

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
OFFICE OF REGULATORY STAFF'S CONTINUING
AUDIT INFORMATION REQUEST
DOCKET NO. 2017-207-E (6th Continuing AIR)
DOCKET NO. 2017-305-E (5th Continuing AIR)
DOCKET NO. 2017-370-E (5th Continuing AIR)**

REQUEST 5-1:

Refer to the Company's response to AIR 1-121.

- a) Please provide a Transmission Map for the SCE&G System showing all lines at 115 kV and above. If a large-sized map is available (larger than 8.5 by 14 inches), please provide such map.
- b) Provide a detailed description of all transmission upgrades that have been or will be constructed associated with the NND Project, and identify where these projects are located on the transmission map.
- c) Provide the capital costs spent by year by individual transmission upgrade project. For each project not yet completed, provide the projected costs to complete the upgrades and the timing for completion.

RESPONSE 5-1:

- a) and b) The map responsive to this request contains Critical Energy Infrastructure Information (CEII) and is highly confidential. SCE&G will make this information available for review and inspection by ORS Staff at the Company's corporate headquarters after ORS executes a confidentiality agreement. Access may be coordinated by contacting Chad Burgess at 217-8141 during normal business hours.
- b) and c) Please see attached.

Responsible Person: Shannon Perry

5-1

NND Transmission BLRA

Project	Description	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total Spent thru 12/31/17	Estimated Direct Dollars to be Spent in 2018	Timing of Completion
90B	VCS1-Killian 230kV: Construct, Add R/W, and Add 230KV Term at Killian Sub	4,529	233,552	455,316	4,150,237	28,739,154	9,348,035	757,369	135,376	129,331	-1,324,950	42,627,949	0	Complete
90E	VCS2-Lake Murray 230kV #2 Construct and Add 230kV Term at Lake Murray Sub and Related Line Relocates and Terminals	0	132,285	228,000	1,213,538	12,651,554	14,407,123	518,217	86,998	100,775	-186,584	29,151,907	0	Complete
91M	Saluda River 230/115kV Sub: Site and Construct	0	0	0	0	61,291	3,320,662	8,937,361	2,651,811	382,187	9	15,353,320	0	Complete
94D	VCS2-St. George 230kV Line #1 and #2 Construct and Rebuild VCS2-Lake Murray 230kV Line #1	0	0	0	415,826	937,925	19,819,299	33,065,145	16,865,028	21,545,601	13,301,903	105,950,728	15,270,000	12/31/2018
94H	St. George-Canadys 230kV: Upgrade & Fold-In at St. George and Updgrade Relays at Canadys Sub	0	0	0	0	0	2,111	212,331	10,117,029	2,483,014	-606,726	12,207,759	0	Complete
94O	St George-Summerville 230kV: Upgrade to B-1272, Fold-in at St. George, Upgrade Term at Summerville	0	0	0	0	0	181	153,247	5,740,755	10,251,902	14,726,692	30,872,776	7,830,000	6/30/2018
94K	St George 230kV Switching Station: Site and Construct	0	322,711	59	0	0	6,281	121,011	6,160,102	674,882	0	7,285,046	0	Complete
Bus Tie	VCS1 to VCS2 Bus Ties Lines #1, #2, #3	0	0	34,286	936,669	381,758	1,560,230	280,576	7,542	-146	-29,029	3,171,887	0	Complete
VCS1	VCS1 Switchyard Upgrades and Related Line Relocates	24,370	58,128	252,299	6,412,912	14,435,727	7,733,160	5,021,988	1,856,558	768,020	298,570	36,861,731	63,000	Complete
91P	McMeekin-Lyles 115kV Line #1: Upgrade Saluda River-Lyles Segment and Fold-In at Saluda River Sub	0	0	0	0	0	84,675	482,279	6,544,919	66,415	23,050	7,201,338	0	Complete
90L	Denny Terrace-Lyles 230kV and Add 230kV Terms at Both Subs	0	0	0	0	586	2,027,321	2,529,712	983,008	31,559	-191,289	5,380,897	0	Complete
94Q	Saluda Hydro-Newberry 115kV: Upgrade to Double-Circuit 1272	0	0	0	0	167,080	3,838,759	2,145	23,343	9,352	-294,569	3,746,110	0	Complete
90Q-R-S	Saluda Hydro-McMeekin-Lake Murray Sub Area 115kV Lines and Substation Upgrades	0	0	0	0	0	1,514,195	466,318	258,143	-62,592	195,182	2,371,246	5,000	10/30/2018
Sub	Edenwood and Denny Terrace 115kV Breaker Upgrades	0	0	0	0	0	0	535,301	150,748	612,534	-374,088	924,495	52,000	10/30/2018
	Direct \$	28,899	746,676	969,960	13,129,183	57,375,074	63,662,032	53,083,000	51,581,359	36,992,835	25,538,171	303,107,190	<u>23,220,000</u>	
	AFUDC	2,455	24,681	50,654	179,001	1,402,710	3,998,165	4,567,816	3,489,115	3,451,063	1,260,889	18,426,550		
	Subtotal	31,354	771,357	1,020,614	13,308,184	58,777,784	67,660,197	57,650,816	55,070,474	40,443,899	26,799,060	321,533,740		
VCS2	VCS2 Switchyard: Construct - Transmission WO	0	0	0	0	0	0	0	0	0	31,221,064	31,221,064		Complete
	TOTAL	31,354	771,357	1,020,614	13,308,184	58,777,784	67,660,197	57,650,816	55,070,474	40,443,899	58,020,125	352,754,804		

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REQUEST 5-2:

Page 2 of the Company's response to AIR 1-121 states, "whenever the loading of a transmission line is projected to reach 90% of capacity, then remedial transmission projects are required to anticipate and serve such condition."

- a. Supply the requirements the Company is referring to in that statement, which obligates the Company to implement remedial transmission projects.

RESPONSE 5-2:

The 90% loading value accounts for variances between planning assumptions and real-time operations. Actual system conditions occur in real-time and can vary from the assumptions made in planning models and simulations. The 90% loading value is used to ensure identification of transmission constraints where small changes in actual system conditions (higher than expected load demand or higher than expected market activity) can result in transmission facilities being overloaded in real-time even though the planning models indicated only highly loaded transmission facilities. The 90% loading value ensures that transmission planners address these transmission constraints in the planning timeframe before they actually occur in real-time. This requirement/practice is consistent with good utility planning practices.

Responsible Person: Hubert C Young III

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REQUEST 5-3:

If the loading was projected to exceed 90% for just one hour of the year, would the Company still be required to implement a remedial transmission project? Please explain. Instead of remedial transmission projects, what other remedial action schemes are available to the Company for implementation? Explain whether a remedial action scheme is available for dispatching the generating units differently when system conditions warrant? Provide all transmission studies, including all assumptions that were discussed in, and used for, the response to AIR 1-121. This would include the 2019 power flow study, and the NERC Compliance assessment.

RESPONSE 5-3:

A remedial project would not necessarily be required if loading was projected to exceed 90% for just on hour of the year. Other remedial measures would be considered. SCE&G models its transmission system based on projected load and generation scenarios which may occur for more than one hour in a given year.

NERC standard TPL-001-4 requires that SCE&G study peak conditions and mitigate all instances where the requirements of that standard are not met. The below is an excerpt from the Near-Term (years 1 through 5) Transmission Planning requirements of the TPL-001-4 standard:

2.1.1. System peak Load for either Year One or year two, and for year five.

Also, the below is an excerpt from the Long-Term (years 6 through 10) Transmission Planning requirements of the TPL-001-4 standard:

2.2.1. A current study assessing expected System peak Load conditions for one of the years in the Long-Term Transmission Planning Horizon and the rationale for why that year was selected.

The required study of peak load is intended to cover all hours when system load is at or near peak load. In planning and operating the SCE&G system there are times when near-peak load conditions will result in higher loaded transmission facilities than in peak load conditions. Peak load conditions are not necessarily

the conditions on which the greatest demands are placed on the transmission system. This is caused by differences between the most economical generation dispatched at near-peak load conditions versus the most economical generation dispatched at peak load conditions. That is, the additional generation online at peak load condition can actually unload transmission facilities in the system depending on where that additional generation is located on the system.

SCE&G uses Operating Guides to ensure reliability is maintained on the system and to avoid or delay transmission additions and improvements. An Operating Guide is a procedure that System Control can follow to change the configuration of the system in such a way that mitigates loading on a particular facility or group of facilities. Transmission planning practices at SCE&G require that mitigation options be reviewed and studied to ensure selection of the most economical and efficient solution. The selected solution may be to build new transmission facilities, improve existing transmission facilities or to implement an Operating Guide that allows the system to be configured differently during those identified system conditions. Through the transmission planning process over the years, SCE&G has identified 33 currently active Operating Guides that provide real-time actions to our System Controllers to ensure the reliability of the transmission system is maintained during and following system events. SCE&G System Controllers are trained on these Operating Guides annually. Additional Operating Guides have been identified in future year studies and will become active Operating Guides at the appropriate point in time. Each of these Operating Guides have or will allow SCE&G to avoid or delay construction of additional transmission facilities or avoid or delay improvements to existing transmission facilities. Operating Guides to relieve transmission constraints and restore reliable operation of the transmission system can include required re-dispatch of generation resources, re-configuration (switching) of the transmission system, serving customer loads from alternate transmission paths, switching reactive resources on or off.

The 2019 Power Flow Study and the NERC Assessment Study conducted for the AIR 1-121 response used the same 2019 power system model that is used in all of SCE&G transmission studies for the summer 2019. This model was created as part of a coordinated effort with members of SERC during the annual Long Term Study Group (LTSG) Data Bank Update (DBU). The assumptions represented in this model include expected customer loads, expected generation dispatch and expected transmission services for summer 2019. For the purpose of providing a response in AIR 1-121, the only modification to the model was to remove the NND transmission facilities and restore the assets affected by the

NND transmission facilities. The facility loading values that were provided in response to AIR 1-121 were the output of these two studies. No study report was prepared. The model and its inputs contain Critical Energy Infrastructure Information (CEII) both for our system and those of neighboring utilities and are highly confidential. In addition, given its size and complexity, the model requires dedicated hardware and software and special training to operate. Accordingly, this information will be provided after execution of a Confidentiality Agreement.

Responsible Person: Hubert C Young III

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REQUEST 5-4:

Please elaborate on the Company's statement made on page 3 of its response to AIR 1-121, "Thus the NERC Compliance assessment clearly demonstrates both the immediate and long-term benefits of the integration of these NND transmission facilities into the SCE&G transmission system." Explain how the study demonstrates this, and explain any quantification of benefits that was determined as part of the study. Provide any studies or calculations of such benefits.

RESPONSE 5-4:

The immediate benefits provided by the integration of these NND transmission facilities into the SCE&G transmission system are realized through reduced power flows on the identified transmission facilities. Reduction in power flows translate into either reduced or eliminated need for other mitigating projects that would have otherwise reduced power flow to below 90% absent the NND transmission facilities. In other words the NND transmission facilities reduced the power flowing on these highly loaded transmission facilities and they were not identified in any planning studies as needing improvements which would have otherwise been identified and planned. Consequently, the costs of the alternate mitigating transmission projects have been avoided. Because these alternate projects were not required and not identified, they were not planned and calculations of the benefits were not performed. The 2019 study and the NERC assessment study conducted for the sole purpose of providing a response to AIR 1-121 and to show that the NND transmission facilities are, in fact, used and useful considered a single snap-shot case (summer 2019). A complete planning study would include off-peak loads, seasonal studies, etc., all of which would likely identify additional transmission constraints which were avoided by the NND transmission facilities.

The long-term benefits of the integration of these NND transmission facilities into the SCE&G transmission system are similar to the immediate benefits in those examples as described in our response to AIR 1-121. Similar to the discussion above, a complete planning study would include additional future years and associated off-peak loads, seasonal studies, etc., all of which would likely identify

additional transmission constraints which were avoided by the NND Transmission Projects.

The NND Transmission Projects have been integrated into the SCE&G transmission plan for more than 10 years and are an essential part of the SCE&G transmission system. A complete planning study that does not include the NND transmission facilities would require extensive planning of an alternate system over the past 10 years.

Responsible Person: Hubert C Young III

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REQUEST 5-5:

Refer to the Company's response to AIR 1-121, where the Company identifies additional efficiencies associated with the NND Projects.

- a) Explain the potential system operating limit violations (Killian/Blythewood) that the Company would have needed to address in some other way than constructing the VCS 1- Killian 230 kV line.
- b) Explain in detail the project to re-build the Denny Terrace-Lyles 115 kV transmission line that would have been needed had the Saluda River Transmission (SRT) substation not been planned. Also compare the cost of rebuilding the line to the cost of the Saluda River Transmission substation.
- c) Without the project associated with the St. George 230 kV switching station, what transmission upgrades would have been necessary to prevent future NERC Reliability Standards system operating limit violations? Compare the cost of other transmission upgrades to the project that would have been necessary associated with the St. George 230 kV switching station had the NND Project not gone forward.
- d) Please explain the analysis the Company performed to determine that the NND transmission facilities would reduce transmission system losses from 97 to 86 MW, the equivalent of 11 MW of generation reserves, and the accompanying reduction in fuel consumption. Provide all spreadsheets/workpapers, electronically with all formulas intact, used to derive these estimates. Also, describe the characteristics of the transmission system associated with the case that produced 97 MWs in losses and the characteristics of the transmission system that produced 86 MWs of losses.
- e) Please provide the on-going capital additions and O&M costs associated with the NND Project transmission upgrades.
- f) Please provide the on-going capital additions and O&M costs associated with the NND Project transmission upgrades.

RESPONSE 5-5:

a) The new VCS1 – Killian 230 kV line has been included in SCE&G transmission planning studies since the line was identified in our system impact studies and approved in 2007. For that reason, planning studies done over approximately the last 10 years have reflected the benefits of the transmission line to the SCE&G system.

To validate that the VCS1-Killian 230 kV line is in fact required, SCE&G ran a planning study in which the VCS1 – Killian 230 kV line was removed and the previously existing 115 kV line was returned to its pre-upgrade capacity. The planning study performed for AIR 1-121 was based on a single scenario, which was the peak load period anticipated for the summer of 2019.

As indicated in SCE&G's response to AIR 1-121, three existing transmission facilities were identified as highly loaded or overloaded under summer 2019 conditions without the VCS1 – Killian 230 kV line. The Parr – Denny Terrace 115kV #1 line flows were at 92% without the VCS1 – Killian 230 kV line and reduced to 50% with the line. While the loading on this line is not yet a NERC System Operating Limit (SOL) violation, the 92% loading is a level at which mitigation plans would have been developed. Similarly, the Killian – Pineland 115kV #2 line flows reduced from 107% to 78% and the Killian – Pineland 115kV #1 line flows reduced from 125% to 84% with the VCS1 – Killian 230 kV line. These two lines at 107% and 125% loading would have been NERC System Operating Limit (SOL) violations and mitigations plans would have been required. SCE&G would expect that if the similar study was run for additional future time periods, load growth would show additional highly loaded or overloaded lines.

In many cases, the maximum loading on SCE&G's transmission system does not occur during summer peak. This is because certain peaking generation resources which are distributed throughout SCE&G system would be generating power during a peak load event. In many cases these peaking resources have been specifically located at or near load centers to reduce stress on the transmission system during the peak load conditions. A study of the loading of the system without the new VCS1 – Killian 230 kV line during shoulder months and off-peak periods, particularly where major generation facilities like VC Summer Unit 1 are off-line for maintenance or refueling, could show even further highly loaded or overloaded lines to exist. This would be the case for loading studies of transmission assets in general. However, in this case it was not necessary to conduct these additional studies since they would only have confirmed that the VCS1 – Killian 230 kV line was necessary for system reliability and to meet planning criteria and NERC standards.

Once a transmission constraint is identified the process for determining the appropriate mitigation is complex and resource intensive. A mitigation plan could include operating guides, new transmission facilities or upgrading existing transmission facilities. Multiple alternative options would be identified, engineered, priced and other studies would be conducted to determine the cost/benefit of each alternative considered. All of these tasks would ensure the selection of the most cost effective and efficient solution. This process can take 6 to 24 months to complete depending on the complexity, and could include required collaboration with neighboring utilities.

- b) The line rebuild that was avoided by the Saluda River Transmission Substation was the Denny Terrace – Lyles 115 kV #1 line. This line is approximately 2.67 miles in length and is constructed with 1272 ACSR on mostly lattice structures. These lattice structures are double-circuited with two radial lines, a portion of the line is with the Denny Terrace – Kilbourne Park 115 kV line and another portion of the line is with the Lyles – Victory Gardens 115 kV line. The project to rebuild this line would have upgraded it to bundled 795 ACSR and would have replaced the lattice structures with steel double circuit single shaft structures.

The estimated cost of the Denny Terrace – Lyles 115 kV transmission line rebuild is \$4,700,000. However, in addition to avoiding the need to rebuild the Denny Terrace – Lyles 115 kV transmission line, the new Saluda River Transmission Substation also displaced the need to add new autotransformers at the Lake Murray and Denny Terrace substations. Those substations do not have the physical space to accommodate the additional autotransformers and would require expansion at significant cost and disruption to the adjoining landowners to accommodate the new autotransformers. The alternative to building the Saluda River Transmission substation would have been approximately \$27.8 million. The decision to build the Saluda River transmission substation was reviewed and the associated costs were approved by the Commission in Docket No. 2012 – 203-E. See Order No. 2012 – 884. Furthermore, it is possible that additional constraints and additional costs might have been identified had a more extensive transmission planning study been done to support the response in AIR 1–121.

Prior to Saluda River Transmission substation the two major 230/115 kV transformation resources serving the downtown area of the City of Columbia were at Denny Terrace and Lyles substations. One of the major benefits of the Saluda River Transmission substation is that it provides a third major 230/115 kV transformation resource to serve the core metropolitan area of downtown Columbia, including West Columbia and Cayce. Contingencies that remove from service certain transmission

facilities between the Denny Terrace and Lyles substations can cause excessive flows on the remaining 115 kV line between these two substations. Saluda River Transmission substation provides another 230/115 kV transformation source in the area that helps to reduce the potential for overloading the system if the identified contingencies occur.

- c) The St. George 230 kV switching station has been an integral part of the transmission system model for approximately 10 years and the benefits of establishing a switching station there have been identified in planning studies since the early 1990s. Presently seven 230kV lines terminate at the St. George switching station. During most system conditions, the VCS-St. George 230kV #1 and #2 lines and the Wateree-St. George 230kV line are source lines that deliver power to the St. George switching station. The remaining four lines including the St. George-Canadys 230kV line, the St. George-Summerville 230kV #1 and #2 lines and the St. George-Duke Progress (Sumter) 230kV line carry power from the St. George switching station to serve load in the southern portion of the system. During certain system conditions and depending on the generation dispatch, power can flow from the southern portion of the system toward the northern portion of the system reversing the flow on several of these lines.

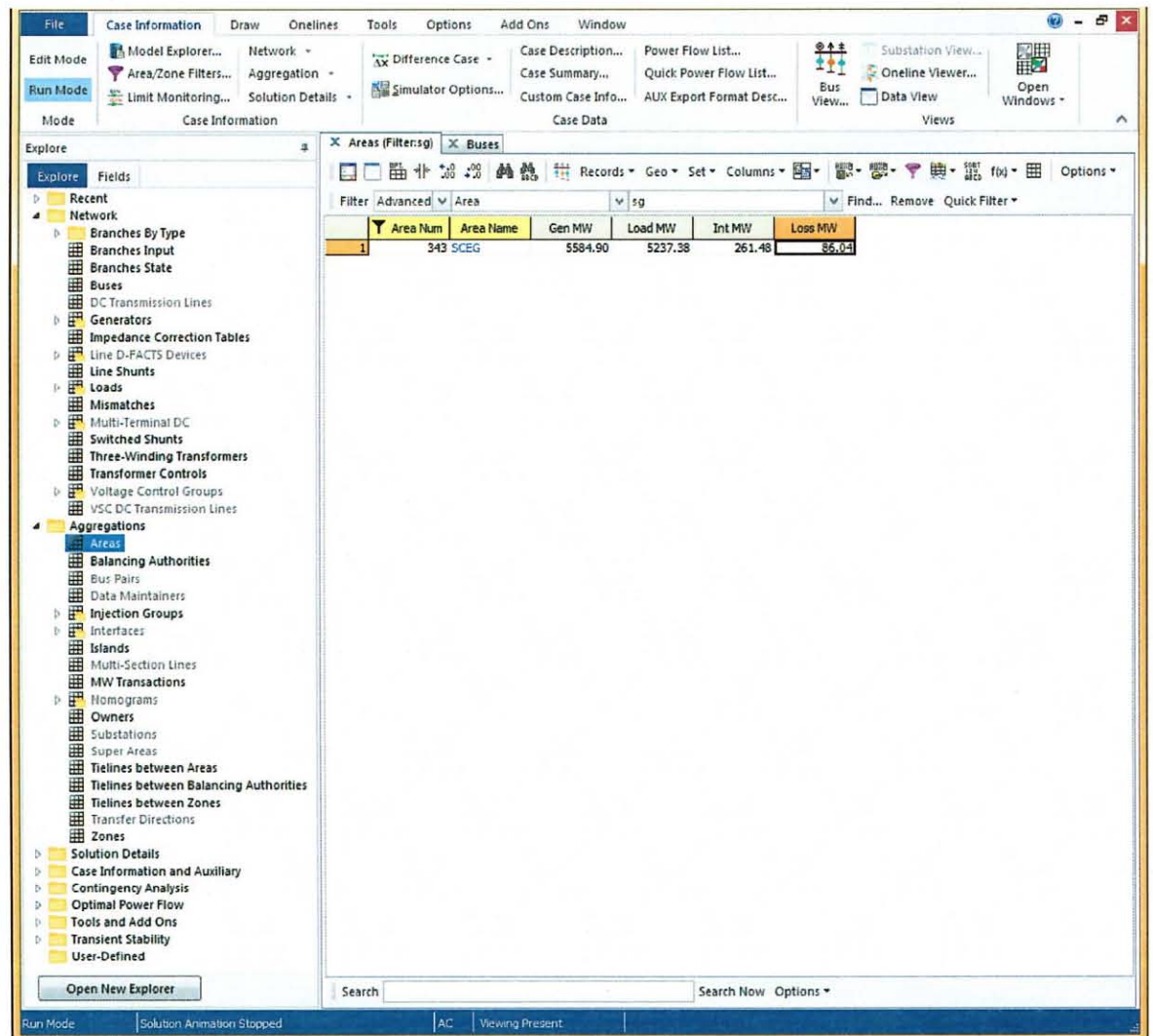
All transmission studies conducted during approximately the last 10 – year period have reflected the benefits to the transmission system of the St. George switching station. From a transmission modeling standpoint, removing the St. George switching station from consideration would also require removing from service some of the seven individual 230 KV lines connected to it, since otherwise some of those lines would have no point of connection and would serve only as capacitors. Removing these lines from service would eliminate the planned backbone of SCE&G's transmission system and make it difficult for SCE&G to serve its loads in the Low Country of South Carolina under numerous load conditions.

The only logical alternative to the St. George switching station would be to build another switching station to take its place. Modeling the construction of a comparable switching station to replace the existing St. George switching station would not produce meaningful results. As such, to attempt a comparison between St. George 230 kV switching station and other transmission upgrades that were never identified as needed would be hypothetical in nature and call for significant speculation.

The St. George switching station is the primary hub for the southern portion of the SCE&G transmission system as it transmits power from

generating resources between the northern portion and the southern portion of the system.

- d) SCE&G used the most current 2019 peak model, with all expected transmission facilities in service (including the NND transmission projects), to determine the current projected system losses for summer 2019. The 86 MW loss value for the expected 2019 summer conditions was calculated by the PowerWorld Simulator and is displayed in the simulator screenshot below:



Then, SCE&G used the same 2019 peak model with the NND transmission facilities removed and the assets affected by the NND transmission facilities restored. The system loss value was re-calculated

by the PowerWorld Simulator to be 97 MW and is displayed in the simulator screenshot below:

Area Num	Area Name	Gen MW	Load MW	Int MW	Loss MW
1	343 SCE&G	5595.24	5237.38	260.90	96.50

In comparing these two screenshots, notice that the customer Load MW value is the same in the two cases, but the Gen MW value is higher in the case with no NND transmission facilities due to the 11 MW increase in system losses. This information shows that the SCE&G transmission system is more efficient and economical with the NND transmission facilities.

- e) The only currently planned capital addition associated with the NND Project transmission upgrades is a security upgrade necessary to address NERC CIP compliance. This project is planned for 2019 and the current estimated direct cost is \$332,710.

The additional on-going annual O&M estimated to be incurred as a result of the NND Project transmission upgrades relate to the associated maintenance of the steel poles, six miles of new transmission right-of-way, two new switchyards, one new substation and addition of three breakers at existing substations. The estimated additional annual O&M expense is \$80,000.

Responsible Persons: Hubert C Young III (a-d) and Shannon Perry (e)

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REQUEST 5-6:

In the last paragraph of the response to AIR 1-121, the Company states that it has experienced improved reliability with the NND Project transmission upgrades.

- a. Please confirm that when the Company made this statement about reliability, it was making a comparison of the system with the NND Project transmission upgrades versus the system without. In other words, the comparison the Company made was to the transmission system as it existed prior to the NND Project transmission upgrades. Please explain the answer.

RESPONSE 5-6:

In the last paragraph of the response to AIR 1-121 SCE&G states that "Therefore, the NND transmission facilities constructed and integrated into SCE&G's transmission system provide immediate and long-term benefit. By enhancing and modernizing SCE&G's transmission system with these used and useful assets, SCE&G has experienced improved reliability (Hurricane Matthew and Irma) and had the opportunity to eliminate transmission upgrades that would have been required absent these assets."

SCE&G confirms that it was comparing the SCE&G system after the NND Project transmission upgrades were made versus the system before the upgrades were made when it stated that "NND transmission facilities constructed and integrated into SCE&G's transmission system provide immediate and long-term benefit", and that "enhancing and modernizing SCE&G's transmission system with these used and useful assets, SCE&G has experienced improved reliability ". The increased benefits and reliability referenced in AIR 1-121's response can be categorized in at least two forms. The first benefit is related to the overall resiliency improvement the NND Project transmission upgrades provide to the grid while a second benefit can be attributed to the improved materials and engineering design the new facilities have over the old facilities.

From a Grid perspective, the NND project upgrades have, at a minimum, decreased contingency loading on other existing SCE&G facilities by either

increasing the number of paths power can take, or through increased capacity over the facilities they replaced, or both. In general terms, a significant number of the NND project upgrades connect the northern portions of SCE&G's system to other portions located in the south creating a transmission "backbone" down the center of the SCE&G system. This connection strengthens SCE&G's ability to transmit power between the generators located in the Columbia area to the load centers in the Charleston area, and vice versa depending on generator availability, off-system purchase availability, and other system conditions. Simply put, the NND project upgrades have taken stress off the rest of the system, have increased the number and capacity of paths for power to flow, and have reduced the likelihood of facility overload or system failure.

From a materials and engineering perspective, the NND project upgrades are of steel, single pole, double circuit construction and are designed in accordance with the National Electrical Safety Code Section 25, Rule 250B and Rule 250C. Per Rule 250B, the NND project upgrades are designed to withstand 0.25 inches of ice with winds of 50 mph. Per Rule 250C, the NND project upgrades are designed to withstand 95 mph winds in the Columbia area to 120 mph winds in the Summerville area. The NND Project transmission upgrades replace old structures of wooden poles, crossarms, and braces that were designed to meet significantly less stringent criteria and are more subject to decay. As a result, during recent extreme weather events, such as the ice storm in 2014, the 1000 year flood in 2015, Hurricane Matthew in 2016, and Hurricane Irma in 2017, SCE&G did not experienced any outage or damage to the NND Project transmission upgrades.

Responsible Person: Pandelis N Xanthakos

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REQUEST 5-7:

Assuming the NND Project would have been completed, and based on the last assumed in- service dates for the NND Project, provide a projection of energy, capacity factor, and fuel cost at V.C. Summer Units 1, 2 and 3 (individually for each unit), over the next 30 years.

RESPONSE 5-7:

SCE&G is in the process of conducting an extensive collection and review of its own documents and information which it anticipates completing by April 10, 2018. SC&EG states that it will supplement this response by producing responsive, non-privileged, non-work product documents in its possession.

Responsible person: James Neely

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REQUEST 5-8:

Provide the most current 10-year (or longest period available) SCE&G Transmission Plan the Company has available, and the most recent 10-year Transmission Plan the Company developed prior to the decision to construct the NND Project.

RESPONSE 5-8:

SCE&G's most recent 10-year expansion plan includes many projects of varying complexity and costs. For information about planned transmission projects of \$2 million and above in 2017-2021, please see [https://www.scrtp.com/docs/librariesprovider12/default-document-library/2017-2021-project-descriptions-\(\\$2m-and-above\).pdf?sfvrsn=2](https://www.scrtp.com/docs/librariesprovider12/default-document-library/2017-2021-project-descriptions-($2m-and-above).pdf?sfvrsn=2). This is an annual posting and the most recent posting was on 6/1/2017.

Additional information on major Transmission Expansion Projects for the 10-year period is posted at (www.scrtp.com) in the "Meeting Archives" under several of the "Meeting Presentations."

Please see also:

http://www.oatioasis.com/SCEG/SCEGdocs/Planned_Transmission_Facilities_-_2018-03-29.pdf. Information on other planned transmission facilities constitutes non-public transmission information and will not be made available.

SCE&G no longer maintains copies of Transmission Expansion Plans developed prior to the decision to construct the NND Project.

Responsible Person: Hubert C Young III

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
OFFICE OF REGULATORY STAFF'S CONTINUING
AUDIT INFORMATION REQUEST**

DOCKET NO. 2017-207-E (6th Continuing AIR)

DOCKET NO. 2017-305-E (5th Continuing AIR)

DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-9:

Is the Company planning to retire any existing transmission assets? If so, please provide a list of the assets that will be retired, the year of planned retirement, along with the costs that will be written off associated with those assets. If there are no planned retirements, please explain why not.

RESPONSE 5-9:

While SCE&G does expect that components of transmission lines and substation, such as a single pole, a limited number of poles or a substation breaker, will be replaced and some lines will be rebuilt, as needed, to maintain reliable operation of the assets, SCE&G is not planning to retire any existing entire transmission lines or substations. This is because all transmission assets (old and new) are maintained to ensure continued reliable operation of the assets.

Responsible Person: Hubert C Young III

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
OFFICE OF REGULATORY STAFF'S CONTINUING
AUDIT INFORMATION REQUEST
DOCKET NO. 2017-207-E (6th Continuing AIR)
DOCKET NO. 2017-305-E (5th Continuing AIR)
DOCKET NO. 2017-370-E (5th Continuing AIR)**

REQUEST 5-10:

Please refer to Appendix 2 of the SCE&G 4th Quarter 2017 Status Construction Report in answering the requests below.

- a) Provide a similar schedule showing the \$399 million transmission capital costs that have been removed, the row or category the costs were removed from, and the year from which they were removed.
- b) Provide a similar schedule, showing the \$86 million in asset capital costs supporting Units 2 & 3 that were transferred to Unit 1, the row or category the costs were removed from, and the year from which they were removed.
- c) Provide a similar schedule showing the transmission AFUDC that was removed, the row or category the costs were removed from, and the year from which they were removed.
- d) Provide a similar schedule, showing the AFUDC associated with the assets supporting Units 2 & 3 that was removed, the row or category the costs were removed from, and the year from which they were removed.

RESPONSE 5-10:

Please see attached.

Responsible persons: William Hutson and Kevin Kochems

Appendix 2

ORS 5-10 a) and c)

RESTATED and UPDATED CONSTRUCTION EXPENDITURES

(Thousands of \$)

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

Per Order 2016-794 Adjusted	Total	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Annual Project Cash Flow(per order)	-														
Capital Cost Rescheduling Contingency	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Budget Carry-Forward Adjustment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Adjusted for Change in Escalation	-														
Cumulative Project Cash Flow(Target)		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Actual through September 2017*	Total	2007	2008	2009	2010	2011	Actual 2012	2013	2014	2015	2016	2017	Projected 2018	2019	2020
Plant Cost Categories	-														
Fixed with No Adjustment	-														
Firm with Fixed Adjustment A	-														
Firm with Fixed Adjustment B	-														
Firm with Indexed Adjustment	-														
Actual Craft Wages	-														
Non-Labor Costs	-														
Time & Materials	-														
Owners Costs	-														
Transmission Costs	329,512	-	26	724	927	11,964	51,677	56,593	46,439	44,401	31,412	52,244	33,105		
Total Base Project Costs(2007 \$)	329,512	-	26	724	927	11,964	51,677	56,593	46,439	44,401	31,412	52,244	33,105		
Total Project Escalation	47,038	-	3	23	53	1,154	5,698	7,069	6,644	7,180	5,581	8,297	5,336		
Total Revised Project Cash Flow	376,550	-	29	747	980	13,118	57,375	63,662	53,083	51,581	36,993	60,541	38,441		
Cumulative Project Cash Flow(Revised)		-	29	776	1,756	14,874	72,249	135,911	188,994	240,575	277,568	338,109	376,550		
AFUDC(Capitalized Interest)	22,293	-	2	25	51	179	1,403	3,998	4,568	3,489	3,451	1,477	3,650		
Gross Construction	398,843	-	31	772	1,031	13,297	58,778	67,660	57,651	55,070	40,444	62,018	42,091		
Construction Work in Progress		-	31	803	1,834	15,131	73,909	141,569	199,219	254,290	294,734	356,752	398,843		

*Applicable index escalation rates for 2017 are estimated. Escalation is subject to restatement when actual indices for 2017 are final.

Notes:

2017-2018 AFUDC rate applied

3.72%

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

Spending through September 30, 2017, reflects actual construction costs. Costs associated with activities in support of the winding down and abandonment of the project after July 31, 2017 are not included here but are set forth on Chart A found in Section I.B of the report for this quarter. The projected costs for completing the Transmission projects associated with the Units are included in Q4 of 2017 and 2018, the period in which those projects are anticipated to be concluded.

Appendix 2

RESTATED and UPDATED CONSTRUCTION EXPENDITURES
(Thousands of \$)

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

5-10.b

**Actual through through September
2017 plus Adjustments**

Plant Cost Categories	Total	Transfers										
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fixed with No Adjustment	54,246			4	2,076	20,776	11,249	6,533	3,633	3,508	3,265	3,202
Firm with Fixed Adjustment A	-											
Firm with Fixed Adjustment B	-											
Firm with Indexed Adjustment	-											
Actual Craft Wages	-											
Non-Labor Costs	-											
Time & Materials	-											
Owners Costs	31,357	-	-	740	3,675	1,371	11,947	6,265	1,889	2,093	2,373	1,003
Total Base Project Costs(2007 \$)	85,602	-	-	744	5,752	22,147	23,196	12,797	5,522	5,601	5,639	4,205
Total Project Escalation	-	-	-	-	-	-	-	-	-	-	-	-
Total Revised Project Cash Flow	85,602	-	-	744	5,752	22,147	23,196	12,797	5,522	5,601	5,639	4,205
Cumulative Project Cash Flow(Revised)		-	-	744	6,496	28,643	51,839	64,636	70,157	75,758	81,397	85,602
AFUDC(Capitalized Interest)	-	-	-	-	-	-	-	-	-	-	-	-
Gross Construction	85,602	-	-	744	5,752	22,147	23,196	12,797	5,522	5,601	5,639	4,205
Construction Work in Progress		-	-	744	6,496	28,643	51,839	64,636	70,157	75,758	81,397	85,602

*SCE&G is still finalizing the cost basis for the relocation and rebuilding of the railroad spur on the VC Summer site. These costs will be moved from NND to Unit 1 plant in service when their cost basis is finalized.

5-10.d

Note: SCE&G did not transfer any AFUDC costs associated with these assets.

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
OFFICE OF REGULATORY STAFF'S CONTINUING
AUDIT INFORMATION REQUEST
DOCKET NO. 2017-207-E (6th Continuing AIR)
DOCKET NO. 2017-305-E (5th Continuing AIR)
DOCKET NO. 2017-370-E (5th Continuing AIR)**

REQUEST 5-11:

Had the Company decided not to construct the NND Project, explain whether any of the following facilities would have still been constructed, or constructed in some different way. If constructed in some different way, explain how the facilities would have been constructed, and provide a schedule comparable to that asked for in the prior question, identifying the capital and AFUDC costs associated with the alternative.

- a) Switchyard
- b) Off-Site Water System
- c) Nuclear Operations Building
- d) CHAMPS work management system
- e) Nuclear Learning Center Annex
- f) Miscellaneous (e.g. emergency services facility, security training facility, software licenses, wastewater treatment facility, railroad spur, IT infrastructure)

RESPONSE 5-11:

- a) Switchyard:
The new section of the VCS switchyard would not have been built if the NND generators had not been expected to interconnect at the switchyard. However, the new section of the switchyard now has eleven transmission lines connected to it. All of these lines transmit power from VCS1 and Fairfield Pumped Hydro to other areas of the system. Eight of these lines are system network lines and include lines that interconnect the SCE&G system with the Santee Cooper system and the Duke Energy Carolinas system improving the capability to support each other as system conditions require. The other three lines connect the new portion of the switchyard to the old portion of the switchyard. The entire VCS switchyard

is used and useful in serving the customers of SCE&G and improving the reliability of the system even without the NND generation project.

b) Off-Site Water System:

The Off-Site Water System would have still been completed without Units 2 or 3. The current Unit 1 water treatment system was built at the time of initial construction and has aged significantly. It was cost beneficial to replace the current Unit 1 system with a new system rather than continue to repair and replace components through the end of life and eventual demobilization of Unit 1.

c) Nuclear Operations Building:

The Nuclear Operations Building would have to still be completed without Units 2 or 3. The Unit 1 NOB was located at the current location of Unit 1 Interim Spent Fuel Storage Facility (ISFSI). Nuclear security regulations required the relocation of the NOB as part of this facility's construction. Also, the former Unit 1 NOB was built at the time of initial construction and had aged significantly. It was cost beneficial to replace the current Unit 1 building with a new system rather than continue to repair and replace the building through the end of life and eventual demobilization of Unit 1.

d) CHAMPS work management system:

The software system formerly used by Unit 1 for work management had aged significantly and would no longer be supported. Therefore, Unit 1 chose to upgrade to this new version of the CHAMPS software. Units 2&3 simply shared in the cost as it was anticipated to be cost beneficial for all three plants to use a shared software platform.

e) Nuclear Learning Center Annex:

The Annex was built solely for Units 2&3 simulator and training.

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

Emergency Response Building: This building and associated equipment was constructed to meet regulatory and industry requirements, primarily due to new post-Fukushima regulation, and reduce insurance costs. Units 2&3 simply shared in the cost as it was anticipated to be cost beneficial for all three plants to use a shared emergency response unit.

Security: This facility was constructed to meet regulatory and industry requirements, primarily due to the old facility being in a recognized flood plain and within the boundary of the Parr Hydro FERC Project, which FERC did not approve as a long-term use. Units 2&3 simply shared in the cost as it was anticipated to be cost beneficial for all three plants to use a shared emergency response unit.

Software Licenses: Various software systems formerly used by Unit 1 had aged significantly and would no longer be supported. Therefore, Unit 1 chose to upgrade to new versions. Units 2&3 simply shared in the cost as is was anticipated to be cost beneficial for all three plants to use shared software platforms.

Wastewater Treatment Facility: This would have still been completed without Units 2 or 3. The current Unit 1 wastewater treatment system was built at the time of initial construction and has aged significantly. It was cost beneficial to replace the current Unit 1 system with a new system rather than continue to repair and replace components through the end of life and eventual demobilization of Unit 1. Units 2&3 shared in the cost because 3-Unit shared facilities such as the NOB, NLC and ERB are served by this treatment facility.

Railroad Spur: The railroad spur would have needed significant upgrades and repairs to support the delivery of large replacement components for VCS Unit 1 and for Fairfield Pumped Storage facility. These upgrades were completed as part of the realignment of the rail spur to move it slightly east for construction of Units 2&3.

IT Facilities: These facilities were constructed for Units 2&3 but are now an integral part of the SCANA IT network and serve multiple SCANA facilities, including VCS Unit 1 and ancillary facilities such as OWS.

Responsible persons: Hubert C. Young III and Kyle Young

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
OFFICE OF REGULATORY STAFF'S CONTINUING
AUDIT INFORMATION REQUEST**

DOCKET NO. 2017-207-E (6th Continuing AIR)

DOCKET NO. 2017-305-E (5th Continuing AIR)

DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-12:

SCE&G 4th Quarter 2017 Status Construction Report Pg. 3 Chart A. Please provide support documentation to show how the dollar amount for each item in Chart A was determined and the original cost share between Units 1, 2 & 3.

RESPONSE 5-12:

The dollar amounts for the items on Chart A were determined by reference to the relevant work orders. For each asset that has been or will be placed into service, the cost of that asset that had been recorded to the NND Project was identified and included in the total.

Detailed Breakdown of Chart A from SCE&G's 4th Quarter 2017 Report			
Original Spit Methodology U1/U2&U3	Description	Total	
Switchyard			
0%/100%	To Transfer cost of Switchyard to Transmission	\$ 31,091,032	
Off-Site Water System			
0%/100%	Offsite Water System	\$ 23,154,501	
Nuclear Operations Building			
50%/50%	Nuclear Operations Building (NOB)	\$ 10,510,783	
CHAMPS work management system			
33%/66%	CHAMPS REPLACEMENT	\$ 6,534,286	
Nuclear Learning Center Annex			
0%/100%	NLC Annex	\$ 5,417,022	

Miscellaneous		
33%/66%	Emergency Services Building	\$ 1,962,488
50%/50%	Security Training Facility (includes classroom trailers)	\$ 1,411,890
0%/100%	Misc Assets including Fiber Huts	\$ 905,627
0%/100%	N/A - nonutility land - Various tracts	\$ 595,513
33%/66%	EMPACT 3.0 SOFTWARE	\$ 475,805
23%/77%	NEW WASTEWATER TREATMENT FACILITY	\$ 386,224
33%/66%	WORKFORCE Work Hour TIME & ATTEND SOFTWARE	\$ 684,932
0%/100%	PRIMAVERA P6 SOFTWARE	\$ 319,552
78%/22%	WASTEWATER TREATMENT FACILITY	\$ 311,417
0%/100%	Network Hardware	\$ 258,572
33%/66%	MAINTENANCE RULE	\$ 224,192
33%/66%	COMMUNICATIONS TOWER FROM SCI	\$ 197,920
0%/100%	N/A - nonutility land - Burris-Fuller tract	\$ 146,925
33%/66%	EMPACT SOFTWARE	\$ 114,487
33%/66%	PLATEAU SOFTWARE UPGRADE	\$ 103,967
33%/66%	VCS COUNT ROOM SOFTWARE & HARDWARE	\$ 140,659
33%/66%	MGMT. OBSERVATION DATABASE SOFTWARE	\$ 72,520
33%/66%	MIDAS SOFTWARE	\$ 70,052
33%/66%	EQUIPMENT ON-LINE MONITORING	\$ 62,902
33%/66%	EMPACT 4.3 SOFTWARE	\$ 55,853
33%/66%	VSIDS SOFTWARE	\$ 55,819
33%/66%	KEY PERFORMANCE INDICATOR	\$ 54,187
33%/66%	VISION LICENSES	\$ 49,469
33%/66%	MET TOWER SOFTWARE	\$ 37,182
33%/66%	AIR PACKS FOR EP	\$ 30,096

	33%/66%	HP WHOLE BODY COUNT EQUIPMENT & Software	\$ 47,884
	33%/66%	WEB EOC	\$ 25,732
	33%/66%	VISION ENTERPRISE LICENSE	\$ 22,847
	50%/50%	TSC RAD MONITORS	\$ 13,680
	33%/66%	WinCDMS	\$ 12,833
	33%/66%	WebEOC ENF BOARD	\$ 11,924
	33%/66%	ADD'L TIME & ATTENDANCE KIOSKS	\$ 9,684
	33%/66%	EMPCENTER KIOSK REPLACEMENT	\$ 8,951
	33%/66%	SIREN SYSTEM COMPUTER REPLACEMENT	\$ 5,302
	50%/50%	RECORDS SHREDDER REPLACEMENT	\$ 4,852
	50%/50%	DIGITAL FLOWMETER & SAMPLING ASBLY.	\$ 2,015
	50%/50%	COFFEE MAKERS FOR NOB	\$ 602
		Total	\$ 85,602,181
*	SCE&G is still finalizing the cost basis for the relocation and rebuilding of the railroad spur on the VC Summer site. These costs will be moved from NND to Unit 1 plant in service when their cost basis is finalized.		

Responsible Person: Kevin Kochems

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
OFFICE OF REGULATORY STAFF'S CONTINUING
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DOCKET NO. 2017-207-E (6th Continuing AIR)

DOCKET NO. 2017-305-E (5th Continuing AIR)

DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-13:

Please state if any expenses were incurred on the project from October 2017 through December 31, 2017 that are sought to be recovered.

RESPONSE 5-13:

SCE&G is not seeking recovery of any project costs incurred from October 1, 2017 through December 31, 2017. In accordance with its customary practice, in December 2017, SCE&G recorded a true up of project AFUDC recorded as of July 31, 2017 to reflect SCE&G's final annual AFUDC rate calculated in accordance with the Federal Energy Regulatory Commission's (FERC) Order No. 561 and Electric Plant Instruction No. 3.17 of the Uniform System of Accounts. This AFUDC true up resulted in an additional \$897,783 of AFUDC being recognized.

Responsible person: Keith Coffey

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
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DOCKET NO. 2017-207-E (6th Continuing AIR)

DOCKET NO. 2017-305-E (5th Continuing AIR)

DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-14:

SCE&G 4th Quarter 2017 Status Construction Report page 1. Please state the criteria the Company used in determining the "certain costs of abandonment" for the months of August and September 2017.

RESPONSE 5-14:

SCE&G reported in Appendix 2 of the BLRA report for quarter ending December 31, 2017 the unavoidable project related costs necessary to safely and efficiently abandon the site that were incurred through September 2017. This would include such costs as those that were incurred for work performed prior to the abandonment of the project, the costs to safely identify and remove contractor construction equipment, costs to identify and initiate necessary permit requirements for an abandoned site, those administrative costs necessary to ensure contractors and subcontractors were properly paid, costs for the WARN period of severed employees, and other similar costs.

These costs were accounted for as capital costs of the project. Other costs were expensed.

Responsible Person: Kevin Kochems

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
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DOCKET NO. 2017-207-E (6th Continuing AIR)

DOCKET NO. 2017-305-E (5th Continuing AIR)

DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-15:

SCE&G 4th Quarter 2017 Status Construction Report page 2. Transmission. Please provide the specific items/segments of the "Certain of these projects," with the associated cost and the intended customer requirements being met.

RESPONSE 5-15:

Please see attached. The customer requirements met by these projects have been described in Response to AIR 1-21 generally. All projects support customers' requirement for reliable and efficient electric service.

Responsible Person: Shannon Perry

5-15

NND Transmission BLRA

<u>Project</u>	<u>Description</u>	<u>Dollars Closed to PIS 2017</u>
90B	VCS1-Killian 230kV: Construct, Add R/W, and Add 230KV Term at Killian Sub	47,602,175
90E	VCS2-Lake Murray 230kV #2 Construct and Add 230kV Term at Lake Murray Sub and Related Line Relocates and Terminals	30,779,218
91M	Saluda River 230/115kV Sub: Site and Construct	16,123,158
94D	VCS2-St. George 230kV Line #1 and #2 Construct and Rebuild VCS2-Lake Murray 230kV Line #1	64,309,190
94H	St. George-Canadys 230kV: Upgrade & Fold-In at St. George and Updgrade Relays at Canadys Sub	13,024,876
94O	St George-Summerville 230kV: Upgrade to B-1272, Fold-in at St. George, Upgrade Term at Summerville	0
94K	St George 230kV Switching Station: Site and Construct	7,763,180
Bus Tie	VCS1 to VCS2 Bus Ties Lines #1, #2, #3	3,353,195
VCS1	VCS1 Switchyard Upgrades and Related Line Relocates	38,541,766
91P	McMeekin-Lyles 115kV Line #1: Upgrade Saluda River-Lyles Segment and Fold-In at Saluda River Sub	7,541,939
90L	Denny Terrace-Lyles 230kV and Add 230kV Terms at Both Subs	5,699,428
94Q	Saluda Hydro-Newberry 115kV: Upgrade to Double-Circuit 1272	3,967,556
90Q-R-S	Saluda Hydro-McMeekin-Lake Murray Sub Area 115kV Lines and Substation Upgrades	1,666,791
Sub	Edenwood and Denny Terrace 115kV Breaker Upgrades	829,893
	Subtotal - Transmission	<u>241,202,366</u>
VCS2	VCS2 Switchyard: Construct - Transmission WO	<u>31,221,064 *</u>
	TOTAL	<u><u>272,423,430</u></u>

* - This amount equals \$31,091,031.57 from work order #170000 and \$130,032.52 from Transmission-BLRA work order #450013, Temporarily Energize VCS2 Switchyard.

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
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DOCKET NO. 2017-207-E (6th Continuing AIR)

DOCKET NO. 2017-305-E (5th Continuing AIR)

DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-16:

SCE&G 4th Quarter 2017 Status Construction Report page 2. Please identify the specific Transmission Projects that were closed to "plant in service" from the NND Project as of December 31, 2017.

RESPONSE 5-16:

Please see attached.

Responsible Person: Shannon Perry

ORS AIR 5-16

Transmission Projects closed to "plant in service" as of December 31, 2017

Project	Specific Project #	WO	WO Description
90E	90E4	168003	Parr-VCS 115 kV Safeguard : Relocate Line and Switch
Bus Tie	94E1	168008	Parr-VCS 115 kV Safeguard: Raise Line at VCS
VCS1	90I1	168100	VCS1 Sub: Add 9392 Terminal and Replace Disconnect Switches
VCS1	90I2	168101	VCS1 Sub: Upgrade 8722 and 8772 Terminals and Replace Disconnect Switch
VCS1	90U	168102	VCS1 Sub: Upgrade 5 PRCBs
VCS1	90K	168103	VCS1 Sub: Add Terminal 9332
VCS1	94J	168104	VCS1 Sub: Upgrade Terminal 8832
VCS1	90F	168105	VCS1 Sub: Bus 1, Upgrade 8852 and Add 9322
VCS1	90I3	168106	VCS1 Sub: Bus 1, Upgrade Switch 8863 & Lightening Arrestors
VCS1	94M	168107	VCS1 Sub: Upgrade 8902 & 8932
Bus Tie	90H	168800	VCS1-VCS2 230kV Bus Tie #2
Bus Tie	90J	168801	VCS1-VCS2 230kV Bus Tie #3
Bus Tie	94E	168802	VCS1-VCS2 230kV Bus Tie #1
90E	90E	450001	VCS2-Lake Murray 230kV Line #2: Construct
90E	91F	450002	Parr-Midway 115kV Lines: Lower at VCS2 Switching Station
VCS1	90M1	450003	Reterminate Duke (Newport) 230kV Line from Parr 230kV Sub to VCS1 Sub
VCS1	90N3	450004	Reterminate Duke Bush River 230kV Line from Parr 230kV Sub to VCS2 Sub
VCS1	90N2	450007	Reterminate Ward 230kV Line from VCS1 Sub to VCS2 Sub
VCS1	90N4	450008	Reterminate Denny Terrace #1 230kV line from Parr 230kV Sub to VCS2 Sub
VCS1	90M2	450020	VCS1-Denny Terrace 230 kV Line #2: Rebuild VCS1 to Winnsboro Junction Segment
VCS1	90N5	450021	VCS2-Lake Murray 230kV Line #1: Reterminate to VCS2 and Rebuild 3 Mile Portion with VCS2-St. George 230 kV Line #2
94D	94D1	450022	VCS2-St. George 230 kV Line #1: Construct (Conductor Only)
94D	94D2	450023	VCS2-St. George 230 kV Line #2: Construct VCS2, and Rebuild VCS2-Lake Murray 230 kV Line #1, (3 miles out) to Lake Murray Segment
94D	94D4	450025	VCS2-St. George 230 kV Line #1 & #2: Construct Lake Murray to Arrowwood Junction Segment and Fold-In Line #2 at Saluda River Sub
94D	94D16	450037	VCS2-St. George 230 kV Line #1 & #2: Construct Orangeburg to 301 Junction Segment
94D	94D18	450039	VCS2-St. George 230 kV Line #1 & #2: Construct 301 Junction to St. George Segment
90E	90E3	450043	Parr-Winnsboro 115 kV Line #1: Rebuild Approximate 1.75 Mile Section
90E	90E1	450044	Parr - Denny Terrace 115kV #14 Line: Relocate
90B	90B1	450052	VCS1-Killian 230kV: Construct VCS1 to Winnsboro Junction Segment
90B	90B2	450053	VCS1-Killian 230kV: Construct Winnsboro Junction to Winnsboro Segment
90B	90B3	450054	VCS1-Killian 230kV: Construct Winnsboro to Blythewood Segment
90B	90B5	450055	VCS1-Killian 230kV: Construct Blythewood to Killian Segment
90B	90B7	450057	VCS1-Killian 230kV: Add Right-of-Way for Blythewood to Killian Segment.
94Q	94Q	450059	Saluda Hydro-Georgia Pacific 115kV Line #1 & #2: Rebuild Approx. 5 Mile Segment from Saluda Hydro to Ballentine
90Q-R-S	90R	450061	McMeekin-Lake Murray 115 kV: Rebuild Approx. 0.5 Mile McMeekin to Lake Murray Segment of the Lyles-McMeekin 115 kV Line #1, Rename McMeekin-Lake Murray 115 kV
90Q-R-S	90S	450062	Saluda Hydro-Lake Murray 115 kV: Rebuild Approx. 0.75 Mile Saluda Hydro to Lake Murray Segment of the Saluda Hydro-CIP 115 kV Line, Rename Saluda Hydro-Lake
90L	90L	450064	Denny Terrace-Lyles 230 kV: Rebuild Approx. 2.5 Mile Lyles to Denny Terrace Segment of the Wateree-Denny Terrace 230 kV Line and Rename the Line Denny Terrace-Lyles
94H	94H	450069	Canadys-St. George 230kV Line: Fold-in Canadys-Santee 230 kV Line Into New St. George 230 kV Switching Station and Rebuild Approx. 10.5 Mile Canadys to St. George Segment and Rename Canadys-St. George 230kV
91P	91P	450071	Lyles-Saluda River 230 kV Line #1 & 230(115) kV Line #2: Rebuild
94K	95A	540002	St. George 230kV Switching Station: Acquire Land
90B	90D	540010	Killian Sub: Add 230kV Line Terminal to VCS1 Sub
91M	91N	540012	Saluda River 230/115kV Substation: Acquire Site
90E	90E2	540013	Parr Substation: Reterminate Denny Terrace #14 115kV Line
90E	90G	540017	Lake Murray Trans: Add 230kV Line Terminal to VCS2 and Replace Relay Panel

VCS1	91U3	540018	Denny Terrace Sub: Replace Relays on VCS1 Line
VCS1	91U2	540020	Denny Terrace Sub: Replace Relays on VCS2 Line
VCS1	91U4	540022	Pineland Sub: Replace Relays on VCS1 Line
VCS1	91U1	540023	Ward Sub: Replace Relays on VCS2 Line
90E	90E5	540026	Denny Terrace: Replace Relays on Parr #14 Line
94K	94K	540028	St George 230kV Switching Station: Construct
91M	91M	540029	Saluda River 230/115kV Substation: Construct
90Q-R-S	90S1	540031	Lake Murray Transmission Substation: Upgrade 115kV Terminal to Saluda Hydro
Sub	90T	540032	115kV PRCBs: Upgrade Interrupter Rating (Edenwood and Denny Terrace Subs)
94H	94I1	540034	Canadys 230kV Sub: Replace Relays on St. George Line
90L	90L2	540035	Lyles 230kV Sub: Upgrade 230kV Terminal to Denny Terrace
90L	90L1	540036	Denny Terrace Sub: Upgrade 230kV Terminal to Lyles
VCS2	90A	540042	VCS2 230kV Switchyard: Construct (Transmission WO)

Note: Projects 94D, 94O, 90Q-R-S and Sub include work orders that will close to "plant in service" in 2018.

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
OFFICE OF REGULATORY STAFF'S CONTINUING
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DOCKET NO. 2017-207-E (6th Continuing AIR)

DOCKET NO. 2017-305-E (5th Continuing AIR)

DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-17:

SCE&G 4th Quarter 2017 Status Construction Report page3, Section II.A. Please provide the details (e.g., contract, letter of agreement, letter of transfer) of the proposal from SCE&G to Santee Cooper where Santee Cooper is to assume responsibility for all equipment at the NND Project.

RESPONSE 5-17:

Please see attached.

Responsible person: Alvis J. Bynum, Jr.

Jeffrey B. Archie
Senior Vice President, SCANA
Senior Vice President & CNO, SCE&G



December 27, 2017
NND-17-0503

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Virgil C. Summer Nuclear Station (VCSNS) Units 2 & 3
Combined License (COL) Nos. NPF-93 and NPF-94
Docket Nos. 52-027 & 52-028

Subject: South Carolina Electric & Gas Company (SCE&G) Request for
Withdrawal of VCSNS Unit 2&3 COLs

References: 1. Letter from Jeffrey B. Archie to NRC, V.C. Summer, Units 2 and 3 -
Notification of Termination of Project Construction, dated
August 17, 2017 (ML17229B487)

This letter requests NRC approval to withdraw the COLs for VCSNS Units 2 & 3 in accordance with the Commission's policy statement on deferred and terminated plants (52 Federal Register 38,077). In Reference 1, SCE&G notified the NRC that as of July 31, 2017, SCE&G stopped construction activities on the VCSNS Units 2 and 3 site. In its October 27 letter, SCE&G stated that it would notify the NRC of its plans for disposition of the COLs no later than December 15. Pursuant to further discussion with the NRC, SCE&G stated that it would notify the NRC by the end of December 2017.

The COLs were obtained from the NRC in March of 2012 and construction commenced shortly thereafter. On March 29, 2017, the Company's General Contractor, Westinghouse Electric Company, unexpectedly declared bankruptcy. Subsequently SCE&G and the project's co-owner (the South Carolina Public Service Authority-Santee Cooper) undertook an evaluation of the cost and schedule to complete the units. On July 31, 2017, Santee Cooper made the decision to suspend work on the project and later that day SCE&G made the decision to abandon the project effective immediately.

There is no nuclear fuel or special nuclear material on the site and all Safeguards Information has been removed from the site. Also, in their present state of construction (less than 40% complete), neither of the units can be considered a utilization facility as defined in 10CFR50.2. Neither unit has all the necessary structures, systems or components in place to sustain a controlled nuclear reaction. Currently there are no construction or quality-related activities ongoing at the site, but SCE&G will continue to comply with NRC requirements pending its authorization of withdrawal.

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In addition to withdrawal of the COLs, SCE&G requests withdrawal of the License Amendment Requests and associated Exemptions under NRC review, Code Alternative requests under NRC review, and all ITAAC Closure Notifications.

SCE&G has irrevocably abandoned its interests in VCSNS Units 2 and 3 project. All of its project completion and preservation activities have ceased. Work is limited to only those actions required to place the site in a safe condition, terminate construction, and close active permits. No further NRC-regulated activities are being performed or planned at VCSNS 2 and 3.

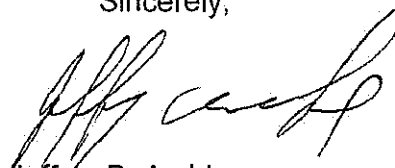
SCE&G has offered to cede its abandoned interest in the VCSNS Units 2 and 3 project to the South Carolina Public Service Authority (Santee Cooper), for no consideration. As of the time of this letter, Santee Cooper has not elected to accept full responsibility for the VCSNS Units 2 and 3 project. If prior to NRC approval of this request to withdraw the COLs Santee Cooper chooses to seek to become the sole licensee for the project, SCE&G will support an application to the NRC to transfer the licenses to Santee Cooper.

The enclosure provides SCE&G's plans for redress of the Unit 2 & 3 site and additional information on site activities. SCE&G is not requesting a specific approval date for withdrawal of the COLs, however, prompt approval will allow for resolution.

This letter contains no regulatory commitments.

Should you have any questions, please contact me at (803) 217-5080 or by email at jarchie@scana.com.

Sincerely,



Jeffrey B. Archie
Senior Vice President SCANA
Senior Vice President & CNO SCE&G

JRB/JBA/

Enclosure

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c: Billy Gleaves
Jennifer Dixon-Herrity
Shawn Williams
Tomy Nazario
Cathy Haney
Vonna Ordaz
Fred Brown
Jim Reece
Kevin B. Marsh
Jimmy E. Addison
Stephen A. Byrne
W. Keller Kissam
Jeffrey B. Archie

Jim Stuckey
Alvis J. Bynum
Kathryn M. Sutton
Roger Reigner
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Shirley S. Johnson
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Enclosure

V.C. SUMMER UNITS 2 AND 3 REDRESS PLAN

Jenkinsville, South Carolina

South Carolina Electric and Gas Company

December 2017

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Enclosure

V.C. Summer Unit 2 and 3 Redress Plan
Jenkinsville, South Carolina
South Carolina Electric and Gas Company

Site Description

The Virgil C. Summer Nuclear Station (VCSNS), Units 2 and 3 site is located on approximately 1,988 acres adjacent to the Broad River near Jenkinsville, South Carolina. As of July 2017, when South Carolina Electric and Gas Company (SCE&G) terminated construction at the site, the Units were approximately 40 percent complete. Since the plant never became operational, no nuclear fuel or waste is on site. The only radioactive material to be disposed of would result from removal of smoke detectors and exit signs from various buildings to be demolished or abandoned in place. Safeguards Information has been removed. Fenced areas are currently under industrial-type security.

The current environmental permit status of VCS is as follows:

Air – General Minor Source Operating Permit status granted September 1, 2010, by the South Carolina Department of Health & Environmental Control (SCDHEC) for Concrete Batch Plant. Expiration date June 30, 2023.

Toxics – There are no polychlorinated biphenyl (PCB) transformers on site; however, there are other PCB-containing items/equipment/articles on site but not in service.

Wastes (Environmental Protection Agency Identification Number SCD069311579):

Hazardous – Large Quantity Generator

Solid – Presently disposed of offsite by contract at a SCDHEC-permitted facility.

Wastewater (National Pollutant Discharge Elimination System [NPDES] Permit Number SC0049131) – Construction and permanent sewage currently routed to the Town of Whitmire, SC. The current NPDES permit expires on January 31, 2018.

Water – Drinking water for the site is purchased from the city of Jenkinsville, a community public water system regulated by the state.

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Army Corp of Engineer- SAC-2007-1852-SIR granted March 30, 2012 to impact 0.26 acres of wetlands, 1.34 acres of jurisdictional waters, and 774 linear-feet of stream. Expiration date March 31, 2022.

NPDES General Permit for Stormwater Discharges from Construction Activities- Approximately fifteen (15) phased construction permits encompassing approximately 900 acres of total disturbed area on-site.

Potential Impacts

SCE&G would maintain the VCSNS 2 & 3 site in compliance with environmental requirements, including after NRC withdrawal of the COLs. Compliance activities would primarily consist of inspection and maintenance of the site in accordance with construction stormwater permits. These measures would continue as long as SCE&G has ownership of the VCS site or until the site is stabilized and stormwater permits are terminated. Maintaining and complying with these existing permits and regulations would ensure the stability of the site.

Most of the minor environmental impacts resulting from redress would be associated with removal of equipment or structures not identified as necessary for other site activities. Materials and structures removed would be above grade or in areas that have previously experienced substantial ground disturbance for the original construction of the plant. The Units 2 and 3 switchyard has previously been placed in-service and is operating on SCE&G's transmission system. SCE&G currently plans to maintain the Unit 2 and 3 transmission switchyard as-is. Under current plans, the existing containment, turbine, and associated support buildings would not be demolished but would remain in their currently constructed state. The other structures not identified as necessary would be removed from the site, abandoned in place, or demolished. These structures are mostly temporary office and storage buildings and warehouses. Any demolition wastes generated would be disposed of in appropriately-permitted waste disposal facilities.

Equipment identified as unnecessary would have the power disconnected and abandoned in place. Such items may include, but are not limited to: valves; battery boards and chargers; transfer switches; vent fans; motors; cabinet panels; breakers; power systems; shop equipment such as lathes, air compressors, and dryers; as well as other miscellaneous equipment. Additional materials on site include, but are not limited to items such as: piping, tubing, and conduit; cable; instrumentation; and general construction materials. SCE&G would continue to conduct periodic site inspections to ensure that none of the equipment or materials are causing environmental, health, or safety problems.

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Redress would also involve the removal of approximately 250,000 gallons of oil and miscellaneous fuel and lubricants located in approximately fifty (50) areas site-wide. Equipment such as generators, above ground storage tanks, and transformers have a capacity range between 200-15,000 gallons per source. Fuel and lubricant would be removed and storage containers would be closed in accordance with all applicable federal, state, or local laws and regulations.

SCE&G has both Corporate and site processes and procedures in place to safely handle the demolition and removal of the identified equipment, structures, and fuels or lubricants in an environmentally sound manner.

Cumulative Impacts

Because the redress activities at the VCS site would constitute minor, insignificant, routine activities, there would be no cumulative impacts associated with the redress activities.

Mitigation Measures

There would be no additional mitigation measures other than the routine mitigation measures, i.e., best management practices.

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DOCKET NO. 2017-370-E (5th Continuing AIR)**

REQUEST 5-18:

Please provide the embedded cost SCE&G has associated with NND Project abandoned equipment.

RESPONSE 5-18:

The total costs incurred in connection with the NND project were \$4.73b. As of December 31, 2017, SCE&G recorded an impairment charge of \$.67b and transferred approximately \$86m of assets to Unit 1 and Transmission, leaving approximately \$3.975b to be reclassified and recorded as unrecovered costs of the abandoned plant. Under the terms of the EPC contract, the Consortium was responsible to provide cost breakdowns between equipment and other items at the conclusion of the project. Since the project has been abandoned, no such quantification has been provided.

Should SCE&G develop a method to estimate these costs, we will supplement our response accordingly.

Responsible person: Kevin Kochems

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REQUEST 5-19:

Please state how SCE&G's customers will benefit from SCE&G's transfer of abandonment equipment to Santee Cooper.

RESPONSE 5-19:

SCE&G has not transferred any abandoned equipment to Santee Cooper. Instead, SCE&G has informed Santee Cooper that it is willing to forebear from any claim against Santee Cooper with respect to any interest in the project facilities. By proceeding in this manner, SCE&G is seeking to preserve significant tax benefits that would be used to mitigate the effects of the abandonment of the construction project on SCE&G's customers.

Responsible Person: Chad Burgess

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DOCKET NO. 2017-370-E (5th Continuing AIR)**

REQUEST 5-20:

At the time of abandonment, there were still several open/ unresolved issues concerning the NND Project Switchyard. Please provide the list of design/material issues and the actions taken to resolve these issues. Please state if there are any existing warranty or ownership issues that must be settled.

RESPONSE 5-20:

Due to the failure of the 30nF capacitors in the NND Project Switchyard (VCS2), 15nF capacitors of a different design and capability were installed. The rating of the VCS2 Switchyard with the 15nF capacitors is 63kA. The open issue at the time of the abandonment was the installation of additional capacitors to reach an interrupting rating of 90kA needed for the addition of VCS Units 2 and 3. After the abandonment, the 63kA interrupting capability of VCS2 is adequate to handle the available fault current.

Responsible Person: Kelvin J Rogers Sr

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
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DOCKET NO. 2017-207-E (6th Continuing AIR)

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DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-21:

Paragraphs 71 and 72 of the Company's petition discusses the Westinghouse Bankruptcy and the \$1.2 billion Toshiba Corporation Guarantee Settlement Payment.

- a) Please describe the calculation, assumptions, etc, that led to the determination that \$1.2 billion would be paid as the Settlement Payment.
- b) What was the amount that the Company initially sought, and why did the Company ultimately agree to the Settlement amount?
- c) Please provide all analyses conducted, written reports, memos, reports, or documentation of any kind created in the evaluation and determination to move forward with monetizing the benefit of the Toshiba Settlement Payment. This should include an explanation or analysis of the Company's determination that it would be more beneficial to monetize the Toshiba Settlement Payment than to wait to receive the payments from Toshiba.
- d) Please provide a timeline and discuss the activities that took place within SCE&G between the time that the Toshiba Settlement Payment was agreed to, and when SCE&G sold all future payments to Citibank. Supply all correspondence to and from Citibank.
- e) Did the Company consider selling to any other party besides Citibank? If so to whom, and why did the Company ultimately decide on Citibank?

RESPONSE 5-21:

- a) Toshiba's initial position was that the EPC contract only called for them to pay \$1.673 billion (100%) or approximately \$0.920 billion (55%) to SCE&G. The \$1.673 billion represents the claim calculated as 25% of total construction costs paid by SCE&G and Santee Cooper ("the VC Summer Project Owners") as stated in the EPC in respect to the VC Summer New Nuclear Construction ("NND") Project as of Westinghouse's bankruptcy filing.

Through extensive negotiations, the settlement amount agreed to by both parties was increased to \$2.168 billion (100%) or approximately \$1.192 billion (55%) to SCE&G. The \$495 million increase (~30% improvement) from Toshiba's initial position was the result of lengthy negotiations using additional damages arguments asserted including interim project disbursements to Westinghouse post-bankruptcy filing and estimated mechanics' liens that were expected to be filed against the NND Project, among others.

- b) Toshiba's public position was that it owed \$1.673 billion (100%) to the VC Summer Project Owners. The VC Summer Project Owners' initial position to Toshiba was approximately \$3.0 billion based on an illustrative damage analyses. After extensive negotiations that spanned several months, the final amount agreed to was \$2.168 billion (100%).

SCE&G agreed to the Toshiba Settlement Payment of \$2.168 billion (100%) because it provided certainty in the form of a defined payment schedule from Toshiba.

Furthermore, the Settlement Payment was believed to be more attractive than the alternative of pursuing a protracted and expensive litigation against Toshiba to seek additional recovery above and beyond \$2.168 billion (100%) with an uncertain outcome.

- c) SCE&G objects to Request 5-21(c) on the basis that the information responsive to this request is protected by the attorney-client privilege. Notwithstanding the above-stated objection, SCE&G provides the response set forth below without waiving, but specifically reserving, its rights under its objection.

SCE&G determined that it was more beneficial to monetize the Settlement Payment in light of Toshiba credit risk:

"With Toshiba still facing challenges, we believe this was a crucial step to mitigate the risk and realize the value of these payments for the benefit of our customers," said SCANA Chairman and CEO, Kevin Marsh. "The guaranty settlement payments from Toshiba, as the parent company of Westinghouse, are payable due to the failure of Westinghouse to deliver on its fixed price commitment on our new nuclear project. This transaction allows us to ensure these payments are not subject to further credit risk. As we have consistently communicated, SCE&G intends to utilize the net value of these payments to mitigate the cost of the abandoned project to customers." (SCANA press release dated September 27, 2017)

This conclusion was supported by analysis of Toshiba credit risk as measured across several quantitative and qualitative metrics.

- d) The sale of the Toshiba Settlement Payment was structured, marketed, and negotiated by SCE&G and Santee Cooper's financial and legal advisors (the "Advisors"). Communication with Citibank during the sales process was handled by the Advisors.

After the Settlement Agreement was executed at the end of July 2017 and the continuation of monitoring of Toshiba credit risk, the Advisors began exploring alternatives that would provide the VC Summer Project Owners with increased certainty regarding their recovery under the Settlement Payment. Based on the level of unsolicited inbound interest that was received, it was concluded that an outright sale of the Settlement Payment was the most attractive alternative because it would allow the VC Summer Project Owners to mitigate Toshiba and other counter-party credit risk while at the same time, receive upfront cash proceeds in respect to the Settlement Payment.

The monetization process was structured to be robust, and designed to maximize value and provide certainty of an expedited closing:

- To maintain flexibility and maximize market participation, the transaction structure that was marketed accommodated both partial and whole bids of the Settlement Claim
- Over 100+ sophisticated, institutional accredited broker-dealers and credit investors were contacted during the marketing process

Given the Westinghouse bankruptcy, all of the information was publicly available – through a fulsome planning and documentation process, the transaction was completed in approximately one month.

- e) The VC Summer Project Owners' Advisors reached out to over 100 accredited investors in order to maximize market participation and interest.

More than a dozen initial binding bids were received, including five from broker-dealers (i.e. Citibank) that were bidding on the behalf on multiple accredited investor consortia.

Of the initial bids received, the VC Summer Project Owners' Advisors pursued further negotiations with a select number of bidders that submitted the highest priced, most actionable bids. The select bidders were encouraged to submit revised bids to further maximize value. After those multiple rounds of bidding, Citibank was chosen as the winning bidder because it provided the highest revised bid and the most competitive package for the VC Summer Project Owners.

Responsible persons: Chad Burgess (legal matters) and Christina Putnam

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
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DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-22:

RESPONSE 5-22:

There is no Request 5-22 so no response is needed.

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
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DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-23:

Provide Read Access to the NND Project CHAMPS Condition Report Database (including NND, Unit 2 and Unit 3) to view all in-process, approved, and closed Condition Reports for the NND project.

RESPONSE 5-23:

The information responsive to this request contains confidential and sensitive information. Due to the confidential and sensitive nature of the information requested, SCE&G will make the information responsive to this request available to ORS for review and inspection at SCE&G's administrative offices after the execution of a confidentiality agreement.

Responsible Person: Kyle Young

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
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DOCKET NO. 2017-207-E (6th Continuing AIR)

DOCKET NO. 2017-305-E (5th Continuing AIR)

DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-24:

Please identify (by name and title) the SCE&G construction experts that reviewed the 2015 construction schedule and found the schedule scope and sequencing to be logical and appropriate per Stephen Byrne's direct testimony (pg. 38, ln 17; Docket 2015-103-E).

RESPONSE 5-24:

Both SCE&G and Santee Cooper had their oversight team reviewing the schedule during the 3rd Quarter of 2014 after the Consortium presented major schedule changes. The SCE&G employees who spent significant time reviewing the schedule were:

Alan Torres – General Manager, Nuclear Plant Construction
Brad Stokes - General Manager, Nuclear Design Engineering
Rod Steffy - Manager, Nuclear Plant Startup
Kyle Young - Supervisor, Nuclear Construction
Ken Browne - Senior Engineer
Bernie Hydrick - Project Support Specialist
Jonathan Coleman - External Consultant, Project Controls

Responsible person: Kyle Young

**SOUTH CAROLINA ELECTRIC & GAS COMPANY
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DOCKET NO. 2017-370-E (5th Continuing AIR)**

REQUEST 5-25:

Please provide all documents provided to the United States Department of Justice, Federal Bureau of Investigation, Securities and Exchange Commission ("SEC"), South Carolina Law Enforcement Division, Office of the Attorney General for the State of South Carolina, and the South Carolina Department of Labor, Licensing and Regulation during 2017 and 2018 as a result of those entities' investigations into matters arising out of the NND project. Provide the documents in the same format as provided to the entities. SEC filings located on its EDGAR database and documents located on the Public Service Commission of South Carolina's website are excluded from this request.

RESPONSE 5-25:

SCE&G objects to Request No. 5-25 on the ground that it is overbroad and unduly burdensome because it seeks information that is neither relevant to the subject matter of this litigation, nor reasonably calculated to lead to the discovery of admissible evidence. SCE&G further objects to Request No. 5-25 on the ground that it is harassing and unduly burdensome to the extent that it is duplicative of other requests propounded by ORS.

Subject to and without waiving these specific objections, SCE&G will conduct a reasonable, good faith effort to search for, identify, and produce, on a schedule to be discussed with ORS's counsel, non-privileged documents only to the extent that they are relevant to the claims set forth in ORS's Request for Rate Relief and otherwise responsive to this request.

Responsible Person: Chad Burgess

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OFFICE OF REGULATORY STAFF'S CONTINUING
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DOCKET NO. 2017-207-E (6th Continuing AIR)

DOCKET NO. 2017-305-E (5th Continuing AIR)

DOCKET NO. 2017-370-E (5th Continuing AIR)

REQUEST 5-26:

This question seeks information related to analyses and case studies prior to the decision to abandon the NND Project.

- I. Please provide analyses and case studies showing the following scenarios:
 - i. Completing both Units 2 and 3 (referenced in paragraph 82 of the Merger Application). This case was previously made available to ORS in July 2017.
 - ii. Completing Unit 2 and abandoning or delaying Unit 3 (referenced in paragraphs 85-86 of the Merger Application).
 - iii. Completing Unit 2 and abandoning or delaying Unit 3 in the case that Santee Cooper did not pay its 45% share of the construction and operating costs (referenced in paragraph 90 of the Merger Application). If no economic analysis was performed, please explain how SCE&G determined this option would not be feasible or beneficial to customers.
 - iv. Completing both Units 2 and 3, as shown in Appendix 3 of Exhibit JML-2 to Joseph M. Lynch's direct testimony in Docket No. 2016-223-E ("Comparative Economic Analysis of Completing Nuclear Construction or Pursuing a Natural Gas Resource Strategy, July 1, 2016").
 - v. Completing both Units 2 and 3, as shown in Appendix 3 of the Corrected Version of Exhibit JML-1 to Joseph M. Lynch's direct testimony in Docket No. 2015-103-E ("Comparative Economic Analysis of Completing Nuclear Construction or Pursuing a Natural Gas Resource Strategy, May 26, 2015").
- II. For each of the analyses and case studies above, please provide the following data files in working Excel spreadsheets with all formulas intact, unless otherwise specified. Where the file was previously provided under Case I, the file name is provided.
 - i. Schedule of Year by Year Revenue Requirements from the Combined Base Load Review Act/Siting Act Application,

showing annual totals for nuclear construction and transmission projects (actual and forecasted). For Case I, this spreadsheet is named "Transmission-All Gas.xlsx".

- ii. Sunk Costs (i.e., Abandonment Costs), along with assumptions on recovery time period and rates of return for each option in the Joint Application and Petition. For Case I, this spreadsheet is named "Sunk Costs (062717.xlsx)".
- iii. Forecasted annual value of production tax credits, for VCS Units 2 & 3. For Case I, this spreadsheet is named "PTC Calc.xlsx."
- iv. Accumulated Deferred Income Tax (ADIT) for new nuclear development (NND) and alternative natural gas resources (CC). For Case I, those spreadsheets are named "aditNuclear_2016_00%.xlsx" and "aditcc_2016_00%.xlsx".
- v. Fixed charge rates for NND, CC, and future peaking resources. This should include debt and equity ratios and rates, recovery periods, tax and insurance rates, and nuclear decommissioning rates. For Case I, this was the "FCR-SCEG" sheet in the scenario spreadsheets described in (vii) below.
- vi. Construction, costs, including transmission, of CC and future peaking resources. For Case 1, this was the "Change.PLAN" sheet in the scenario spreadsheets described in (vii) below.
- vii. For each individual scenario considered, the annual production and capacity costs of the NND option and the CC option. This should include the results as extracted, and interpolated from both sets of PROSYM runs. For Case 1, these spreadsheets are named:

"2Nucs_GasNe_(carbon)CO_(gas)G.xlsm", where (carbon) and (gas) represent the scenario assumptions for carbon and natural gas prices.
- viii. All PROSYM input files, including control (*.ctl), load shapes (*.eei), and data (*.dat.) files.

RESPONSE 5-26

With respect to Request 5-26I(i) through (iii), SCE&G objects this request on the ground that the information responsive to this request is protected by the attorney-client privilege.

As for Request 5-26I(iv), please see Exhibit JML-2 at the following link:

<https://dms.psc.sc.gov/Attachments/Matter/5c0ba125-a47f-4d57-996e-7cdc09ba5d6f>

For the files responsive to Request 5-26I(iv), please see folder 5-26I(iv) on the attached compact disc.

As for Request 5-26I(v), please see Exhibit JML-1 at the following link:

<https://dms.psc.sc.gov/Attachments/Matter/d5d00f30-155d-141f-232b1fc66639f4a6>

For the files responsive to Request 5-26I(v), please see folder 5-26I(v) on the attached compact disc.

With respect to Request 5-26II(i) through (vii), SCE&G is in the process of conducting an extensive collection and review of its own documents and information which it anticipates completing by April 10, 2018. SC&EG states that it will supplement this response by producing responsive, non-privileged, non-work product documents in its possession.

Responsible persons: Chad Burgess (legal matters) and James Neely