

THE OFFICE OF REGULATORY STAFF

DIRECT TESTIMONY & EXHIBITS

OF

GARY C. JONES, P.E.

SEPTEMBER 24, 2018



DOCKET NO. 2017-370-E

Joint Application and Petition of South Carolina Electric & Gas Company and Dominion Energy, Incorporated for Review and Approval of a Proposed Business Combination between SCANA Corporation and Dominion Energy, Incorporated, as May be Required, and for a Prudency Determination Regarding the Abandonment of the V.C. Summer Units 2 and 3 Project and Associated Customer Benefits and Cost Recovery Plans

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GARY C. JONES, P.E.

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2017-370-E

**IN RE: JOINT APPLICATION AND PETITION OF SOUTH CAROLINA
ELECTRIC & GAS COMPANY AND DOMINION ENERGY,
INCORPORATED FOR REVIEW AND APPROVAL OF A PROPOSED
BUSINESS COMBINATION BETWEEN SCANA CORPORATION AND
DOMINION ENERGY, INCORPORATED, AS MAY BE REQUIRED, AND
FOR A PRUDENCY DETERMINATION REGARDING THE
ABANDONMENT OF THE V.C. SUMMER UNITS 2 & 3 PROJECT
AND ASSOCIATED CUSTOMER BENEFITS AND COST RECOVERY
PLANS**

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

A. My name is Gary C. Jones, P.E. I am President of Jones Partners, Ltd., a private consulting engineering firm in the electrical power generation field. My business address is 1555 North Astor Street, Apt. 22W, Chicago, Illinois, 60610-5765.

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I received a Bachelor of Science degree in Engineering Science from Tennessee Technological University in Cookeville, Tennessee, where I also participated in the Co-Operative Education Program with two one-year assignments at the Oak Ridge National Laboratory in Oak Ridge, Tennessee. I worked for thirty-two years at Sargent & Lundy, LLC, ("S&L") an international architect-engineering and consulting engineering firm in

1 the electric power industry based in Chicago, Illinois. I held engineering positions of
2 increasing levels of responsibility working on the design, procurement, licensing,
3 construction support and start-up of nuclear power plant projects, culminating in the
4 position as Senior Vice President and one of the owners of the firm for the final sixteen
5 years. I led the engineering activities associated with the design of six nuclear power plants
6 at three different power plant stations, including the LaSalle County and Braidwood plants
7 for Commonwealth Edison (now Exelon) and the Marble Hill station for Public Service
8 Indiana. I also led the engineering activities associated with the restarts of the LaSalle
9 County Station Units 1 and 2 and the D.C. Cook Plant after these plants were shut down
10 due to operation concerns. In addition to leading the engineering activities for the initial
11 designs and for the restarts above, I also led the engineering activities associated with
12 services to numerous other operating nuclear power plants, including modifications,
13 technical and economic studies, licensing support, procedure and process development and
14 other consulting services. For two years, I also served for two years as head of the
15 Mechanical Department at S&L.

16 Among the most significant assignments on international nuclear projects were
17 leading the design review of the first indigenous Chinese nuclear power plant, Qin Shan
18 Unit 1, and participating as a senior member in the design review of the Korean nuclear
19 power plants Yonggwang Units 3 and 4.

20 Upon my retirement from S&L, I established a private consulting practice, Jones
21 Partners, Ltd., where I continued working in the nuclear power industry for two and a half
22 years until I accepted a position at the International Atomic Energy Agency (“IAEA”) in

1 Vienna, Austria. There I was a Senior Engineering Safety Officer in the Engineering Safety
2 Section of the Department of Nuclear Safety and Security. My assignments included
3 developing international safety standards and performing safety reviews of nuclear power
4 plants. My most significant assignment with the IAEA was leading the safety review of the
5 fifteen operating nuclear power plants in the Ukraine.

6 Following the completion of my assignment at the IAEA in 2008, I returned to
7 private consulting in the power industry and continue that work today. I am a licensed
8 professional engineer in the States of Missouri and South Carolina. Additional details of
9 my work experience are provided in my resume which I have included as Exhibit GCJ-1.

10 **Q. WHAT IS THE NATURE OF YOUR BUSINESS?**

11 **A.** As a consultant, I provide professional engineering and consulting services to
12 clients in the electric power industry.

13 **Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE THE PUBLIC SERVICE**
14 **COMMISSION OF SOUTH CAROLINA (“COMMISSION” or “PSC”)?**

15 **A.** Yes. I provided written and oral testimony associated with Docket Nos. 2012-203-
16 E and 2016-223-E to update the schedule and budget for the construction of V.C. Summer
17 Units 2 & 3 (“the Units” or “the Project”). I also presented allowable ex parte briefings to
18 update the Commission on the construction status of Units.

19 **Q. WHAT IS YOUR ASSIGNMENT FROM THE SOUTH CAROLINA OFFICE OF**
20 **REGULATORY STAFF (“ORS”)?**

21 **A.** My assignment is to assist ORS in monitoring and tracking of the construction
22 schedule and budget related to SCE&G’s construction of the Units. I began my assignment
23 with ORS in August 2011.

1 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

2 **A.** The primary purpose of my testimony is to address the prudence of the costs
3 incurred by South Carolina Electric & Gas Company (“SCE&G” or the “Company”)
4 during the construction of the Project until the time the abandonment decision was made
5 on July 31, 2017. Based upon my experience in monitoring the Project and after my review
6 of the documents made available during discovery, I have concluded that Project costs
7 incurred after March 12, 2015 (the date of the filing by SCE&G of Petition 2015-103-E)
8 were imprudent and should be disallowed by the PSC as a basis for recovery due to
9 abandonment by SCE&G in this petition. The specific amount of this disallowance and the
10 amount that ORS is recommending that SCE&G should be allowed to recover under the
11 Base Load Review Act (“BLRA”) abandonment provisions are provided in the written
12 direct testimony of ORS witness Mr. Lane Kollen.

13 In addition, the revised rates increases granted under Order Nos. 2015-712 and
14 2016-758 associated with these imprudent cost increases and schedule changes should be
15 immediately rolled back and the collections by SCE&G should not only stop but the
16 amounts already collected for these revised rates increases should also be refunded or
17 credited to the retail customers as soon as possible. The specific amounts associated with
18 these revised rates increases and the ORS recommendations for implementing these
19 provisions are also addressed in Mr. Kollen’s testimony.

20 The statutory basis of the ORS assessment is described in the direct testimony of
21 ORS witness Mr. Anthony James. Using the guidance set forth in these statutes, the result
22 of my assessment is that SCE&G deliberately and repeatedly misled the PSC and ORS by
23 withholding key information on the projected construction schedule. The Company’s

1 actions to withhold this information resulted in the approval of revised Project construction
2 schedules and budget increases that would likely not have been approved had this
3 information been properly disclosed and evaluated by the PSC and ORS. This means that
4 “the evidence of record” required by the statute to be provided by SCE&G was incomplete,
5 omitted and misleading, and SCE&G used deception to obtain PSC approval of erroneous
6 schedules and cost estimates.

7 In addition, I will address the following related areas:

- 8 a) The prudence of the SCE&G decision to abandon the Project;
- 9 b) The prudence of SCE&G’s decision to monetize the Toshiba settlement in
10 lieu of accepting the originally proposed long-term payout;
- 11 c) The associated transmission system costs;
- 12 d) The transfers of certain originally shared facilities and assets to V.C.
13 Summer Unit 1; and
- 14 e) Whether SCE&G properly managed the Project.

15 I have included a timeline as Exhibit GCJ-2 which provides the context of the
16 regulatory and major Project events which are referenced in my testimony. In addition, the
17 timeline includes numerical references to salient correspondence and documents that
18 provide additional insight to support my assessment. These are included as Exhibit GCJ-
19 2.1 through Exhibit GCJ-2.76. Not all these documents are directly referenced in my
20 testimony; however, they are included to provide context and continuity to further support
21 the basis for my testimony.

22 **Q. PLEASE PROVIDE SOME BACKGROUND ON THE PROJECT PRIOR TO**
23 **MARCH 12, 2015.**

1 **A.** At the time this Project began, there was a resurgence of interest in nuclear power
2 in the United States. In fact, a “nuclear renaissance” was widely promoted and several
3 nuclear projects were slated for construction and under review by the Nuclear Regulatory
4 Commission (“NRC”). The Westinghouse Electric Company (“WEC” or “Westinghouse”)
5 AP-1000 was hailed as a major break-through in new nuclear plant technology with its
6 passive safety features and modular construction design. The similar smaller AP-600 had
7 already completed its design certification review with the NRC, and the AP-1000 was
8 believed to be a simple extension of this design that would require minimal additional
9 review by the NRC. Nuclear plant construction schedules in Asia had been reduced and
10 the use of modular construction had been a major contributor to successfully completing
11 several projects in five years or less from first nuclear concrete pour to power operation.
12 The new NRC regime of the combined construction/operating license (“COL”) under 10
13 C.F.R., Part 52 was touted as a significant improvement in removing the risk of licensing
14 delay which had plagued the previous generation of US nuclear plants, causing delays and
15 huge cost increases.

16 In addition, the Engineer-Procure-Construct (“EPC”) contract offered by the
17 WEC/The Shaw Group (“Shaw”) consortium appeared to offer an economic and risk-
18 reducing approach to new nuclear plant construction. The design was supposedly
19 essentially complete and the world-wide supply chain ready and able to produce scores of
20 these new innovative nuclear plants. The United States was poised to take a leadership role
21 in nuclear technology and performance. Unfortunately, this is not how it turned out.

22 The Project was beset by unexpected problems and delays from the beginning.
23 Many of these problems are delineated in the May 6, 2014 joint letter from SCE&G’s and

1 the South Carolina Public Service Authority's ("Santee Cooper") (known collectively
2 hereinafter as "Owners") CEOs Kevin Marsh and Lonnie Carter to the Consortium CEOs
3 Philip Asherman and Danny Roderick (Exhibit GCJ-2.10). The COL issuance was delayed
4 by nine months and was not issued until March 30, 2012, versus the originally scheduled
5 July 1, 2011. The start of the first nuclear concrete pour of the Nuclear Island ("NI")
6 foundation on Unit 2 occurred on March 9, 2013 rather than the scheduled date of August
7 24, 2012. This date was significant because it marked the start date of NI construction and
8 the time when critical path construction activities could begin. Any problems with
9 equipment or component delays or failure to meet construction schedules after the start of
10 NI construction would potentially be impactful on the completion date of the Units.

11 Also, the WEC design was not as complete as advertised and had not been properly
12 reviewed for constructability by the Consortium or SCE&G. The module fabrication
13 facilities promoted by Shaw to be state-of-the-art industrial complexes failed to achieve
14 both quality and productivity, resulting in significant Project delays. The new licensing
15 regime proved to be as obstructive and intrusive as the old, if not more so, engendering
16 delays and increasing costs. The EPC contracting approach appeared to be driven more by
17 cost reduction concerns than by quality and productivity and created deep animosity among
18 the Consortium partners and the Owners.

19 Among the most important and most potentially impactful events that occurred on
20 the Project are the changes in the Consortium partners responsible for construction. The
21 first of these changes occurred in July 2012 when Chicago Bridge & Iron ("CB&I")
22 announced their intention to acquire Shaw and assume the construction contractor's role in
23 the Project Consortium. This change was formalized on February 13, 2013 when CB&I

1 announced the final purchase of Shaw; however, CB&I had actually assumed construction
2 responsibility for the Project in 4Q2012. This was viewed optimistically by all in the
3 industry and on the Project because CB&I had an outstanding reputation in the industry as
4 a dependable and high-performing fabrication contractor and were already performing well
5 on the Project. Although they had limited experience as a nuclear plant constructor, it was
6 generally believed that they represented a vast improvement over Shaw and that
7 construction progress and productivity would greatly improve under their management.
8 Unfortunately, this would not prove to be the case.

9 Each of these challenges had potentially workable solutions and mitigating
10 approaches which were pursued and implemented at varying levels and with limited
11 success. The potential solutions proposed at the time appeared to provide a viable path
12 forward that would result in a successful and economical project which would have
13 benefitted the utility and SCE&G ratepayers. These issues and their solutions were
14 reviewed by ORS in conjunction with SCE&G and were addressed in testimony provided
15 to the PSC. At the time, none of these concerns were so severe as to have required a halt
16 to construction of the Project or an immediate abandonment. I asserted then and continue
17 to maintain based on the available record reviewed thus far that the actions taken by
18 SCE&G appear to have been reasonable based on the best information available at the
19 time. However, it is possible that on-going discovery including upcoming depositions may
20 yield additional information that could alter my opinions.

21 **Q. HAS SCE&G'S DISCLOSURE AND PARTICIPATION IN DISCOVERY IN THIS**
22 **PROCEEDING AFFECTED YOUR TESTIMONY?**

1 **A.** Yes. SCE&G’s delays in providing ORS with requested information and/or refusal
2 to provide requested information prevents me from being able to opine with any certainty
3 regarding the prudence of SCE&G’s conduct prior to March 12, 2015.

4 However, the information of which I am aware that was available to or known by
5 the Consortium prior to March 12, 2015 suggests that members of the Consortium knew or
6 should have known the Project was in jeopardy and should have been thoroughly reviewed
7 relative to factors contributing to significant and increasing delays in construction and
8 budget and cost overruns and that a revised resource-loaded fully integrated schedule
9 should be developed and implemented. The record available to ORS as of this date does
10 not include a complete set of internal correspondence and documentation among and
11 between the Consortium members. It is possible additional evidence might establish that
12 information on extended schedule delays and significant cost increases were known far
13 sooner to the Consortium members.

14 Such evidence would be significant regarding any prudence determination in these
15 proceedings, particularly since under Act 258 the prudence of the Consortium’s actions are
16 attributable to SCE&G. In summary, although my testimony is based on the information
17 available to and reviewed to date, it is possible that additional pertinent information may
18 become available in the future that would affect my opinions.

19 **Q. WHY SHOULD SCE&G BE RESPONSIBLE FOR ALL COSTS INCURRED**
20 **FROM MARCH 12, 2015 UNTIL ABANDONMENT?**

21 **A.** There are two main reasons that SCE&G should be responsible for all costs incurred
22 from March 12, 2015 until abandonment. The first reason is that SCE&G was aware in
23 early 2014 that the Project needed an independent comprehensive assessment of the

1 construction status, schedule and budget and had begun planning for such an assessment
2 but withheld these plans from the PSC and ORS. The status reporting from the Consortium
3 had grown increasingly unreliable and the validity of their schedule and cost estimates were
4 seriously flawed and suspect. The importance of having an integrated resource-loaded
5 construction schedule on a project of this size and scope cannot be over emphasized. The
6 schedule drives all work activities and planning. It enables managers to determine the
7 critical areas that need additional resources and focus. Because construction activities
8 represent to largest component of a nuclear power plant's costs, the schedule is the most
9 important input to determining the cost of the plant. Having a realistic and properly
10 developed project schedule is the single most important management tool for project
11 success.

12 The second reason is that the SCE&G March 12, 2015 filing under Docket No.
13 2015-103-E was seriously deficient and presented unsubstantiated, misleading and baseless
14 estimates of the revised Project construction schedule and costs. Each of these reasons will
15 be more fully addressed in my testimony below.

16 **Q. PLEASE EXPLAIN THE IMPORTANCE OF THE INDEPENDENT**
17 **ASSESSMENT AND ITS POTENTIAL IMPACTS ON THE DECISIONS MADE**
18 **BY THE PSC RELATED TO THE PROJECT.**

19 **A.** As can be seen in Exhibit GCJ-2.9, Mr. Marsh began discussions in May 2014 that
20 the Owners should engage an outside expert to assist with the management of the EPC
21 contract. Furthermore, in Mr. Marsh's September 3, 2014 e-mail to Mr. Carter (Exhibit
22 GCJ-2.17), he indicated he was ready to engage an outside expert to assist with the schedule
23 and Project status. In a January 28, 2015 meeting Messrs. Carter and Crosby of Santee

1 Cooper initiated discussions with the Bechtel Power Corporation (“Bechtel”) to prepare a
2 proposal for the project assessment (Exhibit GCJ-2.19) and received Bechtel’s preliminary
3 proposal via an e-mail on February 5, 2015 (Exhibit GCJ-2.20). The PSC and ORS should
4 have been advised at this time of SCE&G’s intent to have an outside expert review the cost
5 and schedule. Failure to do so constituted an unacceptable withholding of material
6 information on SCE&G’s part.

7 Knowledge of this pending assessment would more than likely resulted in a
8 postponement of the review of SCE&G’s March 12, 2015 filing until the review was
9 completed and results were available, especially in light of the unusual and premature
10 nature of the filing as discussed later in my testimony. It most certainly would have been
11 my recommendation to do so.

12 Despite waiving legal arguments in this proceeding, SCE&G justified their decision
13 to withhold the results of the Bechtel assessment and the Bechtel Report from the PSC and
14 ORS on the basis that the assessment and report were privileged and confidential and
15 undertaken in preparation for litigation. However, these legal arguments do not withstand
16 scrutiny in light of the disclosures¹ that have only recently become available as a result of
17 (a) discovery in this proceeding², including the complete waiver of all claimed protections
18 by SCE&G in its June 11, 2018 filing with the PSC, (b) the Governor’s direction to Santee
19 Cooper to release the report and related documents (Exhibit GCJ-2.76), and (c) PSC orders

¹ See Exhibit GCJ-11.

² The Governor directed Santee Cooper to provide ORS with access to information provided to the Office of the Governor which was provided to third parties and made available to the Governor pursuant to his October 2, 2017 letter on March 31, 2018. It should be noted that the most revealing documents have been provided by Santee Cooper and demonstrates that SCE&G refused to make full disclosures even after being ordered by the PSC. See Exhibit GCJ-10.

1 requiring disclosure. It is also puzzling as to why SCE&G continued to claim these legal
2 arguments and withhold the Bechtel Report until the above described recent actions were
3 implemented when subsequent EPC contractual agreements with the Consortium in
4 October 2015 expressly prohibited litigation. This certainly precludes the need to keep the
5 results from ORS after the October 22, 2015 Bechtel presentation (Exhibit GCJ-2.37).³

6 **Q. WHY WAS SCE&G'S MARCH 12, 2015 FILING WITH THE PSC UNIQUE?**

7 **A.** The March 12, 2015 filing was the first time the new WEC/CB&I Consortium
8 regime presented a revised schedule and budget to the PSC and it was unusual because
9 ORS had a difficult time reconciling this filing with previous revised schedule and budget
10 filings. The ORS issues with this filing were addressed in ORS witness Mr. Anthony
11 James's written testimony, dated June 29, 2015 and in his oral testimony before the PSC
12 on July 22, 2015. Most significantly, in all previous filings SCE&G had always presented
13 approved or accepted contract change orders as the basis for their cost changes associated
14 with the EPC contract. In this filing, almost all the major changes were based on a revised
15 Estimate at Completion prepared by the Consortium that had not been approved by an EPC
16 contract change order and the additional change orders identified by SCE&G were
17 unapproved estimates, many of which had been prepared solely by SCE&G with little or
18 no input from the EPC Consortium. ORS asserted the filing was unprecedented and
19 premature and questioned why SCE&G was filing a budget increase request with such
20 limited and unapproved information available. SCE&G insisted that the BLRA required
21 that a request for change be filed if the 18-month grace period for any of the BLRA

³ The basis for the Bechtel Report and associated documentation not being privileged information was provided in ORS Motion to Compel Discovery Responses dated May 23, 2018.

1 milestones was going to be exceeded and that the BLRA did not require approved change
2 orders and allowed cost increases and schedule changes to be based on estimates. In the
3 end, ORS assented to this interpretation as part of the negotiated settlement agreement
4 because the BLRA left no real alternative.

5 The other unusual aspect of this filing was that in all previous cases, the substantial
6 completion dates in the EPC contract and those being sought in the filing agreed. In this
7 case they did not. Mr. James addressed this issue in his written and oral testimony as
8 previously referenced. SCE&G indicated in their testimony that they intended to hold the
9 Consortium to the guaranteed substantial completion dates of March 15, 2017 for Unit 2
10 and May 15, 2018 for Unit 3, as stipulated in Order No. 2012-884 and in the revised EPC
11 contract but were seeking to modify the construction schedule proposed to the Commission
12 to be June 19, 2019 for Unit 2 and June 16, 2020 for Unit 3. It now appears that there may
13 have been an additional reason for not including these revised completion dates in the EPC
14 contract.

15 **Q. PLEASE EXPLAIN HOW THE NARRATIVE PRESENTED TO THE PSC IN 2015**
16 **DIFFERED FROM CORRESPONDENCE BETWEEN THE OWNERS.**

17 **A.** Substantial evidence demonstrates that SCE&G's testimony (see Mr. Stephen
18 Byrne's direct written testimony, pages 36 - 39) related to the construction schedule
19 proposed in the March 12, 2015 filing presented a "revised, fully-integrated construction
20 schedule" which was not true. The, then SCANA CEO, Mr. Kevin Marsh identified the
21 tentative and preliminary nature of this schedule in a September 3, 2014 e-mail to Mr.
22 Lonnie Carter of the South Carolina Public Service Authority ("Santee Cooper") (Exhibit
23 GCJ-3). Mr. Carter's September 8, 2014 response (Exhibit GCJ-4) is even more telling in

1 that he stated "... my sense is that neither the Owners nor the Consortium have any real
2 confidence that the proposed rollout schedule that the Consortium shared with the Owners
3 on August 1st is achievable. I am concerned that we have become tied to artificial dates,
4 both past and future, often driven by disclosure considerations." SCE&G continued
5 negotiating to no avail with the Consortium about the discrepancies in the schedule. Even
6 though SCE&G did not believe the values provided by the Consortium, SCE&G submitted
7 the inconsistent and unreliable cost and construction schedules for the March 12, 2015
8 filing with the PSC.

9 In the July 24, 2015 corrected direct written testimony of Mr. Kevin Marsh on page
10 42, under item 3, he acknowledged the lack of confidence in the proposed cost and schedule
11 estimates and clearly established the reason for SCE&G's premature filing by stating: "If
12 SCE&G foregoes adjusting its cost and construction schedules, it foregoes including these
13 costs in revised rates filings. Without revised rates, SCE&G loses revenue that is required
14 to support the debt the company plans to issue in coming years and to support common
15 stock." In retrospect, and with the benefit of my review of documents SCE&G previously
16 concealed, I conclude that SCE&G itself did not believe the cost and schedule it submitted
17 to the PSC, but rather only sought the approval of those revisions as a means to gain a rate
18 increase.

19 It is also of interest to note that Mr. Marsh assured ORS that SCE&G planned to
20 return to the PSC with cost savings they expected to achieve once negotiations with the
21 Consortium were completed. These savings would supposedly reduce the overall Project
22 costs (see Exhibit GCJ-5).

1 As further evidence of the dubious nature of the revised cost and schedule presented
2 to the PSC in this filing, although SCE&G had repeatedly indicated since early summer
3 2013 it intended to provide the revised fully integrated construction schedule to ORS, they
4 had not done so as of the date of the filing, and in fact never did. ORS was advised by
5 SCE&G that the schedule required additional adjustments to reflect additional mitigation
6 activities and on-going developments before it could be provided. Although ORS was not
7 provided with the complete schedule, it continued to pursue SCE&G to provide a complete
8 fully integrated project schedule. Then, in the September 22 and 23, 2015 Monthly Status
9 Meetings, SCE&G advised that the Consortium had not provided an update to the Project
10 schedule at all, and therefore no update could be provided to ORS. I have concluded that
11 this continued withholding of the schedule was a deliberate attempt by SCE&G to mislead
12 the PSC and ORS about the true completion dates of the Project and to provide new dates
13 for the sole purpose of gaining approval of subsequent revised rates increase
14 (approximately \$65 million) that followed once the revised substantial completion dates
15 and associated BLRA milestone schedule were approved by the PSC.

16 A critical reading of SCE&G's 2015 testimony supports that its witnesses did not
17 even believe that the completion dates provided by the Consortium were reliable. Mr.
18 Byrne acknowledges that to achieve these dates, the Consortium would have to achieve
19 huge improvements in productivity and establish production rates they had never achieved
20 or even come near achieving. Mr. Byrne acknowledged this on page 39 of his 2015
21 testimony when he stated that "WEC/CB&I has set itself a significant challenge as to future
22 productivity." He also states that "SCE&G has no basis or interest in insisting that
23 WEC/CB&I should use less challenging assumptions." This further supports the ORS

1 contention that a prudent approach would have been to await the results of the independent
2 assessment that had been planned to be performed by Bechtel, rather than to file premature
3 and unreliable changes to the Project cost and schedule. It now appears that SCE&G did
4 not prioritize a realistic and meaningful construction schedule over the promotion of an
5 unrealistic and questionably based schedule solely to gain an increase in its rates.

6 **Q. PLEASE EXPLAIN THE IMPORTANCE OF EXHIBIT GCJ-2.17.B.**

7 **A.** Another intriguing episode is referenced in Exhibit GCJ-2.17.B in the notes of the
8 October 13, 2014, “Rebaselined Schedule/EAC – Meeting # 1.” The attendees at this
9 meeting were identified as senior executives from SCANA/SCE&G, Santee Cooper, WEC
10 and CB&I. The notes indicate that, “Kevin has Carlette working up the \$6.0B project cap
11 numbers...but the following chart is another attempt at the calculation while we wait on
12 Carlette.” It is also later stated, “It will be interesting to see Carlette’s analysis.” ORS
13 agrees that it will be very interesting to see “Carlette’s analysis.” Despite repeated requests
14 from ORS, SCE&G has thus far failed to provide this analysis. As has been reported in the
15 news media with regard to Ms. Walker’s testimony, her analysis was not received favorably
16 by SCE&G executives and was not utilized as the basis for the filing with the PSC. Once
17 this analysis is reviewed, it may form the basis for my amended testimony.

18 With the evidence currently available, the March 12, 2015 filing is the first time I
19 can document that SCE&G did not engage in a good faith effort to provide a properly vetted
20 and documented construction schedule and cost estimate for the Project to the PSC and
21 ORS. The filing appears to have been prepared and submitted with the sole purpose of
22 obtaining approval of an undeserved and premature rate increase while SCE&G was
23 simultaneously instituting an assessment to determine whether the costs and schedule it

1 was submitting had any merit. Therefore, I recommend all costs incurred from this point
2 forward to be excluded from recovery.

3 **Q. WERE THERE OTHER INSTANCES WHEN SCE&G MISLED THE PSC AND**
4 **ORS?**

5 **A.** Yes. On October 27, 2015, just over a month after the PSC issued Order No. 2015-
6 661 (Exhibit GCJ-2.34) dated September 10, 2015, approving the SCE&G petition 2015-
7 103-E as modified by the settlement agreement approved by the PSC (Exhibit GCJ-2.33)
8 on September 2, 2015, SCE&G signed an Agreement with Westinghouse significantly
9 revising the EPC contract for the Project (Exhibit GCJ-2.38). This revised contract added
10 two months to the scheduled completion dates of each unit (Unit 2 completion was August
11 31, 2019 and Unit 3 completion was August 31, 2020) and increased the costs by \$137.5
12 million. There were several other significant changes, including the withdrawal of CB&I
13 from the Consortium with their interest transferred to Westinghouse who became the sole
14 contractor responsible for the Project and the addition of Fluor Corporation as a
15 construction subcontractor reporting directly to Westinghouse. With such high costs at
16 stake, it seems likely that negotiations resulting in this revised contract must have been on-
17 going for some time, although ORS was not advised that these negotiations were underway.
18 Such a massive change would have warranted reconsideration of SCE&G's petition and
19 SCE&G's failure to inform the PSC of the potential agreement that would affect the
20 pending petition indicates further that SCE&G valued the increased revenue from revised
21 rates over candor to the PSC.

22 In addition to the questionable validity of the construction schedule developed to
23 support the 2015-103-E filing, it is now even harder to believe that any substantive effort

1 was exerted by WEC, CB&I or SCE&G in revising the construction schedule and
2 developing the new substantial completion dates put forth in the Agreement. The
3 deterioration in the relationship between CB&I and was palpable on the Project site and
4 manifested itself in open animosity, arguments and disagreements at Project meetings and
5 correspondence. CB&I desperately wanted off the Project and to exit the nuclear
6 construction sector and had so advised SCE&G. They had no interest in expending time
7 and effort in developing an accurate revised construction schedule for the Project.

8 I have not found any record that indicates a substantive basis for or any analysis
9 that supports these revised dates of August 31, 2019 for Unit 2 and August 31, 2020 for
10 Unit 3. Again, I now believe this revised schedule was merely a place-holder to get a new
11 construction contractor engaged, to provide unsubstantiated dates that still met the
12 requirements for receiving the federal tax credits and to preserve SCE&G's position for
13 another rate increase. This same opinion was expressed by the CEO of Santee Cooper Mr.
14 Lonnie Carter in his October 21, 2015 memorandum to the Santee Cooper Board of
15 Directors (Exhibit GCJ-2.36.A) in which he states, "Throughout our negotiations, Santee
16 Cooper's top priority has been getting the project on a credible and maintainable schedule,
17 with future payment for work tied to that schedule. For SCANA, the top priority has been
18 fixing the price, and doing so at a level they could convince the PSC to approve."

19 **Q. PLEASE EXPLAIN THE POTENTIAL IMPACT OF THE BECHTEL SCHEDULE**
20 **ASSESSMENT.**

21 **A.** SCE&G's concealment continued as evidenced by the recently revealed
22 information that Bechtel had just completed their assessment of the Project and had
23 presented their findings and recommendations to the SCANA/SCE&G and Santee Cooper

1 executives at a meeting on October 22, 2015 (Exhibit GCJ-2.37). The Bechtel assessment
2 had formally begun on August 10, 2015 and a preliminary report had been submitted to
3 Michael Crosby on or about October 14, 2015. As stated by Mr. Crosby in his October 14,
4 2015 e-mail to Mr. Lonnie Carter, "...projection on the commercial operation dates is
5 sobering." (Exhibit GCJ-2.36). These dates provided at the October 22, 2015 meeting and
6 in a draft of the Bechtel Report, dated November 9, 2015 (Exhibit GCJ-2.40) are excerpted
7 from page 1 of the Executive Summary of the Report and presented in the table below:

8 **Impacts on Commercial Operation Dates**

	Unit 2	Unit 3
Current COD ⁴	June 2019	June 2020
Adjustment	18 to 26 months	24 to 36 months
New COD	Dec 2020 to Aug 2021	June 2022 to June 2023

9
10 **Q. PLEASE EXPLAIN WHEN YOU WERE PROVIDED AN OPPORTUNITY TO**
11 **REVIEW THE BECHTEL ASSESSMENT.**

12 **A.** Several points need to be made about the continued concealment of the Bechtel
13 Report and the above dates. The first important consideration is that these dates and all
14 discussion of the Project construction schedule were removed from the narrative portion of
15 the subsequent Bechtel Report which was issued on February 5, 2016 (Exhibit GCJ-2.46)
16 after extensive discussions between Bechtel and the Owners and were issued in a separate
17 Bechtel Report entitled "Bechtel Schedule Assessment Report, dated February 5, 2016

⁴ The term Commercial Operation Dates ("COD") as used by Bechtel in this context is synonymous with the term Substantial Completion Dates ("SCD").

1 (Exhibit GCJ-2.46.A). I saw Exhibit GCJ-2.46.A for the first time on August 14, 2018,
2 after repeated discovery requests were finally answered by SCE&G. SCE&G claims that
3 they never saw the November 9, 2015 version of the Report, and thus far, the information
4 made available to ORS seems to support this assertion, although it is very difficult to
5 understand why SCE&G as the principal client of the attorney who administered the
6 Bechtel contract would not have seen this earlier draft. Also, it is apparent from the
7 statements made in the February 4, 2016 teleconference memorandum of Mr. Ty Troutman
8 of Bechtel (Exhibit GCJ-2.42) that in mid-December 2015 Mr. Stephen Byrne was very
9 familiar with the details of the November 9, 2015 Bechtel Report.

10 It is clear that SCE&G did see these same dates at the October 22, 2015 meeting.
11 These same dates were also included in the separate schedule assessment report. ORS
12 views the deletion of these dates and discussion of the construction schedule from the
13 Report as a direct attempt to misrepresent and to hide relevant and significant information
14 from disclosure to the PSC and ORS.

15 Until the February 5, 2016 version of the Report was released to the public by the
16 Governor in September 2017, I had not seen the Report and I had not seen the separate
17 Report addressing schedule until August 14, 2018. The existence of the November 9, 2015
18 version was not made known to me until October 18, 2017.

19 **Q. IN 2015, DID ORS INQUIRE ABOUT THE WORK PERFORMED BY BECHTEL?**

20 **A.** Yes. Remarkably, SCE&G continued to hide the results of the Bechtel assessment
21 even after ORS made inquiries about it based on clues that some sort of assessment had
22 occurred. ORS became aware that Bechtel had evidently performed some sort of review
23 through its participation the Plan-of-the-Day (“PoD”) Meetings as part of on-going

1 monitoring of the Project. A person unknown to ORS stood at an October 15, 2015 PoD
2 meeting, and thanked SCE&G personnel for all their good cooperation and support during
3 the assessment that had just been completed. The individual then donned a Bechtel hardhat
4 which was noted by the ORS representative present at the PoD meeting. This prompted an
5 ORS question at the October 27-28, 2015 regular monthly construction meetings regarding
6 the Bechtel assessment (see agenda item VI.d on page 5 on Exhibit GCJ-6). I was informed
7 at the meeting that Bechtel's scope and findings were unknown to those present, that the
8 assessment had been performed under the direction of upper level executives and would
9 not be available to those present or ORS and that no written report existed. In subsequent
10 conversations with other SCE&G senior managers, I was told that nothing new was found
11 by Bechtel during their assessment and that I was already aware of all the issues which
12 they had identified. No mention was made of the Bechtel schedule assessment, the
13 recommendations made in the Report, or the scope and extent of the assessment.

14 I believe that the sole purpose of these verbal responses to ORS's inquiries was to
15 mislead ORS and hamper it in performing its statutory duty of monitoring the cost and
16 schedule of the Project. While the final Report may not have been available, we now know
17 there were weekly written reports that Bechtel had prepared and submitted to SCE&G.
18 These weekly reports addressed progress, findings and recommendations and certainly
19 would have been a valuable resource to the ORS in the performance of its duties. These
20 weekly reports were appended to the final Bechtel Report. It is of some interest to note that
21 even though the final Report deleted all narrative regarding the schedule assessment, there
22 was a detailed description in the appended weekly reports of the process Bechtel utilized
23 in developing their schedule assessment.

1 **Q. ARE THE PROJECTED COMPLETION DATES CONTAINED IN THE**
2 **BECHTEL REPORT IMPORTANT?**

3 **A.** Yes. The Bechtel projected completion dates were a better approximation than
4 anything developed by WEC and are more in agreement with the dates that SCE&G
5 ultimately developed as part of their assessment of completing the Project on their own
6 during the so-called Interim Assessment period following the Westinghouse bankruptcy
7 that was announced on March 29, 2017. These dates are provided in the table below:

	Unit 2	Unit 3
WEC Completion Dates	August 31, 2019	August 31, 2020
Bechtel Completion Dates	Dec 2020 to Aug 2021	June 2022 to June 2023
SCE&G Completion Dates ⁵	December 31, 2022	March 31, 2024

8
9 SCE&G attempted to discredit the Bechtel schedule assessment and denigrate it as
10 a basis for deleting it from the report. However, it appears that Bechtel’s assessment was a
11 much more reasonable estimate of the true schedule for Project completion than the WEC
12 assessment. Bechtel’s schedule assessment has been portrayed by SCE&G as a “guess;”
13 however, it was a much better estimate than the unsubstantiated and misleading estimate
14 that was provided in the October 27, 2015 Amendment to the EPC. One can also easily see
15 from a cursory review of Exhibit GCJ-2.46.A that there was a substantive basis for
16 Bechtel’s estimate and a rigorous methodology employed to determine the completion

⁵ SCE&G Filing in Civil Action No. 3:18-cv-1795-JMC, “Verified Complaint for Declaratory Judgement and Temporary, Preliminary and Permanent Injunctive Relief”, dated June 29, 2018, page 30, Line 152 (See Exhibit GCJ-7).

1 dates based on their extensive nuclear power plant construction experience even though
2 they received inadequate support and limited cooperation from WEC during their
3 assessment.

4 SCE&G accepted the Westinghouse fixed price offer on May 26, 2016 and filed a
5 petition with the PSC in Docket No. 2016-223-E which contained the August 31, 2019 and
6 August 31, 2020 completion dates as the basis for the cost increases and construction
7 schedule changes. This filing was clearly made after the final Bechtel Reports dated
8 February 5, 2016 had been provided to SCE&G. However, SCE&G completely discounted
9 the Bechtel schedule analysis and again withheld from the PSC and ORS the Bechtel
10 assessment of the schedule. This information would certainly have been material to the
11 PSC's review of the filing.

12 **Q. WHY IS THE BECHTEL ASSESSMENT AND REPORT SO IMPORTANT TO**
13 **THIS FILING?**

14 **A.** The Bechtel assessment represented the only other independent evaluation of the
15 Project of which the ORS has been made aware. This is important because each of the other
16 participants involved in reviewing the progress of the Project and developing a construction
17 schedule for the Project had a vested interest in presenting an optimistic view of both the
18 progress and the completion dates. Bechtel's assessment represented a comprehensive
19 approximately two-month review by fourteen (14) highly qualified and experienced
20 nuclear professionals, representing over 500 years of total experience and over 300 years
21 of EPC experience on over 85 projects. Such an independent assessment would have been
22 very valuable to the ORS in performing its monitoring duties and in preparing its
23 recommendations to the PSC, and valuable to the PSC in making its decisions.

1 Bechtel is one of the premier global companies in the nuclear industry. They have
2 been the lead construction contractor on more than forty (40) new nuclear power generation
3 plants representing over 74,000 MW of electrical generation capacity and have provided
4 engineering and/or construction services work on 80% of the US nuclear plants and on
5 over 150 nuclear plants world-wide. They have an unmatched reputation in nuclear plant
6 expertise and qualifications. It certainly would have been worthwhile for the PSC and ORS
7 to know their findings and recommendations and even more importantly their assessment
8 of the construction schedule as part of the review of SCE&G's filings in Docket Nos. 2015-
9 103-E and 2016-223-E. This would have been a major factor in assessing the construction
10 schedule and Project cost and could have significantly changed the outcome in each of
11 these cases. It would have been a valuable validation to know that a prestigious group of
12 nuclear experts had identified similar issues.

13 It is important to note that two major elements of the Bechtel assessment were not
14 provided to the PSC or ORS. The most important was Bechtel's assessment of the
15 schedule.⁶ The second element that was not revealed to the PSC and ORS was Bechtel's
16 recommendations for addressing and correcting the findings. SCE&G evaluated these
17 recommendations on their own and determined how they should or should not be
18 implemented without knowledge of the ORS. SCE&G tabulated and tracked the progress
19 of implementing these recommendation (Exhibit GCJ-2.52.A); however, this tracking
20 report was not shared with ORS. The PSC and ORS should have been made aware of these
21 assessments and the basis for implementing or dismissing them. Knowledge of such

⁶ Steve Byrne stated in his deposition at page 229 and 230 that the Bechtel dates were never provided to the PSC, the public or investors. See Exhibit GCJ-12.

1 information is key in carrying out ORS's statutory mandate. As a final commentary on the
2 misguided and deceitful practices in concealing the very important Bechtel assessment
3 from the PSC and ORS, I cite the highlighted language in Exhibits GCJ-8 and GCJ-9. The
4 use of terms like "scrub" and "whitewashed" should not be in the lexicon of a utility that
5 seeks to develop and maintain an open and honest relationship with their customers and
6 regulators.

7 **Q. PLEASE EXPLAIN ANOTHER INSTANCE IN WHICH SCE&G WITHHELD**
8 **IMPORTANT INFORMATION FROM THE PSC.**

9 **A.** It was during the ORS review of filing made in Docket No. 2016-223-E that
10 SCE&G continued to deceive and withhold important information from the PSC and ORS.
11 In response to ORS Audit Information Request 1-32, dated March 24, 2016 (Exhibit GCJ-
12 2.50) which requested that SCE&G identify any consultants utilized by them on the Project,
13 SCE&G omitted Bechtel. Even when given a second chance to include Bechtel (Exhibit
14 GCJ-2.52), SCE&G again identified only two minor consultant contracts that had been
15 utilized by SCE&G and again omitted the one million-dollar Bechtel contract. Disclosure
16 of the Bechtel assessment of the schedule would have substantively affected ORS's review
17 and the development and structure of the recommended settlement agreement associated
18 with the approval issue under PSC Order 2016-794.

19 **Q. WHAT ACTION SHOULD BE TAKEN BY THE PSC RELATED TO THE**
20 **INFORMATION WITHHELD BY SCE&G?**

21 **A.** I regard these serious omissions and concealment of materials to be sufficient
22 grounds for a finding of imprudence by SCE&G based on the standards under the BLRA
23 and the definitions of imprudence. When these actions by SCE&G are evaluated using the

1 clarifications and revised provisions of Act 258 and Resolution 285, there is no doubt that
2 SCE&G intentionally concealed, omitted, misrepresented and failed to disclose material
3 facts in its filings with the PSC and correspondence and interaction with ORS and that
4 SCE&G failed to exercise proper oversight of their contractor to assure prudent
5 management and oversight as required by the Act. Therefore, it is recommended by ORS
6 that the PSC exclude the Project expenditures from March 12, 2015, through the decision
7 to abandon the Project on July 31, 2017 as detailed in ORS witness Mr. Kollen's testimony
8 from recovery under the abandonment provisions of the BLRA.

9 **Q. DO YOU BELIEVE SCE&G'S DECISION IN JULY 2017 TO ABANDON THE**
10 **PROJECT WAS PRUDENT?**

11 **A.** Yes. Based on the projected completion dates and cost projections, it appears that
12 the Project would not have been an economically viable facility because costs would have
13 more than doubled if the Project had been completed. A less expensive natural gas-fired
14 combined cycle plant could be built in less time and at less cost than that associated with
15 completing the Units or, as SCE&G has already demonstrated, the power could be
16 purchased from a cheaper alternate source. This conclusion is also supported by the
17 analysis provided in ORS witness Mr. Richardson's direct written testimony.

18 Although the settlement agreement issued as part of Order 2016-294 required all
19 construction costs above and beyond the agreed fixed price in the EPC contract and not
20 covered by very restrictive change orders be borne by SCE&G, this would have probably
21 been successfully challenged by SCE&G due to the changed circumstances on the Project
22 (i.e., the Westinghouse bankruptcy resulting in the voiding of the EPC contract and the
23 withdrawal of Santee Cooper from the Project) and in all probability SCE&G would not

1 have been financially able to complete all or even a single unit of the Project. The additional
2 costs would then have fallen to the SCE&G customers, and this would have unduly
3 burdened them.

4 In addition, many of the risks involved in completing the Project would not have been
5 eliminated by SCE&G proceeding on their own. Thus, there probably would have been
6 even further delays and cost increases above and beyond those immediately identified at
7 the time the Project was abandoned, and these may have been passed on to the customer
8 further increasing their rates. The Vogtle project has already been subjected to a very
9 significant cost increase beyond that approved in December 2017 that has placed that
10 project in jeopardy once again.

11 **Q. SHOULD THE PROJECT HAVE BEEN ABANDONED EARLIER?**

12 **A.** Based on the documentation currently available to me and personal experience in
13 monitoring the Project, I believe that up until the March 12, 2015 filing, there had been
14 efforts by SCE&G to resolve the issues on the Project, develop mitigating strategies and
15 proceed forward with the goal of completing the Project. The Company did not set out to
16 fail in its efforts.

17 By the time of the March 12, 2015 filing with the PSC, SCE&G decided to move
18 forward with a thorough assessment of the Project. It was imprudent for SCE&G to delay
19 the initiation of the assessment until August 2015 and proceed with the filing utilizing
20 speculative and unsubstantiated construction schedule and cost data without first
21 completing the assessment. For the reasons I expressed earlier, I also believe Bechtel's
22 assessment of the status of the Project in 2015 and their estimate of the completion schedule
23 was accurate.

1 ORS witness Mr. Richardson addresses in his written direct testimony that the Project
2 would have been uneconomic if the Bechtel completion dates had been utilized in a
3 corrected analysis presented by Dr. Lynch in his 2015 testimony. If these results had been
4 available at or before the 2015 hearings, it would have most certainly prompted further
5 investigation by ORS and required additional justification from SCE&G to proceed with
6 the Project. The decision might have been different from that reached on the basis of
7 SCE&G's misleading and deceptive information.

8 I must also acknowledge that on-going discovery and depositions may provide
9 additional information that could indicate that SCE&G's imprudence pre-dated March 12,
10 2015. If so, I reserve the right to supplement the basis for my opinions.

11 **Q. WAS THE DECISION BY SCE&G TO MONETIZE THE TOSHIBA**
12 **SETTLEMENT IN LIEU OF ACCEPTING THE ORIGINALLY PROPOSED**
13 **LONG-TERM PAYOUT PRUDENT?**

14 **A.** Yes, based on the information currently available to ORS. Although in hindsight
15 this decision does not appear to be correct and prudent, especially when Toshiba decided a
16 short time later to reduce their exposure and paid out the entire settlement in a single
17 payment to the Vogtle owners. One must consider the context and circumstances at the
18 time SCE&G made the decision to monetize the payout. Toshiba was on very tenuous
19 financial footing at the time that SCE&G was making their decision. Toshiba faced the
20 very real possibility of delisting on the Japanese stock market and it was desperately
21 searching for a buyer for some or all of its major assets. The losses associated with
22 Westinghouse were much larger than had originally been reported. There was very real
23 concern of Toshiba's on-going viability, especially in the long term.

1 ORS witness Mr. Lane Kollen reviewed SCE&G's detailed justification and
2 analysis for monetizing this settlement and his results are addressed in his testimony.

3 **Q. IS SCE&G'S PROPOSAL TO NOT ABANDON THE TRANSMISSION ASSETS**
4 **ASSOCIATED WITH THIS PROJECT REASONABLE?**

5 **A.** Yes. SCE&G proposed that the transmission system assets associated with the
6 Project be booked as plant-in-service assets in support of SCE&G's existing system and
7 phased into the rate base, rather than written off as abandoned is acceptable as modified by
8 the ORS recommendations provided in Mr. Kollen's testimony. SCE&G provided
9 justifications that these assets contribute to increasing the overall robustness of the system,
10 improve reliability and provide increased capacity that will be required in the future.

11 **Q. DO YOU AGREE WITH SCE&G'S PROPOSED TREATMENT OF COSTS**
12 **ASSOCIATED WITH THE TRANSMISSION SYSTEM FOR THE UNITS?**

13 **A.** No. The ORS recommendations are provided in the testimony of Mr. Kollen.

14 **Q. DO YOU AGREE WITH THE SCE&G'S TRANSFERS OF CERTAIN**
15 **ORIGINALLY SHARED FACILITIES AND ASSETS TO V.C. SUMMER UNIT 1?**

16 **A.** No, not fully. ORS has developed an alternate approach for apportioning the costs
17 among the Units, for which SCE&G may seek recovery through a general rate case. ORS
18 will present its approach at this future general base rate hearing. Mr. Kollen addresses this
19 matter in further detail in his direct testimony.

20 **Q. IN YOUR PROFESSIONAL OPINION DID SCE&G PROPERLY MANAGE THIS**
21 **PROJECT?**

22 **A.** Based on the documented record recently made available as part of the discovery
23 associated with this filing, I must emphatically say no. Prior to the revelations that

1 SCE&G's withheld material information and misled ORS and the PSC, I would have been
2 more hesitant to reach this conclusion. With the above revelations, however, I must
3 conclude that SCE&G's management of the Project was not adequate.

4 It is extremely disheartening to learn that many of SCE&G's efforts to provide
5 accurate and complete information to the PSC and ORS were not sincere, and that vital
6 information was withheld to intentionally deceive the regulators.

7 **Q. CAN YOU PROVIDE EXAMPLES OF INADEQUATE MANAGEMENT BY**
8 **SCE&G?**

9 **A.** I believe that SCE&G's management of the Project could have been improved.
10 There are several areas where ORS encouraged SCE&G to expand their oversight and take
11 a more active role in the Project. I will discuss a few of these so that one can better
12 understand the basis of my opinion.

13 In the early stages of the Project before Shaw was purchased by CB&I, SCE&G
14 had adopted a "hands-off" approach to the Project, primarily because of the nature of the
15 EPC contract and the Consortium's refusal to permit SCE&G to take any active role in the
16 management of the Project without demanding cost increases and transfers of liability. The
17 major issue in the early stages was the delay in the production of structural modules by the
18 Shaw Lake Charles facility. Although this was a serious issue that needed to be rectified,
19 it was not causing significant delays in the Project because the site was not ready to begin
20 installation of the modules due to the delays in obtaining the COL and the delay in pouring
21 the first nuclear concrete consisting of the base mat in the NI. However, once these
22 milestones were attained, it became clear that the continued delay and lack of quality of
23 the structural modules were the most significant issue on the Project. I believe that SCE&G

1 permitted these issues to fester too long before acting to correct them and that this had a
2 significant and long-lasting negative impact on the Project completion schedule.

3 It should be noted that SCE&G did eventually act, but in retrospect this was not as
4 timely as it should have been. ORS witnessed and supported SCE&G's efforts to become
5 more assertive and seek alternative approaches to correct this problem. The reassignment
6 of module fabrication to several outside subcontractors, the assignment of Westinghouse
7 and SCE&G on-site resident engineers to monitor progress and improve the turn-around of
8 design changes, the decision to bring some modules on-site for rework and completion and
9 the eventual replacement of Shaw by CB&I in the Consortium were all seen by ORS as
10 positive steps in which SCE&G had actively participated. SCE&G's increased role in
11 managing the Project was visible at this point and welcomed by ORS. The actions just
12 came too late to be indicative of good management on the part of SCE&G.

13 Perhaps the most pervasive management issue was the inability to develop a
14 realistic and accurate construction schedule. ORS consistently made this demand but was
15 never presented with an adequate schedule. The Project was being managed from a ninety-
16 day look-ahead schedule rather than the fully integrated resource-loaded schedule that was
17 required to successfully complete the Project. Each time the Consortium supposedly
18 developed a schedule, SCE&G advised ORS that they did not agree with the schedule and
19 it needed further refinements before they could provide it to us. At the time, ORS believed
20 that SCE&G was making efforts to develop a realistic and accurate schedule. However, it
21 now appears that this was not the case beginning with the schedule filed with the March
22 12, 2015 filing (Docket No. 2015-103-E). Documentation shows that while SCE&G

1 withheld material information and worked to deceive the PSC and ORS, it did not believe
2 the schedule it was providing to the PSC.

3 The next example of poor management is the failure to hold the Consortium fully
4 accountable for their failure to achieve the production rates and productivity levels that
5 were required to complete the Project. The goals established by the Consortium were never
6 met on a sustainable basis, despite multiple changes in Consortium management and
7 construction management. I believe that SCE&G's mis-management resulted from its
8 failure to recognize that they needed help from an outside organization with more
9 experienced people and demanding the same from the Consortium. Even though there were
10 many changes on the Project, in reviewing the record made available during this discovery
11 process, it appears that very few of those charged with directly meeting the production and
12 productivity goals were changed throughout the life of the Project. Therefore, these goals
13 were not met, and the Project fell further and further behind

14 These are a few of the examples of SCE&G's poor management of the Project.
15 However, the Company's major failure, and the one that should void their attempt to
16 recover all the abandoned cost of the Units, is the intentional and material
17 misrepresentations, omissions and deception SCE&G perpetrated on the PSC, ORS and
18 SCE&G customers.

19 **Q. WILL YOU UPDATE YOUR TESTIMONY BASED ON INFORMATION**
20 **THAT BECOMES AVAILABLE?**

21 **A.** Yes. I fully reserve my right to revise my recommendations via supplemental
22 testimony should new information become available not previously provided by the Joint
23 Applicants, or from pending state and federal investigations and lawsuits.

1 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

2 **A.** Yes, it does.