (2007$)</strong></td>
<td>$4.962 billion</td>
<td>$2.869 billion</td>
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<tr>
<td><strong>Estimated Total&lt;sup&gt;5&lt;/sup&gt; Santee Cooper &amp; SCE&amp;G Gross Cost (including Escalation and AFUDC)</strong></td>
<td>$2.711 billion</td>
<td>$1.549 billion</td>
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</tbody>
</table>

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<sup>2</sup> Order No. 2015-661, Exhibit 3

<sup>3</sup> Docket No. 2016-223-E, SCE&G’s Petition, Exhibit 2

<sup>4</sup> This estimate is calculated by dividing SCE&G’s share of the base project cost by 55%. In general, SCE&G’s share of costs is 55% and Santee Cooper’s share of costs is 45%. ORS is not privy to details of Santee Cooper’s Owner’s Costs, so this is only an estimate.

<sup>5</sup> This estimate is calculated by dividing SCE&G’s share of the gross cost by 55%. In general, SCE&G’s share of costs is 55% and Santee Cooper’s share of costs is 45%. ORS is not privy to details of Santee Cooper’s Owner’s Costs, so this is only an estimate.