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)

OPENING BRIEF OF THE CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES ON TRACK 4 (SAN ONOFRE NUCLEAR GENERATING STATION)

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TABLE OF CONTENTS

TABLE OF CONTENTS
Continued

Page

TABLE OF AUTHORITIES

Page

CPUC DECISIONS

CALIFORNIA PUBLIC UTILITIES CODE

COMMISSION RULES OF PRACTICE AND PROCEDURE

MISCELLANEOUS

SUMMARY OF RECOMMENDATIONS

Rule 13.11 of the Commission's Rules of Practice and Procedure requires a "summary of the briefing party's recommendations following the table of authorities." To that end, the Center for Energy Efficiency and Renewable Technologies (CEERT) provides the following summary of its recommendations for inclusion in any decision resulting from the current record in Track 4 (San Onofre Nuclear Generating Station (SONGS)) of the Long Term Procurement Plan (LTPP) Rulemaking (R.) 12-03-014 as follows:

- The Commission should confirm that the governing Commission legal and policy precedent for the issues to be resolved in Track 4 includes D.13-02-015 (2012 LTPP Track 1), in particular, as well as D.13-03-029 (San Diego Gas and Electric Company (SDG&E) Power Purchase Tolling Agreements (PPTAs)) and D.13-10-040 (Energy Storage).
- The Commission should conclude that this legal and policy precedent establishes the Commission's obligation to "balance its reliability mandate with other statutory and policy considerations," including "reasonableness of rates and a commitment to a clean environment," as further defined by statute and the Loading Order of preferred resources.
- The Commission should confirm that, consistent with D.13-02-015, in particular, the Loading Order, which identifies "preferred" resources and prioritizes their procurement in the following order: first "energy efficiency and demand response," followed by "renewables (including renewable DG [distributed generation], then "clean fossil-fueled DG," and only then "clean fossil-fueled central station generation," applies to identifying and meeting all energy needs, including any local capacity requirements (LCRs) in the Track 4 SONGS Study Area.
- The Commission should find that D.13-10-040, which established an Energy Storage Procurement Framework (ES Framework), excluded large-scale (50 MWs or more) pumped storage projects from that framework, but did so by identifying the LTPP proceeding, including the current Track 4, as the venue for providing a procurement mechanism for large-scale pumped or bulk storage, especially since that technology would

have particular application in terms of addressing "local reliability impacts of a potential long-term outage at the San Onofre Nuclear Power Station (SONGS)."

- The Commission should adopt the conclusions reached in Track 4 rulings that the California Independent System Operator (CAISO) 2013-2014 Transmission Planning Process (TPP), with a draft expected in January 2014 and final results by March 2014, will provide "useful information to inform the Commission regarding a decision on both the level and type of resources to replace SONGS" and "should be taken into account" in any Track 4 decision.
- The Commission should confirm that no decision was made during the pendency of Track 4 as to whether the Commission should provide "interim" Track 4 procurement authorization for Southern California Edison Company (SCE) or SDG&E in a January or Q1 2014 decision or, alternatively, defer any Track 4 procurement authorization until after the draft and/or results of the CAISO's 2013-2014 TPP are made available.
- The Commission should find that, absent a clear and compelling record of immediate SONGS Study Area LCR need, it is reasonable to defer interim Track 4 procurement authorization until key assumptions, from the CAISO's 2013-2014 TPP draft or results to changes in load forecasts and the results of Track 1 solicitations (particularly for preferred resources), are updated and known in early 2014.
- The Commission should find that consideration of those changed assumptions can be assessed in a manner to permit a timely Track 4 decision by June or July 2014.
- The Commission should find that, while the CAISO, SCE, and SDG&E may have forecasted LCR needs through 2022, the current record in Track 4 does not justify any "interim" Track 4 authorization for SCE or SDG&E by January or Q1 2014, especially without consideration of those near-term changes in key assumptions, and, instead, Track 4 should be the subject of a "holistic" final decision that can be issued on a timely basis as early as June or July 2014.
- The Commission should find that, in fact, the CAISO, SCE, and SDG&E SONGS LCR studies varied widely on key assumptions, including those related to preferred resources, applicable outage "contingencies" and "reliability standards," and available mitigation

measures, that, in some cases, were also in conflict with the SONGS Study Area assumptions required by the Revised Scoping Ruling issued in this 2012 LTPP on May 21, 2013.

- The Commission should find that these varying assumptions, which also did not fairly consider interim mitigation "bridges" that could fill any gap in the availability of transmission options or preferred resources to meet LCR needs, such as load shedding, special protection schemes, and even existing gas-fired generation, result in a record that does not support procurement of new, additional GFG resources by SCE or SDG&E at this time on an interim or final basis.
- The Commission should find that the CAISO's primary recommendation in this Track 4 has been to defer procurement authorization for SCE and SDG&E until the draft and results of its 2013-2014 TPP are known and that any later agreement to the Commission granting SCE's and SDG&E's Track 4 procurement requests now was largely based on moving forward with procurement of "preferred resources" so that a "track record of their development and their effectiveness can be established" and not on any immediate need for either utility to procure additional GFG resources.
- The Commission should find that SCE has proactively sought to advance the procurement and definition of preferred resources to meet its LCR need through its pending Track 1 preferred resources Request for Offers (RFO) and its proposed "Living Pilot."
- The Commission should find that SDG&E has not offered, but must be required to provide, a mechanism for the proactive procurement of Loading Order preferred resources or storage as part of its request to procure 500 to 550 megawatts of additional resources.
- The Commission should reject SDG&E's recommendation to limit eligibility to provide those resources to renewable and conventional (GFG) generation only and, if authorized, should instead be required to expand that solicitation to include preferred resources and storage.
- The Commission should find that both the Commission's and a utility's ability to rescind, terminate, or not approve Track 4 power purchase agreements or create "contingent"

agreements for generation development and siting may be difficult and costly for ratepayers.

- If the Commission should grant "interim" procurement authorization for either SCE or SDG&E in a Track 4 decision issued in January or Q1 2014 based on the current record, the Commission should require, consistent with the Loading Order and D.13-02-015, that an allocated portion of each of the utilities' procurement requests (SCE (500 MWs)/SDG&E (500-550 MWs)) should be solicited from preferred resources and energy storage, with no more than 300 to 350 MWs to be procured from conventional gas-fired generation and at least 150 to 200 MWs of that procurement to come from preferred resources and storage, with renewable generation eligible to bid into either RFO.
- The Commission should confirm that large-scale pumped or bulk storage must be part of any procurement or RFO authorized by this Commission in this Track 4 and any future LTPPs, consistent with D.13-10-040.
- The Commission should find that the Track 1 RFO may not be suitable for Track 4 procurement (i.e., as to the identification of need or resource attributes) and, as opposed to the confidential development of SCE's Track 1 procurement plans, the Track 4 RFOs must be developed through a transparent stakeholder process, especially to ensure key input that will improve the RFOs and ensure their success, especially in attracting and procuring preferred resources and storage to meet any identified Track 4 need.
- The Commission should expressly identify next steps to be taken in this and any future LTPP that will further the Commission's commitment to increased reliance on preferred resources and storage, recognizing that continued and timely focus on RFOs like SCE's Track 1 solicitation of preferred resources and its Living Pilot, will serve as a "forcing function" to require the utilities "to truly identify the value" of preferred resources and storage in meeting LCR needs.

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The Center for Energy Efficiency and Renewable Technologies (CEERT) respectfully submits this Opening Brief in Track 4 (San Onofre Nuclear Generating Station (SONGS)) of the Commission's Long Term Procurement Plan (LTPP) Rulemaking (R.) 12-03-014. This Opening Brief is timely filed and served pursuant to the Commission's Rules of Practice and Procedure (Rule 13.11) and the Administrative Law Judge's (ALJ's) Ruling setting the briefing schedule.[1]

I. INTRODUCTION

CEERT has been an active participant on energy procurement issues before the Commission since the early 1990's. This 2012 LTPP proceeding is no exception, and CEERT has been a party to workshops and evidentiary hearings, offered testimony, and filed comments and briefs on issues arising in Track 1 (Local Reliability), Track 2 (System Need), and now Track 4 (SONGS). CEERT's participation has focused on its longstanding advocacy aimed at promoting energy solutions that will improve this State's environment and meet its greenhouse gas (GHG) emission reduction goals, especially through increased reliance on preferred

[1] Reporter's Transcript (RT) at 2304 (ALJ Gamson); ALJ's Ruling on Briefing Schedule and Instructions sent by electronic mail to the R.12-03-014 (LTPP) Service List on November 4, 2013. No "common briefing" outline was adopted, but the instructions included issues to be addressed in the briefs.

resources, including energy efficiency, demand response, and renewable energy generation, and storage technologies.

While grid reliability, especially in the Southern California area in the absence of SONGS, must be maintained, it remains CEERT's position that this Commission can achieve that outcome, while also meeting its responsibility to maintain reasonable rates and implement the State's environmental policies. Based on the law and evidentiary record applicable to this Track 4, including adherence to the Commission's Loading Order of preferred resources and the value of bulk storage to grid reliability, CEERT asks that the Commission adopt CEERT's recommendations in this brief as summarized, and incorporated here by reference, in its "Summary of Recommendations" above (beginning at page iv) and as further reflected in its Appendix A Proposed Findings of Fact and Proposed Conclusions of Law.

In sum, it is CEERT's position that the Commission must again confirm its commitment to the Loading Order of preferred resources in the same manner as D.13-02-015 (issued in Track 1). In addition, the Commission should find that the Track 4 record does not support or justify any "interim" procurement authorization for either Southern California Edison Company (SCE) or San Diego Gas and Electric Company (SDG&E) by January or Q1 2014; that a decision in Track 4 can await, and must consider, multiple near-term changes in key assumptions (i.e., the California Independent System Operator's (CAISO's) 2013-2014 Transmission Planning Process (TPP) draft or results, changes in load forecasts, and results from Track 1 (Local Reliability) preferred resources procurement); and that such a decision can be timely issued by June or July 2014.

Alternatively, if the Commission should grant such "interim" procurement authorization in January or Q1 2014 based on the current record, that procurement authorization must limit the

maximum amount of gas-fired generation (GFG) procurement and require a minimum procurement amount of preferred resources and storage (no less than 150 to 200 MWs for SCE and SDG&E each). Further, any such interim authorization should require the applicable requests for offers (RFOs) to be developed in a transparent stakeholder process and the Commission should clearly identify the next steps in this Track 4 and any future LTPP in a manner that maintains and furthers its commitment to increased reliance on preferred resources and storage to meet all energy needs.

II.
THE ISSUES TO BE BRIEFED MUST BE ADDRESSED IN THE CONTEXT OF THE LAW AND POLICY APPLICABLE TO THIS LTPP RULEMAKING AND TRACK 4.

A. ALJ Instructions for Briefs in Track 4.

On November 1, 2013, at the close of evidentiary hearings in Track 4, assigned ALJ Gamson announced that a "common briefing outline" would not be used, but that he would provide instructions on the issues to be addressed. On November 4, 2013, ALJ Gamson provided the following instructions:

> "Based solely upon the record in this proceeding, briefs should include a clear argument setting forth the party's position on what determinations the CPUC should make on the following issues:
>
> "1. Should the CPUC authorize SCE and/or SDG&E to procure additional resources at this time for the purposes within the scope of this proceeding?
>
> "2. If so, what additional procurement amounts should be authorized at this time? Please specify any calculation that leads to this position.
>
> "3. What additional resources, if any, should be authorized to fill procurement needs? Should there be any requirements or restrictions on procurement amounts for any specific resources or categories of resources?
>
> "4. What process should the utilities use to fill any procurement amounts authorized at this time?

"5. Are there other determinations the CPUC should consider, or conditions the CPUC should impose, regarding Track 4 procurement?"[2]

Parties were also encouraged, but not required to include specific proposed Findings of Fact and Conclusions of Law for the Commission to consider in the Commission's Track 4 decision.

By this brief, CEERT addresses these issues and the legal and policy context in which each is to be considered and resolved.[3] That is, answers to each of these issues are informed by statute and Commission decisions and rulings on the law and policy that govern any procurement that may be authorized in Track 4 of this LTPP rulemaking. For that reason, the law and policy applicable to Track 4 is addressed first.

B. Governing LTPP Law and Policy

1. Historical Precedent of the "Loading Order" of Preferred Resources.

Through a succession of Commission decisions on long term procurement planning (LTPP) dating back to 2001 and through biennial rulemakings beginning in 2004, the Commission has articulated the law and policy applicable to providing "the three IOUs [investor-owned utilities] authorization to plan for and procure the resources necessary to provide reliable service to their customer loads" for each ten-year planning period at issue.[4] Notably, among the express "policy directives" to be followed in each LTPP since 2004, the IOUs have been

[2] ALJ Instructions on Briefs in Track 4, at p. 1.

[3] In its Opening Brief in Local Reliability Track 1 of this proceeding, CEERT similarly argued the importance of the Commission basing any finding of local reliability "need" within the context of the policy and precedent that has been adopted by *this Commission* in authorizing any LTPP procurement. (CEERT Track 1 Opening Brief (9/24/12), at pp. 6-12.)

[4] Pursuant to Assembly Bill 57 (Stats.2002, Ch.850), adding Section 454.5 to the Public Utilities (PU) Code, the first long term planning rulemaking (R.01-10-024) initiated utility procurement following the 2001 Energy Crisis in D.03-12-062. Since that time, and beginning in 2004, the Commission has addressed LTPPs in rulemakings issued every two years (R.04-04-003, R.06-02-013, R.08-02-007, R.10-05-006, and now R.12-03-014 (2012 LTPP)).

"directed to prioritize their resource procurements following the 'loading order' of preferred resources established in the EAP [Energy Action Plan]."[5]

As to the "loading order," it identifies "preferred" resources and prioritizes their procurement in the following order: first "energy efficiency and demand response," followed by "renewables (including renewable DG [distributed generation])," then "clean fossil-fueled DG;" and only then "clean fossil-fueled central-station generation."[6] In addition, the Commission has directed that "[s]ensible transmission investments should be made in concert with these other resource commitments."[7]

From the initial application of the "loading order" in 2004, its significance as the guiding policy and principle for utility procurement has only grown over the years to the present. Thus, for this 2012 LTPP (R.12-03-014), the Commission commenced this proceeding by again confirming its commitment to the Loading Order, regardless of the long-term need or resource plan being examined – system, local reliability, or bundled. Therefore, here, as before, the Commission will "comprehensively consider the impacts of state energy policies on the need for new resources" *and* ensure that "*[a]ll* resource and procurement planning in this proceeding will be done in the *context* of the Energy Action Plan II (EAP II) and other state energy policies," which now include "AB 32 greenhouse gas" emission reduction and "once-through-cooling [OTC] policies."[8]

These commitments follow from the Commission's decision in the 2010 LTPP (Decision (D.) 12-01-033), in which the Commission concluded that the Energy Action Plan "*requires* the

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[5] D.04-12-048, at p. 6.
[6] D.04-12-048, at p. 7. In fact, the Commission has made clear that "whenever an IOU issues a Request for Offer/Proposal (RFO/RFP) for generation resources, it must justify its selection of fossil generation over renewable generation offers. In other words, selection of renewable generation is the rebuttable presumption guiding IOU generation procurement." (Id., at p. 2.)
[7] D.04-12-048, at p. 7.
[8] R.12-03-014, at pp. 1-2; footnotes omitted; emphasis added.

utilities to procure resources in a specific order" with '"invest[ment] first in energy efficiency and demand-side resources, followed by renewable resources, and *only then* in clean conventional electricity supply.'" [9] D.12-01-033 also made clear that (1)"[u]tility procurement *must comply* with the Commission's established loading order," (2) the "loading order applies to *all* utility procurement," and (3) "the utility obligation to follow the loading order is *ongoing*" regardless of whether a "target" has been "hit" for a preferred resource to "satisfy other obligations of the utility." [10]

2. Clarification *and* Expansion of the Role of Loading Order Preferred Resources and Energy Storage in Identifying *and* Meeting *All* Energy Needs, Including Local Capacity Requirements.

a. Scope of 2012 LTPP.

On May 17, 2012, this 2012 LTPP was originally scoped to include three tracks: Track 1 "Local Reliability," Track 2 "System Needs," and Track 3 "Procurement Rules and Bundled Procurement."[11] On February 13, 2013, the Commission issued a decision (D.13-02-015) in Track 1 to address the "long-term" local capacity requirements (LCRs) of Southern California Edison Company (SCE) in its Los Angeles (LA) Basin and Big Creek/Ventura local reliability areas "expected to result from the retirement of thousands of MW from current once-through cooling [OTC] generators due to compliance with State Water Quality Control Board regulations."[12] The issue of LCRs for San Diego Gas and Electric Company's (SDG&E) were separately considered in D.13-03-029 issued SDG&E's Application (A.) 11-05-023), which sought approval of certain proposed "Power Purchase Tolling Agreements" (PPTAs). Both of these decisions are discussed in detail below.

[9] Decision (D.) 12-01-033, at p. 17, citing Energy Action Plan 2008 Update, at 1; emphasis added.
[10] D.12-01-033, at p. 20; Finding of Fact 7, at p. 46; Ordering Paragraph 4, at p. 51; emphasis added.
[11] Scoping Memo of Assigned Commissioner and Administrative Law Judge (May 17, 2012), at p. 2.
[12] D.13-02-015, at p. 2.

On May 21, 2013, however, the Commission issued a Revised Scoping Ruling. The Revised Scoping Ruling provided a revised schedule for Track 2 (System Needs) and added a "Track 4" to "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."[13] While the SONGS "plants are OTC plants," they were "not included" in the Track 1 OTC studies nor was "a prolonged outage" of SONGS considered to be within the scope of A.11-05-023.[14]

As such, the addition of Track 4 was intended to "help inform the magnitude of local capacity requirements with and without SONGS."[15] To that end, the Revised Scoping Ruling included an Attachment A setting "forth the assumptions to be used for considering the impacts of interim [2018] and long-term [2022] local reliability needs in the Los Angeles Basin local area [SCE] and San Diego [SDG&E] sub-area resulting from an extended SONGS outage."[16] Attachment A of the Revised Scoping Memo made clear that its "assumptions are established, consistent with" not only the 2012 LTPP scenarios and assumptions, but also D.13-02-015 and D.13-03-029.[17]

Of note, the Revised Scoping Memo made a key link between Tracks 2 and 4 by stating that "[t]here also may be some interaction between any needs identified in the incipient Track 4 of this proceeding and any residual operational flexibility needs identified in Track 2 of this proceeding."[18] However, in a subsequent Assigned Commissioner (AC) and ALJ's Ruling Regarding Track 2 and Track 4 Schedules issued on September 16, 2013 (September 16 AC/ALJ's Ruling), Track 2 was "*cancelled*" since "[t]here has been some indication that system

[13] Revised Scoping Ruling, at p. 4.
[14] D.13-02-015, at n. 6, p. 7; D.13-03-029, at pp. 17-18.
[15] Revised Scoping Ruling, at p. 4.
[16] Id., at p. 6.
[17] Revised Scoping Ruling, Attachment A, at p. 1.
[18] Revised Scoping Ruling, at p. 4.

flexibility needs may be low or non-existent depending on the level of local capacity procurement authorized in Track 4."[19]

b. Governing Commission Precedent for Track 4.

(1) D.13-02-015 (Track 1 Local Reliability)

As of this date, only one decision has been issued in this 2012 LTPP – D.13-02-015. Significantly, this Track 1 decision addressed long-term "local reliability" in Southern California that is also at issue in Track 4, albeit with SONGS' retirement now reflected in that modeling.[20] In fact, SCE's Track 4 testimony confirms this direct link between Track 1 and Track 4 by incorporating its Track 1 testimony "into this Track 4" and proposing "to combine its requested Track 4 procurement authorization with its current Track 1 procurement authorization."[21] Similarly, CEERT witness Caldwell testified:

> "The additional issue in Track 4 of consideration of the permanent retirement 1 of SONGS makes Track 4 an extension of Track 1. The needs are similar, the 2 locational requirements overlap, [and] the timing is similar."[22]

This circumstance, especially given the ground-breaking reliance in D.13-02-015 on "preferred resources" to reduce and meet any long-term local reliability, makes that Track 1 decision the most significant legal and policy precedent for resolving issues arising in Track 4.[23] Specifically, for the first time, D.13-02-015 takes the preferred resources Loading Order beyond a traditional role of estimating the availability of preferred resources to *reduce* forecasted LTPP

[19] September 16 AC/ALJ's Ruling, at pp. 6-7; emphasis added.
[20] In D.13-02-015, the Commission addressed SCE's local capacity requirements (LCRs) in its LA Basin and Big Creek/Ventura local reliability areas. (D.13-02-015, at p. 2.)
[21] Ex. SCE-1, at 3 (SCE (Nelson)) and 55 (SCE (Cushnie)).
[22] Ex. CEERT-1, at p. II-2 (CEERT (Caldwell)).
[23] While the issue of local reliability creates a nexus between Tracks 1 and 4, that does not mean that the Requests for Offer (RFOs) used by SCE for Track 1 procurement should be extended for use in Track 4 where the targeted need is different and where improvements, especially to procure preferred resources, can and should be made. See, Section IV.C., *infra*.

resource needs to actually *requiring* these resources to *meet* a portion of any identified need, including any arising from "local reliability" concerns.

Notably, this important change in LTPP procurement was made in D.13-02-015 by first drawing important distinctions between the authority of this Commission and the California Independent System Operator (CAISO or ISO). Thus, while confirming that this Commission has a "primary responsibility" and the California ISO has a "primary mission" to "ensure reliability in the electrical system" or "California electrical grid," the Commission found that a "*significant difference*" exists "between the ISO's reliability mission and the Commission's reliability emphasis."[24] Namely, "the Commission must balance its reliability mandate with other statutory and policy considerations."[25] Those considerations "[p]rimarily" relate to "reasonableness of rates and a commitment to a clean environment," which "stem from both statute and Commission policy consistent with statute," in particular, the EAP "Loading Order."[26]

By relying on preferred resources and energy storage, D.13-02-015, first, reduced the LCR need modeled by CAISO for the LA Basin and Big Creek/Ventura local areas, which the Commission found had "overstate[d]" that need by failing to adequately account for expected levels of these resources. [27] On this point, the Commission recognized the current and future contributions and capabilities of preferred resources by (1) adjusting demand forecasts to assume "amounts of uncommitted energy efficiency," (2) reducing LCR needs by a "conservative" estimate of 200 MW of dispatchable demand response expected to be available in the LA Basin by 2020, and (3) determining that a significant amount of energy storage capacity and/or demand

[24] D.13-02-015, at p. 35; emphasis added.
[25] Id., at p. 35.
[26] Id., at pp. 35-36.
[27] Id., at pp. 127-128.

reduction from demand response resources is "likely" "beyond our conservative estimates" that, along with "transmission related improvements," can "meet or reduce LCR needs by 2021, even beyond the projections in the ISO models."[28] According to D.13-02-015, "these additional potential resources strengthen our determination that far lower levels of new generation procurement are needed to satisfy LCR needs in the LA basin local area than recommended by the ISO," which were deemed "too high."

Second, while authorizing SCE to procure a range of between 1400 and 1800 MWs of electrical capacity in its LA Basin local reliability area and between 215 and 290 MWs in its Big Creek/Ventura Local reliability area by 2021, the Commission made that procurement subject to specific conditions, including the *procurement of preferred resources and energy storage* to *meet* that need. [29] Thus, SCE was prohibited from procuring more than 1200 MW of the capacity authorized for the LA Basin "from conventional gas-fired resources,"[30] a limitation based on the Commission's determination of a "strong *likelihood* that additional preferred and energy storage resources …will be available to effectively meet or reduce LCR needs by 2021."[31]

In turn, SCE was further directed to procure at least 50 MW of capacity from energy storage resources and at least 150 MW of capacity from "preferred resources consistent with the Loading Order of the Energy Action Plan."[32] In addition, subject to the overall cap of 1800 MW, SCE was authorized, again "consistent with the Loading Order," to procure up to an additional 600 MW of capacity "through preferred resources…and/or energy storage

[28] D.13-02-015, at pp. 55-56, 66, 130. The Commission also concluded that by "assuming higher levels" of preferred resources than the ISO, "we are promoting the policies of the Loading Order, and reducing the anticipated LCR need." (Id., at p. 78.)
[29] D.13-02-015, at pp. 2, 130-131.
[30] Id., Ordering Paragraph 1, at pp. 130-131.
[31] Id., at p. 81.
[32] Id., Ordering Paragraph 1, at pp. 130-131.

resources."[33] Specifically, the Commission concluded that "[*a*]*ll* additional resources beyond the minimum requirement must also be from preferred resources, or from energy storage resources."[34] Finally, SCE was directed to "continue to assess and implement *all* ways to include cost-effective and viable preferred resources to reduce LCR needs," the availability of which will further reduce SCE's LCR needs.[35]

By taking this action, the Commission confirmed that D.13-02-015 "strike[s] a balance among the Commission's three primary statutory directives for ensuring reliability, reasonable rates and a clean environment" and makes clear that the Commission "cannot, and will not sacrifice or ignore any of these imperatives."[36] By D.13-02-015, the Commission again made clear that, as required by statutory mandate and the Loading Order, "*all utility procurement* must be consistent with the Commission's established Loading Order, or prioritization" and the IOUs' obligation is "to follow the loading order on an *ongoing basis*," which "duty" is "not relieved" "[o]nce procurement targets are achieved for preferred resources."[37] In this regard, the Commission further observed in D.13-02-015 that, while "procuring additional preferred resources is more difficult than 'just signing up for more conventional fossil fuel generation,'…consistency with the Loading Order and advancing California's policy of fossil fuel reduction demand *strict compliance with the loading order*."[38]

Critically, the Commission also concluded in D.13-02-015 that "[i]f as much or more of the preferred resources we expect do materialize, there will be no need for further LCR procurement based on current assumptions."[39] In addition, the Commission expressed

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[33] Id., Ordering Paragraph 1, at pp. 130-131.
[34] D.13-02-015, at p. 82; emphasis added.
[35] Id., at p. 87; emphasis added.
[36] Id., at p. 36.
[37] Id., at pp. 10-11 (emphasis added), with citation to D.12-01-033.
[38] Id., at p. 11; emphasis added.
[39] Id., at p. 68.

confidence that "the dual objectives of reliability and adherence to the policy objectives of the Energy Action Plan can both be met," also at "least cost to ratepayers."[40]

(2) D.13-03-029 (SDG&E PPTAs)

As noted above, SDG&E's long term local capacity requirements have also been recently addressed by the Commission, but were considered in the context of a *separate* application (A.11-05-023) seeking approval of certain proposed "Power Purchase Tolling Agreements" (PPTAs).[41] These PPAs had their origins in a 2009 RFO issued by SDG&E to "meet local capacity requirement (LCR) that had been identified in the *2006 LTPP*."[42]

By D.13-03-029, the Commission found a need for SDG&E to procure 298 megawatts of local generation capacity beginning in 2018. In doing so, the Commission approved only one of the proposed PPTAs (the repowering of an existing facility).[43] The two other agreements (Pio Pico Energy Center and Quail Brush Power (new facilities with 20-year contract terms)) were denied without prejudice, permitting SDG&E to file "a renewed application for their approval, if amended to match the timing of the identified need, or upon a different showing of need."[44] Alternatively, SDG&E could issue a new RFO to fill the LCR need identified in D.13-03-029.[45]

In June 2013, SDG&E filed A.13-06-015, currently pending before the Commission, seeking authority to enter into "an amended power purchase tolling agreement" with the Pio Pico Energy Center for 305 MWs to fill the local capacity requirement need identified in D.13-03-

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[40] D.13-02-015, at p. 79.
[41] D.13-03-029, otherwise referred to as the "Sand Diego Gas and Electric Power Purchase Tolling Agreement Decision" (R.12-03-014 Revised Scoping Ruling, Attachment A, at p. 1),
[42] D.13-03-029, at p. 3; emphasis added.
[43] D.13-03-029, otherwise referred to as the "Sand Diego Gas and Electric Power Purchase Tolling Agreement Decision" (R.12-03-014 Revised Scoping Ruling, Attachment A, at p. 1),
[44] D.13-03-029, at p. 1.
[45] Id., at p. 14.

029.[46] Among other things, SDG&E claims that the commercial operation date (COD) for Pio Pico of September 1, 2015, "has the added benefit of serving as a reliability insurance policy in light of Southern California Edison's ('SCE') June 7, 2013 announcement regarding the retirement of the San Onofre Nuclear Generating Station ('SONGS')."[47]

While the forum for the Commission to consider SDG&E's PPTAs in D.13-03-029 was more limited in scope than the Track 1 D.13-02-015 (especially for purposes of the 2012 LTPP), the Commission's conclusions in that decision regarding the role of preferred resources in meeting local reliability needs are consistent with the Loading Order and D.13-02-015. Of note, like D.13-02-015, D.13-03-029 reaches outcomes based on the same important distinctions between the Commission's and the CAISO's responsibilities.

Thus, in D.13-03-029, the Commission determined that "the record of the proceeding highlights the limitations of our reliance on the [CAISO's] OTC study" in order for the Commission to meet its obligations "to ensure just and reasonable rates" and account for "reasonable forecasts of uncommitted energy efficiency and demand response, as well as incremental demand-side CHP, in determining whether to authorize the procurement of additional generation resources," to be consistent "with the 'loading order' for how new resources are prioritized."[48] Further, again like D.13-02-015, D.13-03-029 concludes that these preferred resources "can reasonably be expected to occur as a result of State and Commission policies, and to reduce LCR needs in the San Diego area."[49]

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[46] A.13-06-015, at p. 1.
[47] Id., at pp. 1-2.
[48] D.13-03-029, at p. 9.
[49] Id., at pp. 9-10.

(3) D.13-10-040 (Inclusion of Large-Scale Pumped Storage in LTPP Procurement)

As stated above, in D.13-02-015, the Commission required SCE "to procure at least 50 MW of energy storage resources for LCR purposes in the LA basin local area."[50] This action was taken in furtherance of the Governor's June 2010 Clean Energy Jobs Plan for 3000 MW of energy storage to be added to the grid to meet peak demand and support renewable energy generation and "promote inclusion of energy storage technologies in SCE's upcoming procurement process."[51] This level of procurement was viewed "as a reasonable and modest level of targeted procurement of an emerging resource[e], and as an opportunity to assess the cost and performance of energy storage resources."[52]

In doing so, the Commission also noted that it was "examining the feasibility of energy storage technologies in R.10-12-007."[53] In this regard, in October 2013, the Commission issued D.13-10-040 in that proceeding adopting an "Energy Storage Procurement Framework" (ES Framework), inclusive of procurement targets and program design. The ES Framework follows on guiding principles adopted consistent with Assembly Bill (AB) 2414, which added Chapter 7.7 (Sections 2835, et seq.). Specifically, AB 2414 identifies such "energy storage systems" as commercially available technologies "capable of absorbing energy, storing it for a period of time, and thereafter dispatching the energy," which can "reduce emissions of greenhouse gases, reduce demand for peak electrical generation, defer or substitute for an investment in generation, transmission, or distribution assets, or *improve the reliable operation of the electrical transmission or distribution grid*."[54]

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[50] D.13-02-015, at p. 60.
[51] Id., at pp. 60-61.
[52] Id., at p. 62.
[53] Id., at p. 61.
[54] PU Code §§2835 (a)(1) and (3) (emphasis added); 2836, 2836.2.

Notably, however, *excluded* from the ES Framework by D.13-10-040 are large-scale (50 MWs or more) pumped storage projects.[55] While noting that this exclusion, as proposed, was "controversial," the Commission in D.13-10-040 nevertheless proceeded to maintain this exclusion, reasoning that "the sheer size of pumped storage projects would dwarf other smaller, emerging technologies; and as such, would inhibit the fulfillment of market transformation goals."[56] The Commission further found that applicable statute indicated a legislative intent "to encourage a broad range of energy storage technologies" and, "to achieve this," "a limit on the size of pumped hydro storage systems eligible to participate in the particular mechanisms outlined in this decision."[57]

However, in doing so, the Commission also made clear that its decision was not meant "to discourage large-scale pumped storage projects."[58] Instead, the Commission stated that "[o]n the contrary, these types of projects offer similar benefits as all of the … emerging storage technologies targeted by this program."[59] In fact, the value of an established storage technology like large-scale pumped storage was emphasized by many parties as "integral to ensuring grid stability and reliability, especially with upcoming retirement of once through cooling ('OTC') and the permanent closure of the San Onofre Nuclear Generating Station ('SONGS')."[60]

The Commission itself recognized this potential in D.13-10-040 by identifying the *LTPP* proceeding, *including the "new" Track 4*, as the venue for providing a procurement mechanism for large-scale pumped or bulk storage, especially since that technology would have

[55] D.13-10-040, at pp. 34-39.
[56] Id.40, at pp. 30, 34.
[57] Id., at p. 35.
[58] Id., at p. 36.
[59] Id., at p. 36.
[60] Id., at p. 20.

particular application in terms of addressing "local reliability impacts of a potential long-term outage at the San Onofre Nuclear Power Station (SONGS)."[61] Thus, while the ES Framework was expected to move in parallel with ongoing LTPP evaluations of need and "any" storage procurement would be "increasingly tied" to such LTPP determinations, D.13-10-040 brought that timetable forward for large-scale pumped storage excluded from that Framework. D.13-10-040, therefore, requires utilities to "evaluate" "pumped storage projects larger than 50 MW … in their generation solicitations for new capacity in other proceedings"[62] and to "explore opportunities to partner with developers to install large-scale pumped storage projects where they make sense within the other general procurement efforts *underway* in the context of the *LTPP* proceeding or elsewhere."[63]

In addition, Commissioners Peevey and Ferron, in a Joint Concurring Opinion to D.13-10-040, specifically stated that "storage is envisioned as a resource to improve grid reliability" and emphasized the urgency in considering "valuable bulk storage systems, like pumped hydro" now in meeting that need.[64] Thus, among the items these Commissioners felt needed to be "closely monitor[ed]" in this new framework was the following:

> "Large-scale Pumped Hydro Storage. We understand Commissioner Peterman's focus on emerging technologies and market transformation in this proposed decision and the quandary it puts valuable bulk storage systems, like pumped hydro. This Decision orders Commission Staff to hold a workshop on this topic. We are concerned that ratepayers may be missing an opportunity to benefit by limiting the size of pump storage under this decision. We hope that a fix can be found. We are confident that we can evaluate and recognize the true value of bulk storage through this workshop and further work in the *long term procurement planning proceeding* with Commissioner Florio."[65]

[61] D.13-10-040, at p. 33.
[62] Id., Conclusion of Law 9, at p. 74.
[63] Id., at p. 36; emphasis added.
[64] Id., Joint Concurring Opinion, at p. 1-2.
[65] Id., Joint Concurring Opinion, at pp. 1-2; emphasis added.

Thus, like D.13-02-015, D.13-10-040 has direct implications for any procurement that might be authorized in Track 4. Most particularly, it is clear that such procurement must include and extend to large-scale pumped storage that, based on its technology and size, has the potential to greatly reduce the need for any new construction of gas-fired generation projects in Southern California.

III.
THE IMMEDIATE "NEED" FOR LOCAL GENERATION RESOURCES FOR SCE AND SDG&E HAS NOT BEEN DEMONSTRATED AND IS SUBJECT TO NEAR-TERM CHANGE OR LIKELY MITIGATION

A. Track 4 Assumptions and Timing of Commission Decision.

Attachment A of the Revised Scoping Ruling (May 21, 2013) states that its assumptions required to be used in the Track 4 studies were "established, consistent with" not only the 2012 LTPP scenarios and assumptions, but also D.13-02-015 and D.13-03-029.[66] As stated above, the commonality of issues related to "long term reliability" in Southern California makes D.13-02-012 in Track 1 of this *same* rulemaking of particular significance in resolving Track 4 issues.[67]

In terms of the assumptions and "study parameters," Attachment A states that the "primary purpose of the studies is to determine the local resource replacement requirements for SONGS," as well as ensuring that "local procurement can be optimized to address local capacity needs and flexibility should SONGS need replacement."[68] However, Attachment A confirms that "broader studies of local needs" would be "taken up" in the CAISO's Transmission Planning Process (TPP) and that modeling of the transmission system for purpose of these studies would be based on the 2012/2013 TPP.[69]

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[66] Revised Scoping Ruling, Attachment A, at p. 1.
[67] Ex. SCE-1, at 3 (SCE (Nelson)) and 55 (SCE (Cushnie)); Ex. CEERT-1, at pp. II-1 (CEERT (Caldwell)).
[68] Revised Scoping Ruling, Attachment A, at p. 1.
[69] Id., at pp. 1, 13.

Attachment A further classified its assumptions into three categories, including not just "inputs" to the "model," but also "First Contingency" assumptions "representing resources that can be relied upon to address a post-first contingency situation" (i.e., an outage of key high voltage transmission lines) and "Second Contingency" assumptions "representing residual resources that could be used to meet subsequent post-contingency needs."[70] In subsequent rulings, the goals and timing for Track 4 were further clarified. Among other things, it was confirmed that Track 4 was intended to consider "a diverse set of resources to replace whatever the identified need will be in the absence of SONGS" and that all parties were "expected to provide detailed testimony analyzing any reasonable resource options for filling the local reliability needs previously met by SONGS."[71]

In the September 16 AC/ALJ's Ruling, in addition to cancelling Track 2 (System Need), the Assigned Commissioner and ALJ addressed the question of responding to CAISO's Opening Testimony of August 5, 2013, which had "called for deferring Track 4 until after results of the CAISO's next Transmission Planning Process (TPP) are available."[72] Specifically, study results were expected to be provided "as soon as January 2014, a final TPP by March 2014, and a recommended Track 4 decision by the "the 2nd or 3rd quarter of 2014."[73] In doing so, the September 16 AC/ALJ's Ruling confirmed that the "current Track 4 schedule … will not include TPP results," despite recognizing that the "TPP is expected to provide useful information to inform the Commission regarding a decision on both the level and type of resources to replace SONGS in the long run" and "should be taken into account" in a Track 4 decision.[74]

[70] Revised Scoping Ruling, Attachment A, at p. 2.
[71] Id.
[72] September 16 AC/ALJ's Ruling, at pp. 1-2
[73] Id., at p. 2.
[74] Id., at pp. 2, 3.

Nevertheless, the September 16 AC/ALJ's Ruling concluded that, despite the unavailability of the TPP results, "it is appropriate to continue developing the record ahead of such results in order to provide the opportunity for the Commission to make a decision as early as possible."[75] This determination appeared to rest on the conclusion that "due to long lead times for new resources, there is an urgency to start moving toward identifying and filling any identified need as soon as possible."[76] To that end, it was ruled that "we will consider *whether* an *interim* procurement authorization is required, and, if so, the parameters for such authorization (e.g., types of resources, procurement process, etc.)," but that any such decision will "include language that any authorization will *not* be subject to further review based on additional evidence in this proceeding (such as the new TPP)."[77]

Despite comments filed by CEERT, and other parties, questioning the merits of an "interim" Track 4 decision, especially before the results of the 2013-2014 TPP would be available (January 2014),[78] neither the Assigned Commissioner nor the Assigned ALJ has ever ruled on any alternative proposals as to the timing and content of Track 4 procurement authorization. For this reason, the question of "whether" any "interim authorization," especially where no changes to that authorization will result from "additional evidence," including the 2013-2014 TPP, remain very "live" issues and certainly can and must be addressed in the context of the issues posed by the ALJ in his "instructions" for these briefs.

CEERT's argument on the issues identified by ALJ Gamson, therefore, include its recommendations on the timing and content of any Track 4 decision. Put simply, the record in this proceeding simply does not justify any "interim" Track 4 procurement authorization for SCE

[75] September 16 AC/ALJ's Ruling, at p. 3.
[76] Id., at pp. 2-3.
[77] Id.; emphasis added.
[78] See, CEERT September 10 Comments; CEERT October 14 Reply Comments.

or SDG&E by January or Q1 2014. To do so effectively "jumps the gun" and fails to account for not just the 2013-2014 TPP results, but also changes in load forecasts and results of Track 1 RFOs (particularly for preferred resources), among other things, that will be known by the first part of 2014 and will impact any Track 4 need assessment.

CEERT does not dispute that long term local capacity requirements exist for both SCE and SDG&E through 2022. However, it is CEERT's position that inclusion of the "additional evidence" of the TPP results will create a better record than at present to determine both LCR needs without SONGS and the best means (in particular, preferred resources) to reduce or meet that need without jeopardizing timeliness.

B. CAISO, SCE, and SDG&E Track 4 LCR "Need" Studies and Recommendations.

1. Summary

As reviewed below, the Track 4 LCR "need" studies and recommendations of CAISO, SCE, and SDG&E conflict in significant ways and, in many instances, do not follow the Revised Scoping Ruling's assumptions or embrace the Commission's findings in D.13-12-015 or the Loading Order. Inconsistencies also exist as to the recommendations on the required "timing" of any Track 4 decision, the "reliability standards" applied, and even the type or definition of "contingencies" giving rise to a local reliability "need" considered in these studies.

The bottom line is, particularly without the benefit of updated assumptions to mirror critical near-term information (i.e., the 2013-2014 TPP results) that can impact mitigation options that could reduce or meet LCR need other than procuring more conventional gas-fired generation, the Commission simply does not now have a reliable record for making any Track 4 GFG procurement authorization for either SCE or SDG&E in January 2014, whether "interim" or not. Instead, and for many additional reasons identified in CEERT's and other parties'

testimony, this Commission's need assessment must include the very *near term* assessments – from the 2013-2014 TPP results to changes in demand forecasts to the *results* of SCE's Track 1 *preferred resources* RFO – that will be known by early 2014 and will permit a timely Track 4 decision that fully accounts for these changes by June or July 2014. At most, if an interim order is issued, it must continue to focus on building opportunities for preferred resources and energy storage to fill this need.

2. CAISO Position on Track 4 "Need" and Timing and Inputs to Commission Procurement Authorization.

Prior to the start of evidentiary hearings, ALJ Gamson directed that a "comparison exhibit" of party positions be prepared. This exhibit was received into evidence as Exhibit 1 on October 29, 2013. Unfortunately, and with specific reference to the CAISO's testimony, which launched Track 4 on August 5, 2013, the Comparison Exhibit provides only the most basic summary of CAISO's position on Track 4 need and, significantly, excludes CAISO's recommendation that Track 4 procurement authorization should be deferred pending the outcome of its 2013-2014 TPP.

In fact, CAISO's Track 4 recommendations merit much closer scrutiny, especially to establish key areas of difference between CAISO's Track 4 LCR Study[79] and those undertaken by the utilities. To begin with, CAISO identified the "limiting" contingency (N-1-1) it studied for Track 4 as one that would be triggered by an "overlapping outage event" of, e.g., two high voltage transmission lines, such as Sunrise Power Link and the Southwest Powerlink (SWPL).[80]

[79] Ex. ISO-1, at p. 2 (CAISO (Sparks)). An illustrative graph of the CAISO's position on Southern California local reliability need, using the same assumptions as those used and relied in Ex. ISO-1, is contained in Ex. CEERT-X-ISO-1. (See, e.g., RT 1533-1538 (CAISO (Sparks)).

[80] Ex. ISO-2, at p. 2 (CAISO (Sparks)); see also, RT at 1406-1407 (CAISO (Sparks)); Ex. ORA-X-CAISO-2, at p. 3.

In fact, CAISO witness Sparks testified that "the worst contingency is the loss of Sunrise and SWPL for the entire SONGS area."[81]

CAISO's study yielded an resource need ranging from 612 MWs for SDG&E to as high as 1,922 MWs for SCE, depending on the portion of the LCR study identified need being allocated to the LA Basin and after deducting Track 1 authorization.[82] However, most notably, CAISO testified that it was *not* "recommending that the Commission make a procurement decision based on these study results."[83] The reasons supporting this recommendation are critical to understanding that any Track 4 procurement authorization is *premature* and unsupported without consideration of these near-term results. Thus, as CAISO witness Sparks testified:

> "As I mentioned previously, the ISO views these study results as a benchmark from which consideration of potential alternatives to conventional generation (e.g., additional preferred resources, new transmission) can be evaluated to determine the extent to which they would reduce the need for conventional generation. The ISO will continue its studies to evaluate *potential transmission mitigation solutions-including additional reactive support- that might address a portion of these needs*. These studies are being conducted as part of the 2013/2014 transmission planning cycle that is currently underway. The ISO is also willing to evaluate any *additional preferred resources that are determined through this proceeding to be viable from a development standpoint to determine the extent to which they may reduce the needs for conventional generation*. The ISO also wants to consider *incorporating the 2013 IEPR demand forecast* which is anticipated to be completed and adopted by the CEC Commission by the end of this year."[84]

Of these mitigation measures – from transmission additions to preferred resource procurement to changes in the demand forecast – Mr. Sparks emphasized that CAISO's 2013-2014 TPP results should "inform" the "Commission Track 4" "procurement decision" on "the

[81] RT at 1485 (CAISO (Sparks)).1
[82] Exhibit 1, at p. 2 of 16.
[83] Ex. ISO-1, at p. 29 (CAISO (Sparks)); emphasis added.
[84] Ex. ISO-1, at p. 30 (CAISO (Sparks)); emphasis added.

need for additional resources."[85] According to Mr. Sparks, in January 2014, the CAISO "will post a draft report which will include our comprehensive transmission plan findings in terms of reliability upgrades, policy upgrades, economic upgrades."[86]

While Mr. Sparks did not "believe" that the CAISO could "find cost-effective transmission solutions which could completely eliminate" the identified need, those measures could reduce that need and delay could also permit the CAISO to "go and look at," not just transmission options, but also "preferred resource" options that "could meet that need."[87] In fact, Mr. Sparks clarified that, in "the current ISO planning process," the CAISO is "also working on identifying the necessary characteristics of preferred resources such as demand response such that it can meet local needs," work which remains in "process."[88] Mr. Sparks testified that the CAISO is "not predetermining what resources can meet characteristics which haven't been exactly defined yet."[89] In addition to demand response, Mr. Sparks confirmed that "bulk storage" could also meet a local capacity need "[i]f it has the right characteristics."[90]

Therefore, according to Mr. Sparks, the Commission should "wait" to make a decision on Track 4 procurement authorization "until the ISO has completed its studies of potential mitigation solutions (including the need for additional reactive support)" and, "[w]ith that information," can "consider the appropriate resource 'mix' that can meet the local reliability needs arising from the SONGS retirement."[91] Further, given the timing of the CAISO's 2013-2014 TPP results, available in draft in January 2014 and final in March 2014, CAISO testified

[85] Ex. ISO-1, at pp. 30-31 (CAISO (Sparks)).
[86] RT at 1543 (CAISO (Sparks)).
[87] RT at 1540-1541 (CAISO (Sparks)).
[88] RT at 1553 (CAISO (Sparks)).
[89] RT at 1555 (CAISO (Sparks)).
[90] RT at 1544 (CAISO (Sparks)).
[91] Ex. ISO-1, at p. 31 (CAISO (Sparks)).

that a timely decision could be made by the Commission "on additional resource needs related to the SONGS outcome by July, 2014."[92]

It is important to note that *no conditions or limitations* were placed on these CAISO recommendations. Rather, as also understood by many other parties, CAISO's testimony states that *consideration of all Track 4 procurement authority should be deferred "to allow CAISO to complete updated analysis."*[93] In fact, CAISO witness Sparks confirmed at the Track 4 evidentiary hearings that "we weren't recommending anything."[94] Further, Mr. Sparks made clear that the CAISO's 2013-2014 TPP "and other possible mitigation" analysis, expected to be "done" in "January," not only would impact the 2500 MWs of procurement identified in his testimony, but that he was also "reluctant to speculate at this time what that analysis will produce."[95]

Clearly, CAISO did not advocate that any amount of conventional resources should be procured by SCE or SDG&E prior to that time. In fact, in his rebuttal testimony served on October 14, 2013, CAISO witness Sparks focused solely on responding to "issues involving the technical aspects of the ISO's studies and application of the NERC/WECC [North American Electric Reliability Corporation/ Western Electricity Coordinating Council] reliability

[92] Ex. ISO-1, at p. 31 (CAISO (Sparks)).
[93] Ex. ISO-1, at p. 31 (CAISO (Sparks)); emphasis added. As to how this language was interpreted by other parties, see, e.g., Ex. SCE-1, at pp. 56, 58 (SCE (Cushnie)); Ex. SDG&E-1, at pp. 3-4 (SDG&E (Anderson) (asking the Commission to "reject the CAISO's proposal to delay Track 4" and instead authorize SDG&E "to undertake additional procurement," despite the fact that SDG&E "supports the CAISO's efforts.") Witness May for the California Environmental Justice Alliance (CEJA) testified: "Importantly, CAISO has *not* requested new procurement approval for the approximately 2500 MW of need it identified, instead proposing to wait until after 2013/2014 transmission planning to consider added mitigation." (Ex. CEJA-1, at p. 2; emphasis original; see also, pp. 4-5.)
[94] RT at 1422 (CAISO (Sparks)).
[95] RT at 1423 (CAISO (Sparks)).

standards," in particular, the use of "load shedding" as a mitigation for certain outage contingencies.[96]

In the only other rebuttal testimony offered by CAISO, CAISO Witness Millar, in fact, testified that a "basket of solutions," including "preferred resources" and "transmission" should be considered in addressing the CAISO's identified incremental needs for the LA Basin and San Diego.[97] Further, like Mr. Sparks, Mr. Millar confirmed "that there are a number of transmission alternatives that warrant study and consideration, which is taking place in the 2013/2014 transmission planning cycle."[98] Further, Mr. Millar expressed optimism that preferred resources, including new or existing demand response programs, "can be shaped to meet local capacity requirements" [99]

Yet, Mr. Millar nevertheless *summarily* concludes that "it is urgent for the Commission to authorize an all-source procurement for SCE and SDG&E for the amounts requested" by those utilities (500 MW for SCE; 500-550 MWs for SDG&E (see below)).[100] Mr. Millar distinguishes this from authorization of a "comprehensive amount of procurement meant to address all the residual needs, which we advised against in Mr. Sparks' initial testimony."[101] However, even as to that "comprehensive" analysis, the CAISO witnesses confirmed "Southern California" would not be in a "resource short" position until 2020 and the CAISO's "deterministic criteria" used in its transmission planning process is "conservative," even "pessimistic," in focusing on "specifically heavily stressed periods."[102]

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[96] Ex. ISO-3, at p. 1, 2-14 (CAISO (Sparks)).
[97] Ex. ISO-7, at p. 5 (CAISO (Millar)).
[98] Ex. ISO-7, at p. 5 (CAISO (Millar)).
[99] RT at 1604, 1608 (CAISO (Millar)).
[100] Ex. ISO-7, at p. 6 (CAISO (Millar)).
[101] Ex. ISO-7, at p. 6 (CAISO (Millar)).
[102] RT at 1478, 1625 (CAISO (Sparks/Millar)).

However, Witness Millar offered *no* analysis and could not cite to any recommendation by Mr. Sparks in support of the specific amounts being requested by SCE and SDG&E for procurement authorization now.[103] With respect to any "urgency" in granting these requests, Mr. Millar provided only vague references to a "joint agency task force plan" and related agency staff work that has, to date, resulted in no specific action by any agency.[104] The other basis offered by Mr. Millar to move forward was "to get on with the procurement" of "*preferred resources*" so that a "track record of their development and their effectiveness can be established" and "to be able to test out some of these preferred resources and monitor their development."[105]

CEERT certainly shares both Mr. Millar's optimism regarding the role that preferred resources can play in meeting LCR needs and CAISO's commitment to define those attributes and "advance" these resources to meet that need. However, as discussed further below, at least with respect to SDG&E, its requested 500 MW RFO will *not serve* to test or advance preferred resources or storage since that procurement is limited to generation (renewable and conventional) only. This restriction in SDG&E's RFO is clearly at odds with both this Commission's and the CAISO's goals for any Track 4 procurement.

As to the "Joint Reliability Plan," that plan was issued as a "Report" by the Commission at its November 14, 2013 Business Meeting. However, the plan makes clear that it is simply an "agreement" of the CPUC and ISO "to continue inter-organizational cooperation for future resource and reliability planning," "does *not* commit to any policy outcomes" and simply identifies certain initiatives to be considered in an undefined Commission rulemaking that has yet to be issued. Further, as confirmed by CAISO witness Millar, this plan developed between

[103] RT at 1674 (CAISO (Millar)).
[104] Ex. ISO-7, at p. 6 (CAISO (Millar)).
[105] RT at 1640, 1675-1676, 1691 (CAISO (Millar)); emphasis added.

agencies and the Governor's office without notice to or inclusion of the public or interested stakeholders.[106]

In terms of other non-GFG means to address or reduce Track 4 need, such as using "load shedding," a "special protection scheme," or a "safety net" to mitigate outage contingencies, witness Sparks testified that "load shedding in the San Diego local area is not a reasonable or prudent *long-term* mitigation solutions for the N-1-1 contingency."[107] However, both witnesses Sparks and Millar agreed that such measures *could and had been used* to address contingencies, including N-1-1. Thus, both of these CAISO witnesses agreed with ORA Witness Fagan that "'load shedding' could be an interim 'bridge'" to meet local reliability contingencies "until permanent solutions are implemented" or if mitigation options or LCR resources (i.e., preferred resources) were known to be coming online or available.[108] In addition, although "the smallest increment of load shedding is 500 MWs," only an "incremental" procurement of 150 to 300 MWs of resources ("whether it's preferred resources or other types of resources or transmission") would be required to avoid "500 megawatts of load curtailment."[109]

Finally, as to the "probability" of the Sunrise Powerlink failing to operate or experiencing an "outage," CAISO had not performed any such analysis, noting that "Sunrise has only been in service for about less than 18 months" and "reliable" data would not be available.[110] CAISO witness Sparks also confirmed that "demand response resources" could be called upon to mitigate "interruptions of electrical service" in the Imperial Valley area posed by "fire."[111]

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[106] RT at 1660-1664 (CAISO (Millar)). While Mr. Millar qualified that the CAISO "was not referring specifically to this plan as the basis to approve the plan in this proceeding," he nevertheless confirmed that the "ISO's thinking has been informed by some of these discussions." (RT at 1672-1673 (CAISO (Millar)).
[107] Ex. ISO-2, at p. 6 (CAISO (Sparks)); emphasis added.
[108] RT at 1403-1410 (CAISO (Sparks)); Ex. ISO-7, at pp. 11-12 (CAISO (Millar)); RT at 1577-1578 (CAISO (Sparks)).
[109] Ex. ISO-2, at p. 7 (CAISO (Sparks)); RT at 1443-1444, 1483-1484 (CAISO (Sparks)).
[110] RT at 1415-1416 (CAISO (Sparks)).
[111] RT at 1419-1420 (CAISO (Sparks)).

3. SCE and SDG&E Positions on Track 4 "Need" and Timing of Commission Procurement Authorization.

a. Overview

As summarized in the Comparison Exhibit, SCE seeks authorization for an all-source procurement of 500 MWs, which it describes as "incremental" to its Track 1 authorization and to "preferred resources and transmission needed to meet the higher reliability standards used by CAISO particularly relating to voltage support and to mitigate uncertainty in assumptions including load growth."[112] SDG&E identifies a Track 4 need of "1,320 – 1,470 MW without transmission improvement, [which] could be reduce[d] to 370 – 820 MW with major new transmission," based on the assumption that the Commission will approve SDG&E's 300 MW PPTA with Pio Pico in A.13-03-019.[113] To meet that need, SDG&E requests a "supply-side RFO," limited to renewable and conventional resources only, for 500 to 550 MW.[114]

As detailed below, SCE's and SDG&E's testimony only confirms that these requested authorizations are *not needed* by January 2014 and are subject to reduction as a result of mitigation measures (from transmission options to preferred resource procurement), about which more will be known early in 2014. Their studies also reflect varying interpretations of the "contingencies" or "reliability standards" that directly affect the levels of any local reliability need. What is clear is that any procurement that is authorized must at least follow the model of SCE's Track 1 preferred resources solicitation and its Living Pilot for application to *both* SCE *and* SDG&E.

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[112] Ex. 1,at pp. 2 and 11 of 16.
[113] Ex. 1, at p. 2 of 16. At page 11 of 16 of the Comparison Exhibit, SDG&E's position on "transmission" is summarized as follows: "Modeling of conceptual transmission showed potential for reduction in local needs of between 1500-950 split between SCE's and SDG&E's service areas." (Footnote omitted.)
[114] Ex. SDG&E-1, at p. 5 (SDG&E (Anderson)).

b. SCE

The conditions that can impact and reduce local need are most transparently identified in SCE's testimony. As an example, SCE witness Silsbee confirmed that SCE's "study assumptions" did not expressly follow the Revised Scoping Ruling as to preferred resources and treatment of contingencies, but were deemed "to be reasonably consistent."[115] Thus, SCE's testimony and study, based on its own treatment of contingencies, confirms that:

- Application of NERC "reliability standards" versus the CAISO's more "stringent" Local Capacity Technical (LCT) studies in transmission power flow studies can *lower* the need for new local reliability resources;[116]
- That "subtracting the LA Basin procurement already authorized in Track 1 of this proceeding from the 2800 M need identified in SCE's Track 4 studies," leaves a "remaining need for about 1000 MW;"[117] and
- That the "need" for this remaining 1000 MW or "any additional new LCR resources" can be *displaced* by the construction of the Mesa Loop-In Transmission Project (Mesa Loop-In) and SCE's "aggressive use of Preferred Resources," "while still meeting NERC Reliability Standards" and that the "Mesa Loop-In and Preferred Resources" alone "will substantial y reduce the need for conventional generation in the LA Basin."[118]

First, CEERT notes with approval SCE's commitment to, and understanding of its obligation to follow, the Loading Order and preferred resource procurement in a manner consistent with both D.12-01-033 and D.13-02-015.[119] From its proposed Track 4 "all-source" RFO to its pending Track 1 preferred resources RFO and "Living Pilot," it is clear that SCE is taking steps to affirmatively comply with its "ongoing" obligation to look first to preferred resources to meet its energy needs, including LCRs. This commitment stands in stark contrast to

[115] RT at 2121-2122 (SCE (Silsbee)).
[116] Ex. SCE-1, at p. 2 (SCE (Nelson)).
[117] Ex. SCE-1, at p. 3 (SCE (Nelson)).
[118] Ex. SCE-1, at pp. 3, 61 (SCE (Nelson/Rumble)).
[119] Ex. SCE-1, at p. 1 and n. 1; p. 47 and n. 26 (SCE (Nelson/Silsbee).

SDG&E's recommendations, addressed below, for which the affirmative procurement of preferred resources and energy storage simply are not part of SDG&E's Track 4 request, a fact to which CEERT strongly objects.

SCE's testimony did acknowledge that "it is challenging to understand the specific attributes that preferred resources must have to address all reasonable contingent conditions."[120] However, Mr. Silsbee confirmed that "both [SCE's] Track 1 procurement and any procurement that is effectuated through the living pilot become a *forcing function* to require us to truly identify the value of demand response in meeting LCR needs."[121]

Further, SCE made clear that its request for "500 MW of new resources" was actually in response to meeting "CAISO's higher expectation of need," even where SCE itself did not necessarily agree with CAISO's "contingency" distinctions.[122] Thus, SCE concedes that "no new generation is needed to meet NERC Reliability Standards" at this time.[123] Further, SCE witness Silsbee confirmed that, in SCE's study, SCE sought to "capture both elements of satisfying requirements for LCR resources," namely: by "providing LCR resources to the area" or "by reducing the load which reduces the LCR needs."[124] In addition, SCE further confirmed that its Track 4 "preferred resource" assumptions did not even "forecast the results of the Track 1 LTPP procurement efforts," which were not yet available at the close of this record.[125]

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[120] Ex. SCE-1, at p. 19 (SCE (Silsbee)); RT at 2124-2125 (SCE (Silsbee)).
[121] RT at 2126 (SCE (Silsbee)); emphasis added.
[122] Ex. SCE-1, at p. 3 (SCE (Nelson)); Reporter's Transcript (RT) at 2121-2122 (SCE (Silsbee)). As CEERT witness Caldwell testified, such "contingencies" are, in fact, "extremely rare." (Ex. CEERT-1, at p. II-4 (CEERT(Caldwell)).
[123] Ex.SCE-1, at p. 6 (SCE (Nelson)). It should be noted that SCE's caution regarding its reliance on its studies that meet the NERC Reliability Standards does not appear to be based on any lack of confidence with that approach , but provided additional mitigation measures, including load shedding for Category C.3 contingency, to avoid "monetary sanctions" that can be imposed for "failure to meet the minimum federally mandated NERC Reliability Standards." (Ex. SCE-1, at pp. 26, 28-29 (SCE (Chinn)).
[124] RT at 2127 (SCE (Silsbee)).
[125] Ex. SCE-1, at p. 18 (SCE (Silsbee)); see also, RT at 1911, 1913-1914 (SCE (Nelson) ("indicative bids are due end of the year"). There is also uncertainty as to the timing and funding for the Living Pilot. (RT at 1910-1911 (SCE (Nelson)).

Nevertheless, SCE asks the Commission to authorize the "additional 500 MW to bridge the gap between the CAISO need assessment and SCE's estimate of the LCR need," with these additional resources to be procured through SCE's "existing Track 1 procurement process" with "the resulting power purchase agreements" to be brought to the Commission for review and approval in "third quarter 2014."[126] Yet, SCE also appears to hedge even its requested Track 1 authorization by testifying:

- Given that the "Commission will be aware of CAISO's additional analysis at the time SCE closes its LCR solicitation (from Track 1) and submits its proposed contracts to the Commission for approval," Commission will be able to "withhold its approval" if the "CAISO's analysis suggest that additional LCR resources are not required" and the Commission "fully deliberates the CAISO's additional Track 4 analysis and procurement recommendations," *or*
- "Conversely, if CAISO analysis suggests that more than 500 MW of LCR resources are needed, the incremental LCR need above SCE's 500 MW recommendation can be combined with any Track 2 procurement authorization that the Commission grants."[127]

However, SCE's testimony regarding whether or not the Commission might "withhold" its approval of contracts signed pursuant to the additional LCR procurement authorization is undermined by its Comments filed on the Track 4 schedule on September 10, 2013. There SCE stated its support for an "interim decision to authorize Track 4 procurement, so long as the authorization is not subject to a subsequent decrease in the final decision."[128]

SCE also appears to offer its "plans" for future preferred resource procurement (the "Living Pilot") as a means of further bolstering its request for additional new LCR resources now. Yet, SCE is not requesting approval for its Living Pilot here, acknowledges that additional

[126] Ex. SCE-1, at p. 3 (SCE (Nelson)).
[127] Ex. SCE-1, at p. 4 (SCE (Nelson)).
[128] SCE Opening Comments on Schedule (September 10, 2013), at p. 1. See also, Ex. ORA-1, at p. 15 (ORA (Ciupagea)).

funding may be required to support the Pilot, along with "contingent generation site development" that may be "needed to backstop the Pilot."[129] According to SCE witness Nelson, in describing the Living Pilot in its Track 4 testimony, SCE was "really bringing it for a public airing and to be thorough," noting a "workshop or symposium" planned by the Commission on the Living Pilot in November 2013.[130]

In terms of considering "CAISO's additional analysis and related procurement recommendations" in "early 2014," SCE asks that the Commission consider that analysis (i.e., 2013-2014 TPP) "in a separate phase of Track 4 (Residual Phase)."[131] On this point, SCE testifies that its "subsequent Track 2 procurement effort combined with any Track 4 Residual Phase procurement authorization *can commence at the end of 2014* with a planned submission of procurement application(s) to the Commission *no later than early 2016*."[132]

c. SDG&E

SDG&E, in making its request for 550 MW of Track 4 procurement authorizations now, seeks to meet this need through procurement of "supply-side resources," *limited* to renewable and conventional resources only.[133] In doing so, SDG&E asks the Commission to "reject the CAISO's proposal to delay Track 4, while stating that it "supports the CAISO's efforts" and the "need for additional studies to fully determine the ability of transmission upgrades to reduce LCR need."[134] Although SDG&E "believes it is most productive to move forward with the understanding that LCR need falls within a specified range," SDG&E offers no basis why a Commission decision authorizing additional LCR procurement for SDG&E beyond Pio Pico (if

[129] Ex. SCE -1, at pp. 4-5 (SCE (Nelson)). See also, Ex. SCE-1, at p. 61 (SCE (Rumble) "[t]o ensure reliability is maintained given the tight timeline and other uncertainties, the Preferred Resources and the Mesa Loop-In should be backstopped with a contingent resource strategy.")
[130] RT at 1911-1912 (SCE (Nelson)).
[131] Ex. SCE-1, at p. 56 (SCE (Cushnie)).
[132] Ex. SCE-1, at p. 57 (SCE (Cusnhie)); emphasis added.
[133] Ex. SDG&E-1, at p. 5 (SDG&E (Anderson)).
[134] Ex. SDG&E-1, at pp. 3, 4 (SDG&E (Anderson)).

approved) could not be accomplished by June or July 2014, instead of January 2014, to account for, e.g., the CAISO's 2013-2014 TPP study results.

Further, SDG&E concedes from the outset that "its transmission studies for load and resources," initiated in advance of the creation of Track 4, used "assumptions" that were "similar but not identical to those that the Commission requested the CAISO use in its Track 4 studies."[135] SDG&E witness Anderson also confirmed that "adding major transmission capability in to the load pocket can reduce the need for local generation by approximately 1,000 to 1,400 MW," but that there was substantial uncertainty as to how quickly those projects could be licensed and built.[136]

Yet, SDG&E nevertheless urges the Commission not to attempt "precision" on these differences in assumptions, given that "forecasting demand and resource availability is an imperfect science," and instead authorize a "range of potential need" to "account for the heightened level of uncertainty in the current environment."[137] Of note, SDG&E also testified that it did not "necessarily agree or disagree with the use of the N-1-1 as the limiting contingency without allowance for load shedding" and that, at least "as a short-term operating sort of mitigation, we accept that load shedding is sometimes necessary."[138]

SDG&E's *changed* assumptions, however, are not only at odds with the Revised Scoping Ruling, but also in conflict with the Commission's Loading Order of Preferred Resources undermining the credibility of SDG&E's requested procurement authorization in the first place. Among other things, SDG&E's "generation and transmission scenarios" used in its studies did

[135] Ex. SDG&E-1, at p. 2 (SDG&E (Anderson)).
[136] Id.
[137] Id.
[138] RT at 1754-1755 (SDG&E (Anderson)).

not include a "Preferred Resources Scenario," as SCE did.[139] Further, SDG&E's modeling assumptions "did not include any demand response as a load reduction," "excluded demand response programs as a base assumption," failed to provide for any pro-active procurement of preferred resources, as required for SCE in Track 1 (D.13-02-015).[140] With a revision to its testimony during hearings, SDG&E also excluded energy storage, including large-scale bulk storage, from its proposed RFO for between 500-550 MW of supply-side resources.[141]

Instead, while acknowledging that reliance on demand response resources "can meet some of the local needs" and would be preferable to load shedding, SDG&E nevertheless solely relies only on "program" support for energy efficiency, demand response, and energy storage in the "context of the dedicated EE" and "DR" proceedings and the "Storage OII process.[142] SDG&E further leaves to these proceedings and the Commission "to consider the effectiveness of programs that reduce loads in both the afternoon and evenings," rather than proposing any procurement here that would advance or test that effectiveness, with the acknowledgement that even "supply-side resources" may also lack the "ability" to meet "evening" and "afternoon" load demands.[143]

Remarkably, even with the direction in D.13-10-040 for large-scale pumped storage projects, excluded from the ES Framework, to be evaluated by utilities in their "solicitations for new capacity in other proceedings," of which SDG&E witness Anderson was aware, SDG&E did not change its recommendation to limit its 500 MW RFO to generation resources (renewable

[139] Ex. SDG&E-2, at p. 8 (SDG&E (Jontry)). SDG&E witness Jontry testified that SDG&E "didn't have time to model the additional scenario." (RT at 1765 (SDG&E (Jontry)).
[140] Ex. SDG&E-1, at pp. 7, 11 (SDG&E (Anderson)).
[141] Ex. SDG&E-1, at pp. 5, 12 (SDG&E (Anderson)).
[142] Ex. SDG&E-1, at p. 4 (SDG&E (Anderson)); Ex. SDG&E-2, at p. 3 (SDG&E (Anderson)); RT at 1767, 1800 (SDG&E (Jontry/Anderson)).
[143] Ex. SDG&E-1, at p. 16 (SDG&E (Anderson)).

or conventional).[144] Similarly, SDG&E declined to offer any proposal to affirmatively procure preferred resources or storage, even in a manner similar to SCE's Track 1 preferred resources RFO or SCE's "Living Pilot." In this regard, SDG&E pointed to a 2007 procurement effort that did not result in "incremental demand response" as a reason not to recommend such procurement now.[145] However, the fact that preferred resource procurement "needs to be incremental of what is in the baseline forecasts for energy efficiency and DR" has not stopped SCE, nor should it be an excuse for SDG&E, from soliciting "incremental" preferred resources.[146]

In fact, on further questioning from assigned Commissioner Florio during the evidentiary hearings, SDG&E witness Anderson confirmed that, if a preferred resources RFO were conducted today, SDG&E could "specify" the requirements that are needed by preferred resources to count toward meeting an LCR need.[147] When asked further by Commissioner Florio whether, if the Commission "asked SDG&E something similar" to SCE's preferred resources RFO or Living Pilot, could SDG&E do so, Mr. Anderson testified: "I'm sure if the Commission asked, we will find a way to do it."[148]

C. A January or Q1 2014 Commission Decision Finding a Track 4 Need Now to Authorize SCE's 500 MW and SDG&E's 550 MW Procurement Requests Is *Not* Justified.

The central issues directed by ALJ Gamson to be addressed in this brief (whether SCE or SDG&E should be authorized to procure "additional resources" and, if so, in "what amounts" and type and by what "process") turn on whether there has even been a demonstration of an immediate Track 4 LCR "need" for SCE and SDG&E that *must be authorized by January or Q1*

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[144] RT at 1863 (SDG&E (Anderson)); D.13-10-040, at p. 74. This recommendation was unchanged by SDG&E, despite also agreeing that there are challenges associated with permitting and constructing new gas-fired generation in San Diego. (RT at 1859-1860 (SDG&E (Anderson)).
[145] RT at 1813 (SDG&E (Anderson)).
[146] RT at 1911 (SCE (Nelson)).
[147] RT at 1814 (SDG&E (Anderson)).
[148] RT at 1815-1816 (SDG&E (Anderson)). See also, RT at 1869-1870 (SDG&E (Anderson)) (agreeing that SCE's "Living Pilot" "is one way of going at" affirmatively soliciting preferred resources.)

2014. This question has added significance given the demonstrable impact any such decision will have on this State's environmental and climate goals *if* the result is an over-procurement of conventional gas-fired resources. Any step in that direction requires a *strong and sound* record of need that must be filled in that manner and authorized now.

It is CEERT's position, based on the very "fluid" and vague record of studies and requests made by CAISO, SCE, and SDG&E to date, that no such record exists today and as to any assumptions made that have been used to "suggest" that a local reliability need exists that must be met with conventional GFG resources, all of them will clearly be improved by and benefit from near-term information that will be confirmed within the first half of 2014. Thus, as CEERT testified here, based on all current forecasts and market prices for capacity, "there is no shortage of energy to meet load" and current and near-term "mitigation" options are and will be available to ensure energy is provided to meet load even in the case of "extremely rare" contingency outages.[149]

In this regard, as supported by the thoughtful and thorough testimony of multiple parties, including CEERT, any additional conventional gas-fired generation procurement beyond that authorized in Track 1 and potentially by the Commission granting SDG&E's Pio Pico PPTA is offset or negated by *multiple* factors, regardless of "contingencies" considered or reliability standards applied in current studies. These include the cancellation of Track 2; viable transmission enhancements to improve both real and reactive powers flows on the Southern California grid; the commencement of Track 1 Preferred Resources procurement; the extensive responses to the Commission's Symposium on SCE's "Living Pilot," which have been encouraged to bid into that solicitation; new Energy Storage procurement targets for SCE and SDG&E "in the relevant timeline and location for Track 4;" the potential of large-scale pumped

[149] Ex. CEERT-1, at pp. II-1, II-4, II-5 (CEERT (Caldwell)).

storage now to be included in utility IOU capacity solicitations; and even the existence of a large surplus of natural gas generation capacity in California that is projected to continue throughout this LTPP planning cycle regardless of the retirement of the OTC plants.[150]

On this last point, CEERT witness Caldwell testified:

> "Resources procured to satisfy the Track 4 LCR need will, by definition, be called upon to actually supply that capacity and provide energy to meet load on extremely rare occasions – on the order of a few hours per year at most. Any operations by new conventional generation that may be procured in Track 4 above that rare, but essential, LCR requirement will only displace other existing gas resources that now supply that energy, flexibility, and generic system capacity."[151]

In fact, "the economic health of the existing gas fleet and the possibility of cost-effective retrofits to increase its value on the twenty first century California grid must be considered" before procuring yet more new gas capacity to fill a perceived LCR need in Track 4.[152] In the same vein, California Environmental Justice Alliance (CEJA) witness May concluded: "Existing [GFG] resources can provide a bridge in the unlikely case that new needs exist, while California is building its new clean renewable energy infrastructure," an approach that clearly makes "more sense than adding new gas capacity with a long plant life."[153]

All of these circumstances obviate the need to authorize *more* procurement now of conventional resources beyond those already authorized in D.13-02-015 and D.13-03-029, especially since construction of "new natural gas facilities located within the LCR need area(s)" is clearly a "last resort" option if this Commission is to continue its advancement of this State's Loading Order and environmental and climate goals.[154] New gas-fired generation facilities built

[150] Ex. CEERT-1, at pp. II-1, II-4, II-5 (CEERT (Caldwell)).
[151] Ex. CEERT-1, at p. II-4 (CEERT (Caldwell)).
[152] Ex. CEERT-1, at p. II-6 (CEERT (Caldwell)).
[153] Ex. CEJA-1, at p. 21 (CEJA (May)).
[154] Ex. CEERT-1, at pp. II-1, II-5 (CEERT (Caldwell)).

in response to any "generation" RFO are not simply "temporary" fixes, but represent long-term commitment (up to 30 years) to fossil resources in conflict with these policies.

Any step to authorize such additional resources now beyond what is *currently being procured* by SCE in Track 1 and likely to be approved for SDG&E (Pio Pico) is simply unnecessary by January 2014. This is especially true given the challenges by several parties, including Sierra Club California (Sierra Club) and Natural Resources Defense Council (NRDC), to the utilities' understatement of available preferred resources.[155] As Sierra Club testified, it can, in fact, be reasonably concluded that if the utilities had accounted for all available preferred resources, the "need" would have even been "hundreds of megawatts lower."[156]

In fact, the testimony of multiple parties provide strong support for the Commission to question many of the assumptions used in the CAISO and IOUs' studies and, at the least, await the results of multiple near-term changes to key assumptions impacting LCR need that will be known early in 2014. On this point, a wide range of parties – from ORA, CEJA, Sierra Club, NRDC, Environmental Defense Fund (EDF), Clean Coalition (CC), and EnerNOC, Inc. – all conclude that the CAISO's modeling and reliability assumptions were "very conservative" and even "extreme," that assumptions used by SCE and SDG&E were inaccurate, especially with respect to preferred resources, and that, in turn, SCE and SDG&E "have not demonstrated a need for new generation resources in the SONGS study area" based even on its current assumptions.[157] Further, like CEERT, these parties see the value and urge consideration of the CAISO's 2013/2014 TPP, updated assumptions on preferred resources and energy storage

[155] Ex. SC-1, at pp. 17-18 (Sierra Club (Powers)); Ex. NRDC-1.
[156] Ex. SC-1, at p. 18 (Sierra Club (Powers)). As noted above, SDG&E's modeling of "preferred resources" was particularly disappointing since it assumed "lose estimates of DR, almost no wholesale DG PV, and no new energy storage, in its 2022 modeling." (Ex. SC-1, at p. 19 (Sierra Club (Powers)).
[157] Ex. ORA-1, at pp. 8-9 (ORA (Ciupagea)); see also, Ex. CEJA-1, at pp. 2, 4-6, 9, 14, 21, 28 (CEJA (May)); Ex. CC-1, at p. 1 (Clean Coalition (Wang/White)); Ex. EDF-1, at pp. 2-4 (Environmental Defense Fund (EDF) Fine/Moss); Ex. EnerNOC-1, at p. II-5 (EnerNOC, Inc. (EnerNOC) (Tierney-Lloyd)); Ex. SC-1, at p. 1 (Sierra Club (Powers)); Ex. NRDC-1, at pp. 4-5 (NRDC (Martinez)).

procurement and availability to meet LCR needs, and the CEC's reduced demand forecast for the LA Basin and San Diego for 2022 before authorizing SCE and/or SDG&E to procure additional LCR resources.[158]

CEERT certainly shares EDF's view that it "is of paramount importance to avoid potentially unnecessary, environmentally damaging and costly facilities that would become a part of the energy landscape for decades."[159] From Sierra Club's perspective, the "commission has many low cost non-generation and no-transmission tools at its disposal now that it can deploy on an 'as needed' basis if necessitated by load growth," especially those that "each expedite implementation of local preferred resources."[160] On this point, EnerNOC witness Tierney-Lloyd also sees the value of proposals like SCE's "Living Pilot" that will enhance the "aggressive" development of preferred resources to meet local needs.[161] As the ORA witnesses testified, it is critically important to consider all relevant and updated transmission system solutions and resource combinations available to maintain grid reliability "for the entire SONGS study area" that "minimizes ratepayer cost and GHG emissions in the entire SONGS study area, and not just in the LA Basin."[162]

While the use or availability of "load shed" or "controlled load drop" to address rare contingency outages was debated by witnesses, the record makes clear that even this mitigation option is available under certain circumstances. In particular, according to ORA witness Fagan, load shed, which can be done automatically or manually, can be part of a "special protection

[158] Ex. ORA-5, at pp. 1-2 (ORA (Rogers)); Ex. ORA-1, at p. 9 (ORA (Ciupagea)); Ex. ORA-3, at pp.13-14, 17-18, 21); Ex. CEJA-1, at pp. 2, 28 (CEJA (May)); Ex. CC-1, at p. 1 (Clean Coalition (Wang/White)); Ex. EDF-1, at pp. 2-4 (Environmental Defense Fund (EDF) Fine/Moss); Ex. EnerNOC-1, at p. II-5 (EnerNOC, Inc. (EnerNOC) (Tierney-Lloyd)); Ex. SC-1, at p. 1 (Sierra Club (Powers)); Ex. NRDC-1, at pp. 4-5 (Natural Resources Defense Council (NRDC) (Martinez)).
[159] Ex. EDF-1, at p. 2 (EDF (Fine/Moss)).
[160] Ex. SC-1, at p. 23 (Sierra Club (Powers)).
[161] Ex. EnerNOC-1, at pp. II-10, II-11, II-13 (EnerNOC (Tierney-Lloyd)).
[162] Ex. ORA-3, at pp. 17-18 (ORA (Fagan)); Ex. ORA-5, at pp. 1-2 (ORA (Rogers)); Ex. ORA-1, at p. 9 (ORA (Ciupagea)).

system (SPS)" designed to detect a system condition that is known to cause "unusual" stress to the power system and take predetermined action (i.e., controlled load drop) to alleviate the condition.[163] Applied to the rare and infrequent circumstances that would even trigger an N-1-1 ("first contingency") event, Mr. Fagan confirmed that an SPS would be a low cost option compared to building new infrastructure to reduce LCR need, provide "insurance against extreme contingency events," and, in turn, at least "serve as a 'bridge' mitigation measure to ensure reliability prior to the completion of planned infrastructure assets."[164]

Of significance, CAISO witness Millar confirmed that ORA's conclusion that CAISO reliability standards specifically permit the use of SPS's in response to contingency events.[165] Mr. Millar also agreed with ORA that load shedding could be an interim "bridge" until permanent solutions are implemented, and identified two "arrangements" currently in place in Southern California.[166]

While "controlled load shedding" may not be an appropriate long-term solution to addressing extreme contingencies for reasons identified by SDG&E's witness Jontry, among others, even he concedes it "may be appropriate as a short-term mitigation or in certain specific, localized instances."[167] In fact, that is just the purpose for which it can be considered here – as the "bridge" recommended by ORA -- to permit at least the next six months to update critical assumptions on transmission and preferred resources, among others, to assessing the Southern Californian reliability needs over the next 7 to 10 years without SONGS. Clearly, the mere passage of even one or two quarters in 2014 to accommodate consideration of changes in key

[163] Ex. ORA-3, at p. 4 (ORA (Fagan)).
[164] Ex. ORA-3, at pp. 4-7 (ORA (Fagan)); RT at 1839 (Fagan)).
[165] Ex. CAISO-7, at pp. 8, 11 (CAISO (Millar)).
[166] Ex. CAISO-7,at p. 12 (CAISO (Millar)).
[167] Ex. SDG&E 4, at p. 1 (SDG&E (Jontry)). Mr. Jontry cited to "potentially severe economic and civil consequences" of load shedding applied on a long-term basis, but also agreed that the "determination as to whether use of controlled load shedding as mitigation for a particular event is appropriate must be made on a case-by-case basis." (Id., at p. 2.)

assumptions on LCR needs, including any assessment by the Commission on the merits of CAISO's study parameters, is both prudent and necessary

To do otherwise risks "approval" now that will not be that easy to "rescind," especially where costly siting, permitting, and development is at issue, once it is given.[168] As SCE Witness Nelson testified, there are "significant challenges to siting new generation in the LA Basin" and potential "time constraints," that, from CEERT's perspective, translate to increased costs of such "investment" that, will be borne by ratepayers. Once a commitment is made to that course of action, it will make it harder for the generators who finance these projects to agree to terms that will make it that easy for this Commission to "withhold" approval of related procurement agreements.[169]

In fact, it is just as problematic that SCE will in fact be able to negotiate and sign "option contracts" with "a buyer's right to terminate subject to a *termination payment*" as it will be for such procurement or contingent development to provide an "additional margin to respond quickly to near term unexpected changes, such as increased load growth…or accelerated transportation electrification."[170] Further, in opposing SCE's proposal to pursue bilateral options or contingency contracts with third party developers as a backup for resource development that does not materialize, ORA witness Rogers confirmed that such an "approach would expose ratepayers to costly termination payments in the event the contracts prove unnecessary."[171] Thus, "if these GFG resources are procured before they are needed, this current paradigm has the

[168] As SCE Witness Nelson testified, there are "significant challenges to siting new generation in the LA Basin" and potential "time constraints," that, from CEERT's perspective, translate to increased costs of such "investment" to ratepayers
[169] Ex. SCE-1, at pp. 3-4 (SCE (Nelson)).
[170] Ex. SCE-1, at pp. 5, 6 (SCE (Nelson)).
[171] Ex. ORA-5, at pp. 3, 11 (ORA (Rogers)).

potential to expose ratepayers to unreasonably high costs, as well as undermine California's greenhouse gas (GHG) reduction goals."[172]

CEERT understands TURN Witness Woodruff's concern that there may be "no single 'silver bullet' projects, technologies or other solutions that will cure all the South Coast's reliability challenges in one 'fell swoop.'"[173] But the Commission's goal here should be to adopt the best multi-year plan that gives full consideration of all mitigation measures and preferred resource and energy storage procurement solutions that will reduce and address these challenges through 2020 or 2022. Such an approach is not based on solutions in "one 'fell swoop,'" but instead ensure that the Commission does and has "balanced" its responsibilities to maintain reliable electric service at just and reasonable rates and in furtherance of this State's environment and climate change goals.

For those reasons, CEERT disagrees with TURN that the challenges posed by the SONGS retirement and/or "anticipated retirements of gas-fired generators (GFGs) in the region that rely on Once through Cooling (OTC) technology" should be answered *now* by authorizing SCE and SDG&E to procure *more* gas-fired generation in January or Q1 2014.[174] In fact, again, SCE itself has testified that its currently forecasted SONGS LCR need can be fully displaced by the construction of the Mesa Loop-In (which alone will substantially reduce the need for conventional generation in the LA Basin) and its "aggressive use of Preferred Resources," "while still meeting NERC Reliability Standards."[175] While TURN does not necessarily see transmission solutions that may result from the 2013/2014 TPP as a guaranteed panacea for

[172] Ex. ORA-5, at pp. 5-6 (ORA (Rogers)).
[173] Ex. TURN-1, at p. 2 (TURN (Woodruff)).
[174] Ex. TURN-1, at p. 3 (TURN (Woodruff)). CEERT understands that TURN's recommendation is for SCE and SDG&E to solicit an additional 500 MW each of local resources on an "all-source" basis, but, if procured in early 2014, the composition of that procurement is most likely to be all or mostly GFGs.
[175] Ex. SCE-1, at pp. 3, 61 (SCE (Nelson/Rumble)).

eliminating LCR needs in the LA Basin, TURN witness Woodruff nevertheless recognizes the "key advantages" offered by transmission "for meeting local needs," challenges "CAISO's more conservative and costly method" for mitigating the "key 'N-1-1' contingency," and agrees that "the deployment of preferred resources might be particularly useful for meeting [reliability] needs in a short time horizon."[176]

It is the combination of circumstances and facts demonstrated in this Track 4 record that support the Commission deferring a Track 4 decision to consider the findings from the 2013-2014 TPP, changes in the IEPR demand forecast, and results from SCE's Track 1 preferred resource procurement – all of which will be before the Commission in the first quarter of 2014 and are certainly worthy of consideration before *more* gas-fired generation is procured for development in the LA Basin. On this point, in its Comments on the Track 4 Schedule (September 10, 2013) and Reply Comments on the ALJ's Questions posed at the September 4 PHC, CEERT offered a schedule for a final (not interim) Track 4 decision by June 2014 that would ensure consideration of the following *before authorization by the Commission of any additional GFG procurement by SCE or SDG&E beyond Track 1 or Pio Pico (if A.13-06-015 is granted)*:[177]

- Results from the CAISO's 2013-2014 TPP Process,
- Results from SCE's Track 1 procurement (both conventional and preferred resources),
- Updated California Energy Commission (CEC) demand forecasts (revised in September 2013), and anticipated impacts on load that will result from this Commission's changes in time of use rates for all customer classes, and

[176] Ex. TURN-1, at pp. 3, 6, 10 (TURN (Woodruff)).
[177] In its September 10 Comments on the Track 4 schedule, CEERT also noted that a staff document before the CEC in its IEPR identified "early 2015," not "third quarter 2014," as a possible deadline for approval of SCE and SDG&E power purchase agreements (PPAs) to meet generation needs that may result based on SONGS' closure and the current OTC generation retirement timeline. (CEERT Comments on Track 4 Schedule (September 10, 2013), at pp. 2-6.)

- Initiation of SCE's "Living Pilot," that will "aggressively pursue Preferred Resources in a targeted high-need area in Orange County through its Preferred Resources 'Living' Pilot Program (Pilot)" and permit "reliability in this area [to] be managed without LCR generation above the amounts authorized in Track 1."(Ex. SCE-1, at pp. 4, 49.)[178] Of note, SCE's "Living Pilot" has already been the subject of more than 50 proposals to the Commission in its Symposium held on November 6, 2013, and, as stated by assigned Commissioner Florio at that time, SCE already has funds to commence that pilot without an additional application.

As CEERT's Track 4 testimony and comments make clear, CEERT understands that this State should not risk the "lights going out" or OTC deadlines not being met *if* such an outcome could have been avoided by timely generation or transmission resource procurement. However, arguments made by CAISO, certain utilities, and other parties that a "static" consideration of *past* assumptions, without change or updates to Track 4 studies, is the best way forward to identify reliability needs should be rejected in undertaking such a critical task.[179]

Instead, CEERT continues to believe that the Commission has a duty to ensure that any such procurement decision is fully and publicly vetted and supported. CEERT believes that there is time to develop that record and have a "holistic" *final* decision on the issue of LCR needs and "Southern California Reliability." In fact, as recommended by CEERT:

> "[I]f there is to be acceleration of any schedule to achieve an 'early 2015' PPA goal, it should come *after* a *final* decision has been issued confirming that a need exists and that it can only be met by conventional generation. Once that decision is made, then the Commission can focus on available tools to streamline and accelerate, as appropriate, the solicitation and procurement approval process, as well as any approvals required to facilitate transmission alternatives."[180]

As CEERT witness Caldwell further confirmed in his Track 4 testimony:

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[178] CEERT Comments on Track 4 Schedule (September 10, 2013), at pp. 2-6; CEERT Reply Comments on ALJ PHC Questions (October 14, 2013), at pp. 2-5.
[179] CEERT Reply Comments on ALJ PHC Questions, at p. 2.
[180] CEERT Comments on Track 4 Schedule (September 10, 2013), at p. 5.

> "Notably, the schedule proposed by CEERT in those Comments included full and appropriate consideration of the CAISO's Transmission Planning Process (TPP) study, which is expected in January 2014, *before* a Commission decision is made authorizing any LCR procurement beyond that authorized in D.13-02-015. CEERT's proposed schedule further permits a Proposed Decision on final procurement authorization to be issued by June 2014, following opportunities for public input. This schedule will result in a holistic decision that will fully account for all factors affecting this need, preserve Commission policies, and avoid the piecemeal or premature overreliance on fossil procurement."[181]

Based on the record in Track 4 to date, there is simply no basis for the Commission to grant any "interim" conventional generation procurement authorization to SCE and SDG&E beyond that authorized in Track 1 in D.13-02-015 or to the extent authorized in D.13-03-029. However, as addressed below, should the Commission nevertheless proceed to do so, CEERT urges that authorization to be conditioned in the same manner as D.13-02-015, with RFOs that extend to all sources, including large-scale pumped storage, with a mandatory minimum procurement from preferred and storage resources.

IV.
IF ANY TRACK 4 PROCUREMENT IS AUTHORIZED IN JANUARY OR Q1 2014, LOADING ORDER PREFERRED RESOURCES AND LARGE-SCALE PUMPED STORAGE MUST BE INCLUDED AMONG THE "ADDITIONAL RESOURCES" TO BE PROCURED.

A. Procurement of Preferred Resources and Storage Must Included in Any "Additional Resources" Authorized to be Procured in Track 4.

Based on both the applicable law and record, it is again CEERT's position that neither currently supports interim Track 4 procurement authorization to be granted by the Commission for either SCE or SDG&E in the first quarter of 2014. However, if the Commission proceeds to grant any portion of the requests made by SCE (500 MWs) or SDG&E (500-550 MWs), it is imperative for the Commission to follow the same law, policy, and directions contained in D.13-02-015.

[181] Ex. CEERT-1, at p. II-6 (CEERT (Caldwell)).

To that end, CEERT joins the multiple parties who, like CEERT, have testified in support of the Commission continuing on the path of "capturing all the cost-effective preferred resource potential before contemplating the procurement of conventional generation."[182] In that regard, not only were utility assumptions found wanting as to the expected level of preferred resources, even with an "aggressive" strategy,[183] but CAISO and utility testimony largely understated the value and capability of those resources to meet forecasted LCR need.[184] Of note, EDF's testimony identified multiple ways in which increased levels of preferred resources could be quickly facilitated through pilot programs and tariff changes, including support for the "Living Pilot" as not just "contributing to the literature," but being designed for "immediate scalability" if the criteria is met.[185] In fact, there is at least a shared "optimism" by the CAISO and SCE regarding the capability of demand response, as an example, to meet local reliability needs.[186]

In these circumstances, D.13-02-015 must continue to provide the directional template for the proportions in which "preferred resources" and energy storage (discussed further below) must be included in any Track 4 authorization. In doing so, a further examination of the requests being made by SCE and SDG&E regarding their "targeted" resource-type is required.

According to SCE, it "has not identified a specific resource technology need at this time for its requested 500 MW of new resource procurement authorization and, combined with SCE's current 200 MW of all source Track 1 procurement authorization, the resulting 700 MW "of proposed 'all source' procurement authorization will allow SCE consistent with the Preferred Loading Order, which should result in a lower cost outcome for customers."[187] If unsuccessful

[182] Ex. ORA-1, at p. 7 (ORA (Ciupagea)).
[183] Ex. CEJA-1, at pp. 24-25 (CEJA (May)).
[184] Ex. CEJA-1, at pp. 46-55 (CEJA (May)); Ex. CC-1, at pp. 4-9 (Sahm/Wang)); Ex. EDF-1, at pp. 6-13 (Fine/Moss)); Ex. NRDC-1, at p. 3 (NRDC (Martinez)); Ex. NRDC-2, at pp 3-4 (NRDC (Martinez)).
[185] Ex. EDF-1, at pp. 6-13 (Fine/Moss)).
[186] RT at 1604, 1608 (CAISO (Millar)); RT at 1912-1913 (SCE (Nelson)).
[187] Ex. SCE-1, at p. 57 (SCE (Cushnie)).

in yielding the requisite MWs, "SCE may conduct subsequent solicitations, seek to modify existing utility programs for Preferred Resources, and/or pursue bilateral negotiations to complete the procurement of necessary new resources."[188]

While SCE's plans are laudable, outcomes still are in question for the pending Track 1 preferred resources solicitation, especially where no public stakeholder input was allowed in developing that RFO and questions may remain about its effectiveness, in those circumstances, for that purpose. In addition, the Living Pilot remains restricted to a sub-area of Orange County, does not consider the SONGS reliability area as a whole, and has yet to be fully funded.[189]

SCE's procurement plans, inclusive of its still-pending Track 1 Preferred Resource solicitation and its Living Pilot, targeting "an aggressive amount of Preferred Resource development," however, are clearly preferable to SDG&E's request to exclusively procure its requested 500-550 Track 4 need through a supply-side RFO limited to renewable and conventional generation. While CEERT considers renewable generation a preferred resource, this approach is still at odds with D.13-02-015 (Track 1) and D.13-10-040 (Storage) in excluding all other preferred resources and storage and clearly SDG&E requires a "mandate" form the Commission to actively procure those resources meet its Track 4 needs.

CEERT believes that open-ended invitations for gas-fired resources to ultimately fill any Track 4 procurement authorization must be avoided. That can be done by following D.13-02-015, which provides the basic proportional representation of gas-fired to preferred resources and storage that should be the minimum required for any new resources procurement authorized to meet Track 4 reliability needs in this LTPP. By D.13-02-015, the Commission placed a limit of no more than 2/3 of the maximum authorized capacity procurement being met by "conventional

[188] Ex.SCE-1, at pp. 57-58 (SCE (Cushnie)).
[189] Commissioner Florio at the Living Pilot Symposium suggested that SCE had "existing" funds to commence its Living Pilot, but it is not clear whether that is sufficient to complete this project.

gas-fired resources."[190] That same approximate maximum should be applied to any grant of SCE's and SDG&E's Track 4 procurement requests, with no more than 300 to 350 MWs of that procurement for either SCE or SDG&E being met by "conventional gas-fired resources," and at least 150 to 200 MWs of that procurement coming from preferred resources and storage, with renewable generation eligible to bid into either RFO.[191]

This proportionality is necessary to ensure the ongoing commitment to preserving the Loading Order and continuing to move forward to meet this State's environmental and climate goals. Given SCE's efforts to date, this work can and should be continued by *both* SCE and SDG&E in a manner that fairly values and enhances the level of Preferred Resources in their resource mix. It is not enough to rely solely on programs developed in multi-year rulemakings or even in as-yet unfiled applications. That kind of approach only creates uncertainty and confusion in the very markets – from energy efficiency and demand response to renewable generation, distributed generation, and storage – that will in fact yield the greatest environmental and climate benefits for ratepayers at lowest cost when solicited through a fair competitive process.

B. The Role and Inclusion of Large-Scale Pumped Storage (Bulk Storage) in LTPP Capacity Solicitations Has Been Overlooked by SCE and Inappropriately Ignored by SDG&E.

CEERT agrees with the California Energy Storage Association (CESA), ORA, and Sierra Club, among others, regarding the valuable role that energy storage can play in meeting local capacity needs. As stated by CESA, "[e]nergy storage is an important technology class for meeting LCR needs, …including facilitating transmission upgrade deferral," are "controllable and dispatchable," and are capable of providing services "'across all or most of the times when

[190] D.13-02-015, at p. 2.
[191] Renewable generation is both a preferred and generation resource.

needed.'"[192] In fact, the ES Framework (D.13-10-040) can "maximize the value for ratepayers and avoid the procurement of redundant conventional generation resources,"[193] including the 500 MW utility requested authorizations in Track 4.[194]

In addition, CAISO witness Millar made clear that "pump storage can be a very effective mitigation in meeting local needs, whether it's characterized as a preferred resource or not."[195] SCE witness Nelson also agreed that pumped storage "technology is fairly well understood" and "that there are some significant advances in controls and variable speed pumps that could add additional value to the grid."[196] While witness Nelson was uncertain about the "effectiveness" of "any large pumped hydro storage" in meeting the "West LA Basin LCR," he did believe it could be "bid in" for Track 1 and would contribute to the "balanced approach" of using "all resources" to avoid "the possibility of failure and being overly reliant on anyone."[197] As noted above, according to CAISO witness Sparks, if "it has the right characteristics," there is no basis to exclude "bulk storage" from being procured by SCE or SDG&E to meet a local capacity requirement in the absence of SONGS.[198] In fact, as CEERT testified, D.13-10-040 "establish[es] firm procurement targets in the relevant timeline and location for Track 4 of 580 MW for SCE and 165 MW for SDG&E," and "[a]ll of this new capacity will qualify to fill any LCR need and must be factored into any Track 4 procurement authorization."[199]

However, regardless of whether the Commission takes that step, what cannot be ignored and *must be made clear* in any Q1 Track 4 decision is that *large-scale (50 MW or more) pumped storage* (or "bulk storage") *must* be part of any procurement or RFO authorized by this

[192] Ex. CESA-1, at p. 2 (CESA (Lin)).
[193] Ex. ORA-1, at p. 8 (ORA (Ciupagea)).
[194] Ex. SC-1, at p. 24 (Sierra Club (Powers)).
[195] RT at 1655 (CAISO (Millar)).
[196] RT at 1917 (SCE (Nelson)).
[197] RT at 1916-1917 (SCE (Nelson)).
[198] RT at 1544 (CAISO (Sparks)).
[199] Ex. CEERT-1, at p. II-3 (CEERT (Caldwell)).

Commission in this Track 4 or 2012 LTPP and any future LTPPs. This result is required by D.13-10-040, which *excluded* bulk storage from the ES Framework. As detailed above, the rationale for doing so was that this established technology, with project sizes potentially as great as 500 MW, would dwarf and be more cost-effective than the "emerging" technologies that the Framework is designed to promote.

These very qualities, however, are precisely the ones that give large-scale pumped storage high value in displacing gas-fired generation in meeting LCR needs. As CEERT's witness Caldwell testified: "[T]here are multiple pumped storage facilities under consideration in Northern San Diego County that could easily provide for LCR need found in Track 4, plus provide other significant grid benefits."[200] As such, "[t]hese facilities, *along with* the storage targeted by the Proposed Decision, simply must be considered as part of the portfolio available for procurement in Track 4."[201]

Yet, remarkably, SDG&E *removed* storage as an eligible technology in its requested "supply-side" solicitation to meet its requested 500 to 550 MW Track 4 procurement authorization. In cross-examination, SDG&E witness Anderson explained that "storage" had been removed from resources eligible to bid into its RFO "because we anticipate having the storage-specific RFO running at the exact same time" and SDG&E recommends that "all energy storage be procured via the storage OII process."[202]

However, the existence of the "storage-specific RFO" does not account for large-scale pump storage since that resource was excluded from eligibility from the storage procurement framework in D.13-10-040 in the "storage OII." Mr. Anderson testified that he was aware of this exclusion by D.13-10-040 and the requirement in that decision that large-scale pump storage

[200] Ex. CEERT-1, at p. II-3 (CEERT (Caldwell)).
[201] Id.
[202] RT at 1862 (SDG&E (Anderson)).

projects should now be evaluated by utilities in their "solicitations for new capacity in other proceedings."[203] While Mr. Anderson also testified that he "wouldn't have any objection adding them [large-scale pumped storage] to this RFO," no change was made by SDG&E in its request to limit eligibility for its Track 4 RFO to generation resources.[204]

While both SCE and SDG&E question the availability of large-scale pumped or bulk storage facilities in the specific local areas they have targeted for their Track 4 procurement, the bottom line must be that RFOs conducted by either utility for local capacity requirements for the Southern California SONGS reliability area must extend bid eligibility to include large-scale pumped storage projects. There is no doubt that these bulk storage resources, especially using established technologies of up to 500 MW, provide a very real opportunity for both utilities to meet their local needs without any additional procurement of gas-fired generation. The Commission must, therefore, direct that both IOUs include large-scale pumped storage in their Track 4 RFOs and actively explore opportunities for resource development of this type and size throughout the Southern California SONGS reliability area.

C. Track 4 Request for Offers (RFOs) Must be Developed Through a Transparent Stakeholder Process.

While CEERT agrees with SCE that Track 4 procurement, if authorized, can be considered an "extension" of Track 1, that "extension" or commonality extends only to the facts that the procurement must include preferred resources and storage and that, generally speaking, both tracks relate to "local," as opposed to "system" need. However, SCE's recommendation that SCE's all-source Track 4 procurement can simply be "folded into the existing Track 1" RFO should not be adopted.[205] While it is SCE's position that such an approach could have "both

[203] RT at 1863 (SDG&E (Anderson)); D.13-10-040, at p. 74.
[204] RT at 1864 (SDG&E (Anderson)).
[205] RT at 1914 -1915 (SCE (Nelson)).

timeliness and cost advantage,"[206] the Revised Scoping Ruling and the facts here make clear that the "targeted" "local need" of Track 1 versus Track 4 that justifies any additional procurement are *different*. Those differences must be reflected in the RFO itself. Conversely, if "folding" in these two procurements into an existing RFO saves significant time, then the Commission, if it chooses to grant that request, should use that "time" to defer a decision on Track 4 procurement, as recommended by CEERT, to account for, e.g., results from the 2013-2014 TPP and the Track 1 RFOs and changes in load forecasts for 2022.

As to the process to be used in any RFO going forward, CEERT strongly recommends that the Commission change the "closed-door" approach it took in Track 1 for approving those RFOs to achieve greater transparency and more public and stakeholder input to maximize the success of these RFOs in securing Loading Order preferred resources to meet the IOUs' energy needs. In this regard, in D.13-02-015, the Commission, in detailing SCE's Track 1 procurement authorization, stated, with respect to preferred resources, in particular: "SCE's efforts to obtain these resources are critical to ensuring that the assumptions embedded in this decision will become reality and the reliability needs in SCE's territory are met."[207]

Yet, in D.13-02-015, the Commission adopted a process by which SCE, to provide the utility with "flexibility" in terms of the timing and requirements of its "LCR solicitation process," submitted its "procurement plan for all required and authorized resources" in Track 1 to the Energy Division for review and approval, without public review or input.[208] That "plan," however, included a "detailed description of how [SCE] intends to procure resources, specifying the structure of any RFO or alternative procurement process and related timelines"; its

[206] RT at 1914 (SCE (Nelson)).
[207] D.13-02-015, at p. 38.
[208] D.13-02-015, at pp. 89-91.

"methodology[ies] for determining least-cost/best fit," evaluating resources, and determining their "reliability capabilities"; and its price benchmark for determining cost-effectiveness.[209]

It is true that D.13-02-015 identified "elements" to be included in an SCE RFO, from provisions designed to be consistent with the Loading Order and pursuit of "all cost-effective preferred resources in meeting local capacity needs" to those requiring identification of the "reliability constraint" the resource must meet and the resource's performance characteristics.[210] However, while these "elements" provided some useful instruction, most are worded very broadly and would likely have left much to the interpretation of both SCE and, in turn, the Energy Division. Further, any "review" conducted of that "plan" or "public solicitation process" was, again, limited, in confidence, to the Energy Division, which also retained sole authority to determine that SCE had complied with D.13-02-015.[211] "Public" or stakeholder involvement in providing input on the merits of either the RFO, SCE's plan, or resulting procurement now can only come after-the-fact with the filing of SCE's application (which could date as much as two years from D.13-02-015) "with final LCR procurement contracts for Commission approval, after procurement solicitations, bilateral negotiations and studies for preferred resources."[212]

CEERT understands that it may be the Commission's desire not to "micro-manage" the utility's business in meeting its customers' energy needs. However, in this case, the Commission is embarking on new territory to move away from traditional supply-side resources to clean energy alternatives, many of which, if the Living Pilot proposals are any example, are based on cutting-edge technologies and/or provide more efficient uses of preferred resources in combination with each other. In those circumstances, the input of stakeholders and industries

[209] D.13-02-015, at p. 90.
[210] Id.
[211] Id.
[212] Id.

that are producing these innovative resource and technology solutions are critical to fairly shaping RFOs that will ensure that preferred resources "will become reality" in meeting future energy needs. As CESA witness Lin observed:

> "[T]he development of solicitation applications ..should be conducted via a transparent process with opportunities for external stakeholder input. External stakeholder input will be extremely valuable …vast diversity of expertise with the ability to identify best practices and areas for improvement based on successful commercial deployment outside of California…[and ensure] most net benefits to the system are those procured, to the benefit of the grid and ratepayers."[213]

To that end, *if* the Commission does *not* move ahead to authorize Track 4 procurement for SCE or SDG&E in January 2014, but instead awaits the many updated assumptions expected in the first part of the year (i.e., results from SCE's Track 1 preferred resources procurement), it should also use this time to evaluate the "success" of the Track 4 RFOs in meeting the expectations of both D.13-02-015 and the Living Pilot Symposium. That information should be provided in a public stakeholder process to encourage input to improve solicitations and ensure these resources "become reality."

Alternatively, *if* the Commission does authorize Track 4 procurement for SCE or SDG&E in January 2014, that decision should (1) allocate a portion of that need to be met by preferred resources, as recommended above, and (2) adopt a stakeholder process to permit public input on the development of RFOs for both supply-side (i.e., bulk storage) and preferred resources that permits input from parties on its terms and conditions before approved for the IOUs. CEERT notes that D.13-10-040 specifically has ordered Commission staff to "conduct a public workshop to further explore the operational characteristics and uses for pumped storage projects" that is to be held no later than the first part of 2014.[214] Clearly, that workshop can help

[213] Ex. CESA-1, at p. 4 (CESA (Lin)).
[214] D.13-10-040, at p. 78.

inform a Track 4 RFO, whether commenced in the first half or second half of 2014, as to the "elements" that will best match this valuable resource to any identified LCR need.

V.
IF A TRACK 4 DECISION IS ISSUED IN JANUARY OR Q1 2014, IT MUST EXPRESSLY IDENTIFY NEXT STEPS IN THIS AND ANY FUTURE LTPP THAT WILL FURTHER THE COMMITMENT TO INCREASED RELIANCE ON PREFERRED RESOURCES AND STORAGE TO MEET ALL ENERGY NEEDS.

In his testimony, SCE witness Cushnie provided a description of the Commission's process going forward if SCE's interim Track 4 procurement request were granted by the Commission in January/Q1 2014.[215] This description included opinions on how to treat Track 2 (System Need), a future 2014 LTPP rulemaking, and SCE's expected applications for authorization of, among other things, its Living Pilot, approval of procurement contracts, and contingent gas-fired generation (GFG) resource and site development. As distilled by Mr. Cushnie during evidentiary hearings, that process would look like the following *if and after* a Commission decision authorizing SCE's Track 4 500 MW procurement request in early 2014:

- The 2012 LTPP Track 2 System Need, now "terminated" would "now be captured in a new 2014 LTPP proceeding."[216]
- The "residual" Track 4 need (any above SCE's pending 500 MW request) accounting for the ISO's "updated transmission planning studies," could be "done in a subsequent phase to Track 4."[217]
- Alternatively, the "residual" Track 4 need could be "rolled into a 2014 LTPP proceeding," but only if "the 2014 LTPP proceeding moves forward expeditiously," otherwise, it should be a "residual phase as part of the 2012 proceeding."[218]
- "[P]rocurement for new resources" would be "limit[ed]" to "two major efforts" – the first being the "Track 1 procurement authorization augmented by our request for an additional

[215] Ex. SCE-1, at pp. 56-59.
[216] RT at 1980 (SCE (Cushnie)).
[217] RT at 1980 (SCE (Cushnie)).
[218] RT at 1980-1981 (SCE (Cushnie)).

500 megawatts of authority here in this initial Track 4 phase," and the second would be "a subsequent procurement effort that would address any residual procurement needed as part of the residual Track 4 phase that would occur after the Cal ISO's transmission planning studies are complete….[a]s well as consider any system integration resources that would be authorized as part of the new 2014 LTPP proceeding."[219]

- There would likely be "just one or two applications" for the "all-source solicitation," with separate applications for the contingent GFG resource power purchase agreements (PPAs), if any, and for the GFG "contingent sites,"[220] although it was SCE's goal to "have all the applications before [the Commission] so they could consider the total request of Edison in terms of new resources to meet LCR need."[221]
- The "contingent PPA and the all-source solicitation contract applications will be filed se in Q3 of next year," with the "contingent site" application "conceivably" filed earlier.[222]
- The "Living Pilot" would be a separate application and would be "asking for authority to do up to 400 megawatts in the pilot," but "should be occurring much sooner than these other applications."[223]

As to the differences between the Track 1 and any Track 4 "preferred resources" procurement and the Living Pilot, SCE witness Cushnie stated that that the Track 1 and Track 4 procurement "would be sourced through third parties" through procurement contracts, while the Living Pilot "is more expansive" and would "also consider modifying existing utility programs for preferred resources," "new utility programs for preferred resources," and "advanced technology to increase the effectiveness of preferred resources," all of which "would potentially be developed outside of a typical contracting" or "solicitation process."[224] However, to the extent that "resources we thought we would develop in the pilot are selected through" the

[219] RT at 1981 (SCE (Cushnie)).
[220] RT at 1982 (SCE (Cushnie)).
[221] RT at 1981-1982 (SCE (Cushnie)).
[222] RT at 1983 (SCE (Cushnie)).
[223] RT at 1982, 2009 (SCE (Cushnie)).
[224] RT at 2008-2009 (SCE (Cushnie)).

"current procurement authorization" and "solicitation," then SCE "would procure less resources in the pilot."[225]

While the process proposals made by SCE offer *one* view of the future of the multiple balls in the air that now form that long-term procurement planning exercise, CEERT believes that it is imperative in the Commission's Track 4 decision to *prioritize* the work and timing of any next step tasks consistent with the Loading Order. From CEERT's perspective, actions need to be taken by the Commission, in cooperation with CAISO, that yield a common goal for these agencies – namely, the clear and transparent definition of, and procurement opportunities made available to, preferred resources and storage to meet long-term local and system need.

As noted above, CAISO witness Millar confirmed that a goal of, and basis for, granting SCE's and SDG&E's *current* Track 4 requests (500 MWs each), is to use those solicitations to gain information and experience with preferred resources meeting LCR needs (whether limited to a sub-area or extending to the broader Southern California SONGS reliability area). As SCE witness Silsbee testified, "both [SCE's] Track 1 procurement and any procurement that is effectuated through the living pilot become a *forcing function* to require us to truly identify the value of demand response in meeting LCR needs."[226]

In those circumstances, it is crucial for the Commission to do two things in the Track 4 decision *if any portion of SCE's or SDG&E's requests are granted* without the benefit of the near-term results of the 2013-2014 TPP, Track 1 procurement, and changed load assumptions in January (or Q1) 2014. First, for the reasons identified above, at least 150 MWs of the requested 500 MW procurement each for SCE and SDG&E, should be allocated to mandatory procurement from preferred resources (inclusive of renewable generation) and storage. Second, that

[225] RT at 2009 (SCE (Cushnie)).
[226] RT at 2126 (SCE (Silsbee)).

procurement, along with continued progress on the Living Pilot, should be a priority over any other steps taken to procure more conventional generation resources. In doing so, the Commission must endorse a transparent process for developing RFOs that will clearly define the "attributes" these resources must meet to ensure success, as detailed in the previous section.

CEERT again acknowledges that local capacity resource requirements in the absence of SONGS in the Southern California area have been forecasted. However, it is certainly CEERT's opinion in addressing the two "elements" that drive that need (how it can be reduced and how it will be met), preferred resources, including renewable generation, and storage must be priority resources for the utilities in assessing and meeting that need.

VI.
CONCLUSION

The Commission is faced with another critical decision in this LTPP rulemaking that will shape energy infrastructure and procurement decisions through the end of the decade. Based on the Track 4 record and applicable law and policy, CEERT urges the Commission to adopt its recommendations, summarized in its "Summary of Recommendations" beginning at page iv and reflected in CEERT's in Appendix A hereto (Proposed Findings of Fact and Conclusions of Law). By doing so, the Commission will continue to further this State's environmental and climate goals, while ensuring reliability in Southern California.

Respectfully submitted,

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APPENDIX A

CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES PROPOSED FINDINGS OF FACT AND PROPOSED CONCLUSIONS OF LAW

As encouraged by ALJ Gamson in his instructions for the Opening Briefs in Track 4, the Center for Energy Efficiency and Renewable Technologies (CEERT) offers the following Proposed Findings of Fact and Proposed Conclusions of Law. These proposals are not intended to be exhaustive of all findings and conclusions required in the Track 4 decision, but, instead, are focused on the findings and conclusions that result from, and are required to, incorporate CEERT's recommendations herein. Further, while CEERT's primary recommendations are focused on denying "interim" Track 4 procurement authorization now, CEERT offers certain "*alternative*" findings to the extent that interim authorization is granted by the Commission in a decision issued in January or Q1 2014.

PROPOSED FINDINGS OF FACT:

Finding: The governing Commission legal and policy precedent for the issues to be resolved in Track 4 has been most recently identified in D.13-02-015 (2012 LTPP Track 1), in particular, as well as D.13-03-029 (San Diego Gas and Electric Company (SDG&E) Power Purchase Tolling Agreements (PPTAs)) and D.13-10-040 (Energy Storage).

Finding: It is the Commission's obligation to "balance its reliability mandate with other statutory and policy considerations," including "reasonableness of rates and a commitment to a clean environment," as further defined by statute and the Loading Order of preferred resources.

Finding: Consistent with D.13-02-015, in particular, the Loading Order, which identifies "preferred" resources and prioritizes their procurement in the following order: first "energy efficiency and demand response," followed by "renewables (including renewable DG [distributed generation], then "clean fossil-fueled DG," and only then "clean fossil-fueled central station generation," applies to identifying and meeting all energy needs, including any local capacity requirements (LCRs) in the Track 4 SONGS Study Area.

Finding: Large-scale pumped or bulk storage technologies have particular application in addressing local reliability impacts from the retirement of SONGS.

Finding: D.13-10-040, which established an Energy Storage Procurement Framework (ES Framework), excluded large-scale (50 MWs or more) pumped storage projects from that framework, but did so by identifying the LTPP proceeding, including the current Track 4, as the venue for providing a procurement mechanism for large-scale pumped or bulk storage

Finding:, The California Independent System Operator (CAISO) 2013-2014 Transmission Planning Process (TPP), with a draft expected in January 2014 and final results by March 2014, will provide "useful information to inform the Commission regarding a decision on both the level and type of resources to replace SONGS" and "should be taken into account" in any Track 4 decision.

Finding: Absent a clear and compelling record of immediate SONGS Study Area LCR need, it is reasonable to defer interim Track 4 procurement authorization until key assumptions, from the CAISO's 2013-2014 TPP draft or results to changes in load forecasts and the results of Track 1 solicitations (particularly for preferred resources), are updated and known in early 2014 that will further permit a timely, final Track 4 decision by June or July 2014.

Finding: The CAISO, SCE, and SDG&E SONGS LCR studies varied widely on key assumptions, including those related to preferred resources, applicable outage "contingencies" and "reliability standards," and available mitigation measures, that, in some cases, were also in conflict with the SONGS Study Area assumptions required by the Revised Scoping Ruling issued in this 2012 LTPP on May 21, 2013.

Finding: Forecasts of local capacity requirements through 2022 in studies conducted by CAISO, SCE, and SDG&E did not fairly consider interim mitigation "bridges" that could fill any gap in the availability of transmission options or preferred resources to meet LCR needs, such as load shedding, special protection schemes, and even existing gas-fired generation.

Finding: The CAISO's primary recommendation in this Track 4 has been to defer procurement authorization for SCE and SDG&E until the draft and results of its 2013-2014 TPP are known and that any later agreement by CAISO to the Commission granting SCE's and SDG&E's Track 4 procurement requests now was largely based on moving forward with

procurement of "preferred resources" so that a "track record of their development and their effectiveness can be established" and not on any immediate need for either utility to procure additional GFG resources.

Finding: The current record in Track 4 does not justify any "interim" Track 4 authorization for SCE or SDG&E by January or Q1 2014, especially without consideration of expected near-term changes in key assumptions, and, instead, Track 4 should be the subject of a "holistic" final decision that can be issued on a timely basis as early as June or July 2014.

Finding: SCE has proactively sought to advance the procurement and definition of preferred resources to meet its LCR need through its pending Track 1 preferred resources Request for Offers (RFO) and its proposed "Living Pilot."

Finding: SDG&E has not offered a mechanism for the proactive procurement of Loading Order preferred resources or storage as part of its request to procure 500 to 550 megawatts of additional resources.

Finding: SDG&E has inappropriately requested that any Track 4 procurement authorization, if granted, must be limit eligibility to provide those resources to renewable and conventional (GFG) generation only.

Finding: The Commission's and the utility's ability to rescind, terminate, or not approve Track 4 power purchase agreements or create "contingent" agreements for generation development and siting may be difficult and costly for ratepayers.

Finding: The next steps to be taken in this and any future LTPP must further the Commission's commitment to increased reliance on preferred resources and storage and recognize that continued and timely focus on RFOs like SCE's Track 1 solicitation of preferred resources and its Living Pilot, will serve as a "forcing function" to require the utilities "to truly identify the value" of preferred resources and storage in meeting LCR needs.

Alternative Findings if Interim Track 4 Authorization is Granted:

Alternate Finding: Consistent with the Loading Order and D.13-02-015, it is reasonable to require that an allocated portion of each of the utilities' procurement requests (SCE (500 MWs)/SDG&E (500-550 MWs)) should be solicited from preferred resources and energy storage, with no more than 300 to 350 MWs to be procured from conventional gas-fired

generation and at least 150 to 200 MWs of that procurement to come from preferred resources and storage, with renewable generation eligible to bid into either RFO.

Alternate Finding: The Track 1 RFO may not be suitable for Track 4 procurement (i.e., as to the identification of need or resource attributes).

Alternate Finding: The Track 4 RFOs must be developed through a transparent stakeholder process, especially to ensure key input that will improve the RFOs and ensure their success especially in attracting and procuring preferred resources and storage to meet the authorized level of procurement.

PROPOSED CONCLUSIONS OF LAW:

Conclusion: All procurement undertaken by this State's investor owned utilities (IOUs), including any required to meet SONGS Study Area local capacity requirements, must follow the Loading Order of preferred resources, including renewable generation, and extend to storage technologies.

Conclusion: No immediate need for interim Track 4 procurement authorization was demonstrated by CAISO, SCE or SDG&E SONGS LCR studies or testimony, which were based on conflicting assumptions and definitions that also did not conform with the assumptions adopted for Track 4 in the Revised Scoping Ruling.

Conclusion: In the absence of a record support and due to impending changes in assumptions critical to determining the level of SONGS LCRs, including, but not limited to, the CAISO's 2013-2014 TPP, load forecasts, and Track 1 preferred resource procurement, interim Track 4 procurement authorization should not be granted for either SCE or SDG&E.

Conclusion: This and all future LTPPs should require that procurement to meet identified energy needs, including those to meet local capacity requirements, should extend to and include large-scale (50 MWs or more) pumped or bulk storage technologies or projects.

Conclusion: Consistent with the Loading Order and D.13-02-015, SDG&E should be directed to proactively procure preferred resources and storage to meet any identified energy need, including local capacity requirements.

Conclusion: The Commission should expressly identify next steps for this and any future LTPP in a manner that will further the Commission's commitment to increased reliance on preferred resources and storage.

Alternative Conclusions if Interim Track 4 Authorization is Granted:

Alternate Conclusion: Each of the utilities' procurement requests (SCE (500 MWs)/SDG&E (500-550 MWs)) should be solicited based on the following allocation: no more than 300 to 350 MWs to be procured from conventional gas-fired generation and at least 150 to 200 MWs of that procurement to come from preferred resources and storage, with renewable generation eligible to bid into either RFO.

Alternate Conclusion: The Track 4 RFOs should be developed through a transparent stakeholder process, especially to ensure key input that will improve the RFOs and ensure their success especially in attracting and procuring preferred resources and storage to meet the authorized level of procurement.

Alternative Conclusion: Consistent with the Loading Order and D.13-02-015, SDG&E should be directed to expand its Track 4 RFO to include preferred resources and storage.

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