

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Integrate
and Refine Procurement Policies and
Consider Long-Term Procurement Plans.

Rulemaking 12-03-014
(Filed March 22, 2012)

**JOINT MOTION OF THE DIVISION OF RATEPAYER ADVOCATES,
CALIFORNIA ENVIRONMENTAL JUSTICE ALLIANCE
AND SIERRA CLUB CALIFORNIA TO AMEND THE REVISED SCOPING MEMO
TO REFLECT THE CLOSURE OF THE
SAN ONOFRE NUCLEAR POWER STATION GENERATING FACILITIES**

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I. INTRODUCTION

On May 21, 2013, Commissioner Florio and Administrative Law Judge Gamson issued a “Revised Scoping Ruling and Memo of the Assigned Commissioner and Administrative Law Judge” (Revised Scoping Memo), establishing an additional track to this proceeding. The newly established Track 4 “will consider the local reliability impacts of a potential long-term outage at the San Onofre Nuclear Power Station (SONGS) generators, which are currently not operational.”¹ The Revised Scoping Memo requests that the California Independent System Operator (CAISO) study three different scenarios in its transmission planning model: 2018 without SONGS, 2022 with SONGS, and 2022 without SONGS. The Revised Scoping Memo prescribes several input assumptions for CAISO’s analysis, including energy efficiency and demand response, but does not include the specific reactive power or transmission assumptions CAISO should use in its analysis.

On June 7, 2013, Southern California Edison announced that it was permanently retiring SONGS.² With the uncertainty over the continued operations of SONGS resolved, the California Environmental Justice Alliance, the Division of Ratepayer Advocates, and Sierra Club California (collectively, the Joint Parties) move pursuant to Rule 11.1 of the Commission’s Rules of Practice and Procedure that the Commission request that CAISO focus its modeling on the current reality of no SONGS.

The Joint Parties respectfully recommend that the Commission request that CAISO’s modeling results include the full range of reactive power³ resources considered in its 2012-2013 Transmission Plan in order to provide the most realistic information about “local resources replacement requirements for SONGS”⁴ now that it is clear that SONGS will remain offline.

¹ Revised Scoping Memo, p. 4.

² Edison International press release, June 7, 2013: <http://www.edison.com/pressroom/pr.asp?id=8143> See Letter to U.S. Nuclear Regulatory Commission, Subject: “Docket Nos. 50-361, 50-362, Certification of Permanent Cessation of Power Operations, San Onofre Nuclear Generating Station Units 2 and 3” (executed June 2, 2013), appended as Appendix A to this Motion.

³ Reactive power must be present in the transmission and distribution system to keep electrical current and voltage in phase and to operate electrical equipment with inductive load, such as motors, magnetic equipment, and transformers. *Resource: An Encyclopedia of Energy Utility Terms, Pacific Gas and Electric Company*, 1992. Reactive power capacity is measured in units of volt-ampere reactive or var.

⁴ Revised Scoping Memo, Attachment A, Track 4 Assumptions, p. 1.

The Joint Parties recognize that the Revised Scoping Memo establishes an ambitious schedule for Track 4, and given the fact that the 2022 with SONGS case appears not as relevant, recommend that the Commission request that CAISO focus its finite resources to model the cases without SONGS, but including the full range of reactive power resources identified in CAISO's 2012-2013 Transmission Plan.⁵ If it is infeasible to model the full range of reactive power resources identified in CAISO's 2012-2013 Transmission Plan, then at a minimum the Commission should request that CAISO model 1460 MVAR of additional reactive resources in the combined San Diego and Los Angeles Basin areas for the 2018 and 2022 without SONGS cases, and include a sensitivity for each case that adds even more reactive resources if such additions will reduce the need for new generation real power (MW) requirements.

II. DISCUSSION

A. CAISO studies recognize that the loss of SONGS will produce a significant need for reactive power.

CAISO has recognized that SONGS might remain off line for an extended period of time, analyzing the possibility in its 2013 Local Capacity Technical [LCT]Analysis, Addendum to the Final Report and Study Results, Absence of San Onofre Nuclear Generating Station (LCT Analysis without SONGS Addendum),⁶ in its briefing to the CAISO Board of Governors at the General Session Meeting on December 13-14, 2012,⁷ and its 2012-2013 Transmission Plan, approved by the CAISO Board of Governors in March of this year. The studies and CAISO's presentation to its Board of Governors underscore the key role that reactive power should play in replacing SONGS. The LCT Analysis without SONGS Addendum determined that the absence

⁵ 2012-2013 Transmission Plan, March 20, 2013. Available at <http://www.aiso.com/Documents/BoardApproved2012-2013TransmissionPlan.pdf>.

⁶ 2013 Local Capacity Technical [LCT]Analysis, Addendum to the Final Report and Study Results, Absence of San Onofre Nuclear Generating Station, August 20, 2012 (LCT Analysis without SONGS Addendum). Available at http://www.aiso.com/Documents/Addendum-Final2013LocalCapacityTechnicalStudyReportAug20_2012.pdf.

⁷ Briefing on Nuclear Generation Studies Preliminary Results, presented by Neil Millar, Executive Director of Infrastructure Development, to the Board of Governors Meeting General Session on December 13-14, 2012 (Briefing on Nuclear Generation). Slides 8-11 are appended to these comments as Attachment B and the full presentation is available at <http://www.aiso.com/Documents/BriefingNucl...sPreliminaryResults-Presentation-Dec2012.pdf>.

of SONGS created voltage support deficiencies in both the Los Angeles (LA) Basin⁸ and in the San Diego local capacity areas.² CAISO therefore recommended “[a]mixture of dynamic (i.e., synchronous condensers) and static (shunt capacitors) reactive support ... in order to satisfy fast voltage recovery need at the SONGS 230 bus without causing further operational concerns.”¹⁰

The December 13-14, 2012 Briefing to the CAISO Board of Governors also highlighted the importance of reactive power by including continuous use of synchronous condensers and SVC [static var compensators] support in the primary options for mitigating the loss of SONGS.¹¹

CAISO’s 2012-2013 Transmission Plan focuses on mid-term (2018) and long-term (2022) solutions for maintaining grid reliability in the absence of SONGS. The 2012-2013 Transmission Plan considers two mid-term alternatives. The first mid-term alternative recommends installation of 650 MVAR of dynamic reactive support, while the second, which requires less new generation, recommends installation of “a total of 1,460 MVAR of SVC or SC for dynamic reactive support at SONGS, Talega, Penasquitos, San Luis Rey and Mission Substations.”¹² The two long-term generation mitigation strategies show a need for dynamic reactive support ranging from 1460 – 2010 MVAR.¹³ The two combined transmission and generation alternatives show a total of at least 1460 MVAR of reactive support needed.¹⁴

The precise amount of reactive support needed in the absence of SONGS depends on the assumptions used, including the type of contingency, but in all cases, reactive power is an essential component of any mid- or long-term solution to SONGS retirement.

⁸ “Overall the LA Basin LCR needs are now driven by a new overlapping Category C contingency in the San Diego’s electric system, due to voltage support needs that arise in the area.” LCT Analysis without SONGS Addendum. p. 3.

² “The San Diego sub-area requirements have increased significantly, by 966 MW, and the San Diego – Imperial Valley area requirements have increased also by 447 MW, due to voltage support needs in the absence of SONGS.” LCT Analysis without SONGS Addendum. p. 3.

¹⁰ LCT Analysis without SONGS Addendum, p. 4.

¹¹ See Attachment B.

¹² 2012-2013 Transmission Plan, p. 173.

¹³ 2012-2013 Transmission Plan, Table 3.5-10 Summary of Generation & Dynamic Reactive Support Need (No SONGS Analyses) Mid- and Long-Term (Generation) Options, p. 185. This table and other excerpts from the 2012-2013 Transmission Plan are appended as Attachment C.

¹⁴ 2012-2013 Transmission Plan, Table 3.5-11 Summary of Generation & Dynamic Support Needed (No SONGS Analyses) Mid- and Long-Term Combined Transmission and Generation Alternatives, p. 188. See Attachment C.

B. It is unclear whether CAISO will include the full range of feasible reactive power mitigation solutions in the 2018 and 2022 without SONGS case, so the Commission should clarify the reactive power assumptions.

It is currently unclear what reactive power solutions CAISO would study in the absence of an explicit Commission request. The Revised Scoping Memo notes that it “sets forth the assumptions to be used for considering the impacts of interim and long-term local reliability needs in the Los Angeles Basin local area and San Diego sub-area resulting from an extended SONGS outage,”¹⁵ but does not list reactive power assumptions. The Commission should request that CAISO’s Track 4 modeling include the full range of reactive power resources considered in the 2012-2013 Transmission Plan for both the mid-and long-term. This would allow the Commission and parties to better understand the impact of reactive resources, which are often significantly less expensive than new generation real power resources in resolving reliability concerns if the identified reliability deficiency is related to reactive/voltage concerns. If it is infeasible to model the full range of reactive power resources identified in CAISO’s 2012-2013 Transmission Plan, then at a minimum the Commission should request that CAISO model 1460 MVAR of additional reactive resources in the combined San Diego and LA Basin areas for the 2018 and 2022 without SONGS cases, and include a sensitivity for each case that adds even more reactive resources if such additions will reduce the need for new generation real power (MW) requirements.

C. The Commission Should Consider a Full Range of Reactive Power Options to Reliably Assess the Needs for Generation.

1. Power flow modeling is critical for evaluating the true impact of reactive power resources.

Reactive power is an essential component to a solution for the SONGS retirement. Without power flow modeling of a reasonable range of reactive power options, the Commission and parties will likely not be able to identify the true impact that reactive power will have in reducing procurement need. The analysis that CAISO completed in the 2012-2013 Transmission Plan demonstrates that many hundreds of MWs of procurement can be avoided by effectively deploying more reactive power.¹⁶

¹⁵ Revised Scoping Memo, p. 6.

¹⁶ 2012-2013 Transmission Plan, March 20, 2013, pp. 190-193.

2. The Commission can consider the use of preferred resources in the absence of power flow modeling.

Importantly, the Joint Parties believe that CAISO's analysis will underestimate the availability of preferred resources. For instance, the Revised Scoping Memo's energy efficiency assumption fails to include incremental naturally occurring savings included in the California Energy Commissions' September 2012 analysis.¹⁷ Including the naturally occurring savings would add an additional hundreds of MW of energy efficiency relative to the Revised Scoping Memo. In addition, the Revised Scoping Memo underestimates the availability of energy efficiency in the San Diego local capacity area by failing to include the mid-level energy efficiency in the CEC's September 2012 analysis, even though the local area is identical to the service area. Including mid-level energy efficiency for the San Diego area would add an additional 116 MW. Ideally, all of these types of assumptions would be revised to more closely reflect reality, but the Joint Parties are prepared to raise these issues in their testimony in the proceeding. The Commission has previously relied on parties' testimony to revise resource assumptions to better reflect the availability of preferred resources.¹⁸

3. The CAISO is best positioned to undertake power flow modeling.

The Joint Parties and the Commission's Energy Division do not have access to the costly power flow software to model the impact of reactive power and transmission projects on resource needs. The Commission was not able to determine the potential impact of transmission mitigation solutions that were not modeled in Track 1 of this proceeding,¹⁹ likely due to this lack of information. Therefore, it is essential that the Commission request that CAISO include a reasonable range of reactive power options in its modeling so that the Commission can fully evaluate the resource options to replace SONGS while maintaining just and reasonable rates consistent with California's environmental requirements.

¹⁷ http://www.energy.ca.gov/2012_energypolicy/documents/demand-forecast/IUEE-CED2011_results_summary.xls

¹⁸ D.13-03-029, pp. 9-11 (adjusting LCR study result for additional expected energy efficiency savings).

¹⁹ See D.13-02-015, p. 44 (finding that there was "no conclusive evidence" that ISO's transmission assumptions should be changed even though "[i]t is possible or even likely that there are certain mitigation options for transmission constraints or certain transmission upgrades which were not fully considered by the ISO and which may become feasible.")

III. CONCLUSION

The Joint Parties request that the Commission amend the Revised Scoping Memo to eliminate the request that CAISO model the 2022 with SONGS case, and instead clarify that as sensitivities or separate cases, the Commission requests that CAISO's Track 4 modeling include the full range of reactive power resources considered in the 2012-2013 Transmission Plan for both the mid- and long-term.

If it is infeasible to model the full range of reactive power resources identified in CAISO's 2012-2013 Transmission Plan, then at a minimum the Commission should request that CAISO model 1460 MVAR of additional reactive resources in the combined San Diego and LA Angeles Basin areas for the 2018 and 2022 without SONGS cases, and include a sensitivity for each case that adds even more reactive resources if such additions will reduce the need for new generation real power (MW) requirements

Failing to examine a reasonable range of reactive power options in the modeling effort will frustrate the Commission's and parties' work to identify the best solutions to replace SONGS and could lead to significant, expensive over procurement that undermines California's greenhouse gas (GHG) reduction goals.

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Respectfully submitted,

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