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)

INITIAL COMMENTS OF NRG ENERGY, INC. ON TRACK 4 PROPOSED DECISION

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SUMMARY OF RECOMMENDATIONS

The Track 4 PD should be revised to:

- Allow for all-source procurement to meet the procurement targets and eliminate any "carve-out" for preferred resources;
- Eliminate any reduction in the procurement targets associated with the continued use of load shedding;
- Clarify the requirement for SDG&E to conduct an all-source solicitation if its procurement targets are met through bilateral negotiations; and
- Correct other findings of fact to eliminate confusion or ambiguity as set forth herein.

TABLE OF AUTHORITIES

Decisions

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NRG Energy, Inc. ("NRG") respectfully submits these comments on the February 11, 2014 Proposed Decision of Administrative Law Judge David M. Gamson in Track 4 of the Long-Term Procurement Plan ("LTPP") ("Track 4 PD") proceeding pursuant to Rule 14.3 of the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission" or "CPUC").

I. SUMMARY

The Track 4 PD navigates a thoughtful path through a myriad of complex issues to authorize additional procurement for both the Southern California Edison Company ("SCE") and the San Diego Gas & Electric Company ("SDG&E") to maintain reliability in Southern California following the permanent retirement of all units at the San Onofre Nuclear Generating Station ("SONGS"). NRG agrees with much of the Track 4 PD's conclusions and recommendations.

However, NRG respectfully disagrees with the Track 4 PD's conclusions and recommendations that would lead to an overly conservative procurement authorization in both the SCE and SDG&E service areas. The overly conservative procurement authorization stems from two principal misapprehensions. *First,* the Track 4 PD relies on overly optimistic assumptions regarding the availability of preferred resources to meet local area capacity

requirements in both SCE's and SDG&E's service areas. The Track 4 PD reduces procurement amounts based on the expectation that preferred resources will be able to reliably and effectively meet local capacity needs – an unreasonable expectation where there is no record on which to identify the amount of preferred resources that will be needed, the cost of those resources that will be needed, or how long it will take for preferred resources to meet the local capacity needs. *Second,* the Track 4 PD's undue reliance on firm load shedding to mitigate the impacts of the contingency that defines the local area capacity requirements further leads to an understated need for all-source procurement to address the local needs stemming from the SONGS retirement. Consequently, NRG respectfully recommends that the final decision increase the all-source procurement authorizations in the SCE and SDG&E service areas. In particular, the final decision should authorize all-source procurement in the amounts identified for total procurement in Ordering Paragraphs 1 and 2 (i.e., up to 700 additional MWs in SCE's service area and up to 700 additional MWs in SDG&E's service area).

Finally, the Track 4 PD also requires modification to clarify SDG&E's authority to contract on a bilateral basis. Given the urgency with which new generation is needed in the SDG&E service area, the Commission should not delay SDG&E's ability to bilaterally negotiate until after a procurement plan has been approved by the Energy Division.

II. THE TRACK 4 PD'S PROCUREMENT AUTHORIZATIONS ARE OVERLY CONSERVATIVE AND SHOULD BE INCREASED

A. THE TRACK 4 PD UNDULY RELIES ON PREFERRED RESOURCES TO ADDRESS LOCAL CAPACITY REQUIREMENTS (LCRS) WITH NO RECORD AS TO HOW OR WHEN THOSE RESOURCES COULD MEET LCRS

The Track 4 PD clearly relies on preferred resources to meet LCRs. The Track 4 PD expressly "carves out" a specific preferred resource target in its procurement authorizations (175 MW for SDG&E). The Track 4 PD also expressly carves out 25 MW for energy storage for

SDG&E.[1] The Track 4 PD also provides that *all* of the additional procurement it authorizes could be procured from preferred resources.[2]

Such reliance on preferred resources is inappropriate. Without question, preferred resources have a critical role to play in California's energy future. But the issue of how preferred resources meet the local capacity procurement needs that are the focal point of this track of the proceeding is far from being resolved to the point that such resources can be counted on in known quantities, amounts, or time frames. It is impossible to determine based on the record in this proceeding how, when or at what cost preferred resources will be able to reliably meet local capacity needs. There is nothing in the record of this proceeding that reliably defines how preferred resources can meet local area capacity requirements. There is no process that is working to provide this information on any reasonably identified time frame. The Track 4 PD explicitly recognizes this problem with regards to one type of preferred resource, noting "[t]he incipient nature of energy storage resources, uncertainty about location and effectiveness, and unknowns concerning timing provide insufficient information at this time to assess how and to what extent energy storage resources can reduce LCR needs in the future."[3] SCE's Living Pilot is expected to provide information that would allow the CAISO, the Commission and interested parties to determine how preferred resources can meet local area needs, but statistically and operationally reliable results from this pilot program are years away. Absent such a time frame, and given the long lead time for developing generation, it would be imprudent to defer procurement of generation that can reliably meet local area capacity needs.

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[1] Despite the fact that the Track 4 PD expressly notes that "energy storage targets…cannot be assumed to count toward LCR need on a megawatt-for-megawatt basis." Track 4 PD at 60.
[2] Track 4 PD at 91.
[3] Track 4 PD at 60.

Because of the uncertainty regarding preferred resources' ability to meet local capacity requirements, even if the schedule for determining these resources' contribution was clear, the cost of meeting local capacity requirements through preferred resources is also uncertain. It is likely that the ability of preferred resources to meet local capacity requirements across *all months* will be significantly reduced from their nominal or maximum effectiveness values. For example, the amount of local area reliability support that can be provided from certain kinds of demand response obviously will be higher in the summer than in the winter, because the demand supporting these programs will be higher in the summer than in the winter. However, under the current design of the Resource Adequacy program, local capacity requirements must be met in all twelve months of the year, even if the annual LCR values are determined from studies conducted at peak demand.[4] This annual requirement allows the CAISO to maintain local capacity resources to facilitate the off-peak transmission and generation maintenance needed to maintain the reliability of the bulk power delivery system during times of peak demand. If preferred resources cannot meet local capacity requirements in some months in the way they can in others, either these resources need to be procured in much greater quantities than might have been contemplated, or else the ability of generation owners and transmission operators to take maintenance in the off-peak season will be compromised. Disallowing needed maintenance will detrimentally impact the ability to reliably serve demand in peak months.

While procuring adequate quantities of conventional resources now leaves open the possibility that such resources may operate in the future at lower capacity factors as the grid's energy mix changes, such a result does not threaten the reliability of electric supply. Deferring the procurement of conventional resources based on the hope that preferred resources will be

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[4] Decision D.06-06-064 at 38-42.

able to meet LCRs, however, leaves open the possibility that conventional generation cannot be secured in time if preferred resources cannot be deployed in sufficient amounts or in the right locations to meet annual local capacity needs, or if the cost of procuring preferred resources in sufficient quantities to meet local capacity needs proves to be exorbitant. The resulting reliability problems would dwarf the mild economic effects of reduced capacity factors for some units.

B. THE TRACK 4 PD SHOULD NOT MAKE A DOWNWARD ADJUSTMENT BASED ON THE CONTINUED USE OF FIRM LOAD SHEDDING

With regards to whether it is reasonable to use firm load shedding to mitigate the impacts of the overlapping but non-simultaneous outage of two 500 kV lines that defines the Southern California post-SONGS local capacity need, the Track 4 PD starts out at exactly the right place: "We do not find that the long-term reliance on an SPS to resolve need related to the retirement of SONGS [the San Onofre Nuclear Generating Station] is appropriate."[5]

Having started in the right place, the Track 4 PD then makes a few wrong turns. Following those wrong turns, the Track 4 PD concludes that it is reasonable to subtract 588 MW from the CAISO's forecasted local capacity requirement (LCR) need for the combined SCE/SDG&E area to "account for resources that will not be procured at this time to fully avoid the possibility of load-shedding in San Diego as a result of the identified N-1-1 contingency."[6] The Track 4 PD similarly concludes, "There would need to be a minimum of 588 MW fewer resources if there is a temporary SPS [Special Protection Scheme] in place, as compared to the

[5] Track 4 PD at 44.
[6] Track 4 PD, Conclusion of Law 12.

resources needed to support the N-1-1 contingency identified by the ISO in the SDG&E territory."[7]

The Track 4 PD's journey to the erroneous conclusion that it is reasonable to subtract 588 MW from the CAISO's need determination stems from these statements:

> "Instead, we determine that it is prudent *to wait to see* what resources develop in the SONGS service area to determine whether an SPS or other load-shedding protocol need serves as a bridge until such resources are in place. In particular, we see the likelihood that the procurement of preferred resources as authorized herein (and as acquired through other means) will develop sufficiently *over time* to mitigate the need for further resources, so that the SPS in the SDG&E territory can be lifted and reliability at an N-1-1 contingency level can be maintained."[8]

The Track 4 PD rejects the use of load shedding as a *long-term* approach to mitigating the impacts of the contingency that it concludes, as with the authorization granted in Track 1, is the proper contingency to define the local area capacity needs. But, at the same time, the PD adopts an approach to meeting those local area needs – the use of preferred resources – that provides no guidance, let alone any degree of certainty, with regards to the amount of preferred resources that must be procured to ensure local area reliability, nor to the time frame over which the preferred resources must be deployed to ensure local area reliability. As a result, while the Track 4 PD expressly rejects using load shedding as a long-term strategy, it sets in place a series of uncertain events that makes it impossible to reasonably determine whether or not it will be necessary to rely on firm load shedding as a long term strategy.

In sum, because neither the time frame over which preferred resources can be relied upon to meet local capacity needs, nor the amount of preferred resources needed to meet those needs, nor the cost of meeting local reliability needs with preferred resources, are currently known or

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[7] Track 4 PD, Finding of Fact 26.
[8] Track 4 PD at 45.

can be reasonably inferred, it is not reasonable to conclude that it will not be necessary to rely on firm load shedding as a long-term strategy. Consequently, the Track 4 PD should be revised to increase the procurement necessary to end the use of firm load shedding on a definitive schedule.

C. THE TRACK 4 PD FAILS TO GIVE THE CAISO'S ANALYSIS OF NEED DUE DEFERENCE

The Track 4 PD concludes that the CAISO's analysis followed the assumptions set forth in the Revised Track 4 Scoping Ruling.[9] The Track 4 PD adopts the CAISO power flow models used in the CAISO's analysis.[10] The Track 4 PD similarly concludes that "…we find no credible basis upon which to find that the ISO's analysis is flawed and that the limiting contingency for the SONGS study area is anything but the N-1-1 Category C3 SWPL/Sunrise overlapping outage assumed and modeled by the ISO." [11]

Having fully embraced the CAISO's analysis, the Track 4 PD then erroneously discards that same analysis by adopting a reliance on the use of firm load shedding as a mitigation strategy for an indeterminate amount of time and explicitly subtracting 588 MW from the needs determination. In so doing, the Track 4 PD fails to afford the CAISO's analysis the deference to which it is due.

Such a result is inconsistent with prior Commission precedent. In the Track 1 Decision, D.13-02-015, the Commission adopted the N-1-1 contingency used by the CAISO as the contingency that defines the local area need.[12] The Commission then found that the CAISO had not incorporated appropriate levels of uncommitted energy efficiency and uncommitted

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[9] Track 4 PD at 25.
[10] Track 4 PD at 27.
[11] Track 4 PD at 48.
[12] D.13-02-015 at 40.

combined heat and power[13] and demand response into its model inputs. The Commission consequently authorized SCE to procure up to maximum of 1800 MW instead of the approximately 2400 MW of procurement recommended by the CAISO.

In Track 1, the Commission reduced the amount of procurement recommended by the CAISO because it found the CAISO had not taken certain factors into account in its modeling. Conversely, the Track 4 PD found that the CAISO fully complied with the modeling assumptions set forth in the revised Scoping Ruling, yet reduced the Track 4 authorized procurement by 588 MW by allowing for the open-ended reliance on a load-shedding scheme that the CAISO did not support.

Just as it found that it is not reasonable to selectively update assumptions,[14] it is not appropriate for the Track 4 PD to selectively embrace conclusions. The Commission should not commend the CAISO for its careful compliance with all of the assumptions set forth in the revised Scoping Memo, only to selectively adjust the outcome of the results of that careful compliance by embracing a mitigation strategy rejected by the CAISO.

D. THE TRACK 4 PD REACHES A SOUND CONCLUSION WITH REGARDS TO TRANSMISSION ADDITIONS

The Track 4 PD expressly sets forth that the potential outcomes of the CAISO's Transmission Planning Process – and they are *potential* outcomes at this point in time – are considered in its authorizations.[15]

The most viable transmission project that significantly reduces the need for Southern California local capacity resources is the Mesa Loop-In. This project is the most viable, because it does not involve having to secure new rights-of-way through highly developed urban corridors.

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[13] D.13-02-015 at 49-51, 59.
[14] Track 4 PD at 35.
[15] Track 4 PD at 10.

Even though the CAISO has included the Mesa Loop-In as one of the transmission projects for which it recommends approval in its draft 2013-2014 Transmission Plan, the Track 4 PD prudently observes that CAISO approval is not a fully reliable indicator that the project can be put in service in the time frame proposed.[16]

Because the Mesa Loop-In involves modifying the transmission capacity into the SCE area, it has less of an impact on the need for local generation in the SDG&E area. As such, while it may be reasonable to use the prospects for implementing Mesa Loop-in as a directional indicator for SCE-area local capacity requirements, it should not be similarly viewed as a directional indicator for the SDG&E area local capacity requirements.

E. THE COMMISSION SHOULD INCREASE THE ALL-SOURCE PROCUREMENT AUTHORIZATIONS

Based on the overly optimistic reliance on preferred resources, the improper reliance on load shedding, and the appropriate determination not to rely on possible, but uncertain, transmission projects, the Commission should increase the amount of all-source procurement authorization in both the SCE and SDG&E service areas. Specifically, the final decision should authorize SCE and SDG&E to procure a minimum of 700 MWs of all-source generation in their respective service areas (for SCE, the 700 MWs of all-source authorization would be incremental to the Track 1 authorization).

To the extent the Commission determines that additional preferred resource procurement should still be mandated, those amounts should be layered on top of the all-source procurement authorizations of 700 MWs in each of the SCE and SDG&E service areas. For example, adhering to the preferred resource targets identified in the Track 4 PD, the Commission could authorize SCE to procure an additional 400 MW of preferred resources and could authorize

[16] Track 4 PD at 52.

SDG&E to procure an additional 200 MW of preferred resources (of which 25 MW are energy storage). Based on the CAISO's projected need for new resources over the longer term, even these amounts of procurement would remain conservative and, therefore, clearly reasonable. A maximum procurement of 2,000 MW (1,100 MW in SCE's service area and 900 MW in SDG&E's service area) is still less than the 2,200 MW of retired SONGS generation and would be comprised of a significant percentage of preferred resources.

III. THE COMMISSION SHOULD CLARIFY SDG&E'S AUTHORITY TO NEGOTIATE BILATERALLY

The Track 4 PD should clarify SDG&E's ability to use bilateral negotiations to meet its authorized procurement target. On Page 7, the Track 4 PD states, "SDG&E is authorized to solicit procurement offers through an all-source RFO and bilateral negotiations, subject to Energy Division approval of its procurement process." However, on Page 108, the Track 4 PD indicates, "For SDG&E, we also will require an all-source RFO as part of its Track 4 solicitation process."

The confluence of these two statements creates ambiguity. Specifically, it raises doubt about whether SDG&E still would be required to conduct an all-source RFO (including both preferred and conventional resources) if it found it could satisfy its requirements through bilateral negotiations. While NRG does not support express carve-outs for preferred resources, given that the Track 4 PD expressly carves out 200 MW of SDG&E procurement for specific types of resources (175 MW for preferred resources and 25 MW for energy storage), a reasonable reading of the Track 4 PD would be an all-source RFO would not be needed if the only procurement unfilled through bilateral negotiations was the 200 MW carve-out for preferred resource and energy storage. NRG agrees that to the extent any of the "additional from any

resource" authorization was left unfilled through bilateral negotiations, an all-source RFO should be required.

On a related note, Ordering Paragraph 7 suggests that SDG&E must wait for Energy Division approval of a procurement plan before SDG&E may commence any public procurement activities. Given the urgent need for new generation to meet LCR needs by 2018, which justifies the authority granted by the Commission for SDG&E to negotiate bilaterally, the Commission should not then delay this authority by requiring a procurement plan to address bilateral negotiations. Instead, the Commission should clarify that the procurement plan requirement applies only to resources procured through a Request For Offer, as opposed to a bilateral contracting, process.

IV. PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

Proposed amended Findings of Fact and Conclusions of Law are included in Appendix A. Several of these relate to discussions from previous sections. However, a few do not refer to any previous discussion, and NRG will elaborate on those in this section.

4. Until 2011, SONGS had supplied 2,246 MW of greenhouse gas -free base load power to the LA Basin and San Diego and played an important role in system stability in the **LA Basin and** San Diego Local **Capacity** Area**s**.

This proposed modification to Finding of Fact 4 is intended to clarify the local capacity areas in which SONGS played a significant role.

5. Both SCE and SDG&E have sufficient supplies to meet projected demands in the SONGS service area through at least 2018, even with the unexpected early retirement of SONGS. **However, the CAISO has determined that the San Diego area does not have sufficient capacity to meet local capacity requirements beginning in 2014.**

Finding of Fact 5 is not incorrect with regards to *meeting projected demand*, but could be interpreted to conclude that there is sufficient capacity to meet LCR needs at this time. The

CAISO's 2014 LCR study indicates a 458 local capacity deficiency in the San Diego sub-area in 2014.[17]

24. **The N-1-1 contingency that defines the LA Basin and San Diego area local capacity needs has an estimated likelihood of occurring once every 21 to 928 years.** ~~An SPS in the particular area identified by the ISO in the SDG&E territory has a likelihood of an N-1-1 failure between every 21 and 928 years.~~

In one location, the Track 4 PD refers to the likelihood of *the N-1-1 contingency* as being between 21 and 928 years.[18] The proposed finding of fact – and item (2) on page 44 of the Track 4 PD - confusingly refers to *the SPS* having an N-1-1 failure frequency of between 21 and 928 years.

[17] CAISO *2014 Local Capacity Technical Analysis Final Report and Study Results* at Page 101.
[18] Track 4 PD at 42.

V. CONCLUSION

NRG commends the Track 4 PD's thoughtful approach to a difficult and complex task. NRG supports much of the Track 4 PD's approach and rationale. NRG respectfully does not support the Track 4 PD's undue reliance on the unproven ability of preferred resources to meet local capacity requirements or the Track 4 PD's position with regards to the indeterminate use of firm load shedding and the corresponding reduction in procurement targets. NRG supports the Track 4 PD's position with regards to transmission additions. For those reasons, both SCE and SDG&E should be authorized to procure up to 700 MWs of new all-source generation prior to layering on any preferred resource procurement mandate.

Finally, NRG respectfully requests that the Commission clarify the manner in which SDG&E may procure the new generation it requires to meet reliability requirements that emerge as soon as 2018.

Respectfully submitted,

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Appendix A

Proposed Findings of Fact and Conclusions of Law

Findings of Fact:

4. Until 2011, SONGS had supplied 2,246 MW of greenhouse gas -free base load power to the LA Basin and San Diego and played an important role in system stability in the **LA Basin and** San Diego Local **Capacity** Area**s**.

5. Both SCE and SDG&E have sufficient supplies to meet projected demands in the SONGS service area through at least 2018, even with the unexpected early retirement of SONGS. **However, the CAISO has determined that the San Diego area does not have sufficient capacity to meet local capacity requirements beginning in 2014.**

24. **The N-1-1 contingency that defines the LA Basin and San Diego area local capacity needs has an estimated likelihood of occurring once every 21 to 928 years.** ~~An SPS in the particular area identified by the ISO in the SDG&E territory has a likelihood of an N-1-1 failure between every 21 and 928 years.~~

26. There would need to be a minimum of 588 MW fewer resources if there is a ~~temporary~~ SPS in place, as compared to the resources needed to support the N-1-1 contingency identified by the ISO in the SDG&E territory.

27. The cost to ratepayers of additional resources to mitigate the N-1-1 contingency identified by the ISO in the SDG&E territory **without the use of firm load shedding** would be at least $595 million; there is evidence that such investment may not be cost-effective.

29. It is **uncertain if** ~~likely that~~ the procurement of preferred resources and/or transmission solutions will develop sufficiently over time to mitigate the need for further resources, so that the SPS in the SDG&E territory can be lifted and reliability at an N-1-1 contingency level can be maintained.

~~63. Taking very likely or certain modifications into account, the highest prudent level of procurement authorization for the SONGS study area would be 1,802 MW (rounded to 1,800 MW).~~

75. An overall authorized procurement level for the SONGS service area at this time of ~~1000-1400~~ **1,400 -2,000** MW is consistent with the recommendations of many parties and is near the center of the overall zone of reasonableness.

84. ~~It is not necessary to require any specific incremental procurement for SCE from gas-fired resources, beyond that specified in D.13-02-015. However, e~~Expanding the range of potential gas-fired procurement from 1,000 – 1,200 MW (per D.13-02-015) to **1,400**~~1,000~~ – **1,900**~~1,500~~ MW provides greater flexibility to SCE to meet reliability needs.

Conclusions of Law:

9. Load shedding through an SPS instituted or continued by the ISO should only be used judiciously **and as extraordinary temporary measures** as mitigation for contingencies.

~~10. It is not reasonable to authorize procurement of additional resources at this time to mitigate load shedding for the N-1-1 contingency identified by the ISO in the SDG&E territory.~~

~~11. It is prudent to wait to see what resources develop in the SONGS service area to determine if an SPS or other load shedding protocol can serve as a bridge until such resources are in place.~~

~~12. It is reasonable to subtract 588 MW from the ISO's forecasted LCR need to account for resources that will not be procured at this time to fully avoid the possibility of load shedding in San Diego as a result of the identified N-1-1 contingency.~~

~~26. Any procurement level above 1800 MW entails too high of a possibility of over procurement.~~

~~27. It would be prudent to authorize procurement of less than 1,800 MW because other resources are reasonably likely to be procured, even though in some cases their LCR impacts cannot be precisely measured. To do otherwise would most likely lead to over procurement.~~

~~29. To account for uncertainties about effectiveness of LCR reductions for certain resources, a reasonable maximum procurement level should be somewhere between 1,383 and 1,800 MW.~~

~~33. To be certain that authorized procurement levels will not result in under-procurement, the minimum authorized procurement level should in no case be no less than 593 MW, but could be reasonably set anywhere between 593 and 1,067 MW.~~

~~35. An overall authorized procurement level for the SONGS service area at this time of 1,000 – 1,400 MW provides reasonable ratepayer protection against over procurement and simultaneously provides reasonable protection from reliability impacts from under procurement.~~

~~42. Authorizing SCE to procure between 400 and 1,500 MW (or 21% to 60%) from preferred resources or energy storage in total between D.13-02-015 and this decision is more consistent with the Loading Order than SCE's proposal.~~

~~44. Authorizing SDG&E to procure at least 200 MW from preferred resources or energy storage is consistent with the authority granted to SCE herein and consistent with the Loading Order.~~