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)

AES SOUTHLAND, LLC'S COMMENTS ON PROPOSED DECISION AUTHORIZING LONG-TERM PROCUREMENT DUE TO PERMANENT RETIREMENT OF SAN ONOFRE NUCLEAR GENERATION STATION

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TABLE OF CONTENTS

Page

TABLE OF AUTHORITIES

Page

Decisions

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AES SOUTHLAND, LLC'S COMMENTS ON PROPOSED DECISION

Pursuant to Rule 14.3 of the Commission's Rules of Practice and Procedure, AES Southland, LLC ("AES Southland") submits the following opening comments on the Proposed Decision Authorizing Long-Term Procurement Due to Permanent Retirement of San Onofre Nuclear Generation Stations ("Proposed Decision" or "PD").

I. INTRODUCTION

The Proposed Decision would authorize Southern California Edison ("SCE") to procure between 500 and 700 megawatts ("MW") of additional local capacity to replace the San Onofre Nuclear Generating Station ("SONGS").[1] The Proposed Decision provides a thoughtful analysis of why procurement at that level is appropriate, and AES Southland agrees that a significant level of additional procurement is required.

AES Southland, however, is concerned that the Proposed Decision errs in two important ways. First, more than half of that authorized procurement would be limited to preferred resources and energy storage. The Proposed Decision would require SCE to procure at least 400 MW of the 700 MW from preferred resources and storage, and

[1] AES Southland's participation in this proceeding has been focused on procurement authorizations for SCE. For that reason, these comments do not address the procurement authorization for San Diego Gas and Electric Company.

permits SCE to procure the entire 700 MW from those same type of resources. Coupled with the Track 1 procurement, SCE is now authorized to procure 1,900 to 2,500 MW of capacity, with at least 600 MW, and potentially up to 1,500 MW, to come from preferred resources and/or energy storage. At a minimum, 32% of any procurement must be from preferred resources or energy storage.[2]

Furthermore, that total does not include the planning assumptions used in this proceeding, which assume additional preferred resources will develop. The Proposed Decision used the modeling performed by the California Independent System Operator ("ISO") "as the basis for determining authorized procurement."[3] Those models incorporated assumptions set forth in the May 21, 2013 Revised Scoping Memo in this proceeding, which assumed that over 1,600 MW of preferred resources would be developed to reduce need.[4] If the additional 1,600 MW are included in the calculation, then the minimum percentage of preferred resources that forms the basis of the PD increases to over 60%.

SCE requested an incremental 500 MW of all source procurement authority, a request supported by the ISO and numerous other parties. SCE based that request on its own modeling, which also used the assumptions set forth in the May 21, 2013 Revised Scoping Memo, including over 1,600 MW of preferred resources. SCE also assumed that

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[2] While the PD argues that in at least one scenario only 21% of the procurement would come from preferred resources (PD at 93), that calculation appears to be erroneous and it is only part of the picture. The 21% is derived by dividing 400 MW by 1,900 MW, which is the minimum amount of total procurement authorized in the PD. However, 400 MW is not the minimum amount of preferred resources or energy storage that must be procured; rather, that total is 600 MW (200 MW from the Track 1 decision and the incremental 400 MW from the Track 4 PD). Dividing 600 MW by 1,900 MW results in a minimum of 32% from preferred resources or energy storage.

[3] PD at 27.

[4] That total does not include additional demand responses resources that were assumed to be available as a "second contingency" resource.

additional preferred resources would be developed, at highly effective locations, to further reduce need by over 500 MW. Despite SCE's aggressive assumptions with regard to the development of preferred resources, and a Track 1 decision that already requires a significant amount of preferred resource and energy storage procurement, the Proposed Decision grants SCE only 100 to 300 MW of all source procurement.

AES Southland appreciates the Commission's efforts to encourage the development and implementation of preferred resources and energy storage. AES Southland's own affiliate AES Energy Storage is focused on the opportunities created by this Commission's efforts to promote energy storage. However, those efforts cannot be at the expense of reliability. If the Commission's aggressive assumptions and goals concerning preferred resources even slightly overestimate the ability of those resources to timely materialize in the right amounts and in the right locations, reliability in Southern California will suffer a significant impact. Nor will there be sufficient time to develop additional gas-fired resources to replace any preferred resources that fail to materialize.

Second, AES Southland is also concerned that the Proposed Decision overemphasizes the risks of over procurement, and fails to properly consider that under procurement will have significant cost impacts that may far eclipse the cost of over procurement. The ISO modeling showed a residual need, after Track 1 procurement, of between 1,922 and 1,222 MW in the LA Basin. Though the Proposed Decision relies upon that modeling as a starting point for determining its procurement authorization, it substantially reduces the authorization below those amounts, and the amounts recommended by the ISO, SCE, and numerous other parties, based upon "directional indicators" and concerns about over procurement. However, given that the need for new capacity will occur by the end of 2020, at the latest, the Commission cannot afford to further delay procurement.

AES Southland, and numerous other parties, suggested in briefing that the Commission should authorize SCE to procure more than the 500 MW of all source

procurement it was requesting. The power flow studies performed by SCE, ISO, and Electric Power Engineers, Inc. ("EPE"), an independent transmission consultant retained by AES Southland, all showed a local capacity need well in excess of the 500 MW requested by SCE. However, at a minimum, SCE should be granted its requested procurement authority. AES Southland strongly urges the Commission to revise the Proposed Decision to either make the Track 4 incremental authorization open to all sources to provide SCE greater flexibility, or, at a minimum, reduce the mandatory preferred resources bucket from 400 MW to 200 MW. This would allow SCE to procure up to 500 MW from all sources and give it the option to procure an additional 200 MW of preferred resources and/or storage, if those resources are available to meet local reliability needs and are cost effective.

II. DISCUSSION

A. The Commission Must Provide SCE the Ability to Select the Right Resource Mix Now to Ensure Reliability in 2020

Track 4 of the 2012 Long Term Procurement Plan ("LTPP") proceeding was established "to consider the local reliability impacts of a potential long-term outage of the San Onofre Nuclear Power Station (SONGS) generators."[5] Shortly after Track 4 was initiated, SCE announced the permanent retirement of SONGS. Though that retirement occurred last year, the real impact does not occur until later, with the planned retirement of approximately 7,000 MW of resources relying on once-through cooling ("OTC").[6] At that point, the lack of generation from SONGS, coupled with the OTC retirements, will result in the need for substantial additional capacity in the LA Basin, as shown by the studies performed by the ISO and SCE. According to the ISO studies, the need could be

[5] May 21, 2013 Revised Scoping Memo at 4.

[6] D.13-02-015 at 6.

as high as 3,722 MW, while SCE calculates the need to be 3,240 MW. Though the ISO and SCE power flow studies focused on 2022, SCE noted that "it is likely that the LCR need for 2020 is very similar to the LCR need for 2022." EPE's own power flow study for 2020 showed a need of 3,300 MW. Those amounts do not take into account Track 1 procurement, but even if, as the Proposed Decision assumes, SCE procures the full 1,800 MW it is entitled to pursuant to Track 1, the range of need remains somewhere between 1,222 MW (ISO low estimate) to 1,922 MW (ISO high estimate).

As the Commission has already acknowledged through its Track 1 procurement authorization, meeting the local reliability needs of Southern California will require a diverse set of resources, including some gas-fired generation. The evidence submitted during this proceeding has established that the development of gas-fired combined-cycle resources to meet the anticipated 2020 need may take up to 10 years. Though the Proposed Decision authorizes SCE to use its pending Track 1 procurement efforts to also procure resources to meet any Track 4 authorization, and the permitting of some gas-fired combined-cycle resources is already in process, there is less than seven years remaining before the retirement of OTC resources triggers the need for significant additional capacity in Southern California.

It is therefore imperative that the Commission give SCE sufficient procurement authority and flexibility now to procure the right mix of resources to meet that 2020 need. If the Commission requires SCE to procure preferred resources that fail to timely develop, do not develop in the right locations, or are not cost effective, there will simply not be enough time to procure gas-fired resources, or other resources with longer development timelines, to address that unmet need by 2020. At that point, the options to address reliability needs become considerably constrained, and reliability will be impacted.

It has been suggested that the OTC deadlines might be extended to address reliability if preferred resources fail to appear. That solution is extremely risky. The

OTC plants are Eisenhower-era generation. Capital improvements and maintenance decisions are being made based on the current OTC deadlines, and there is little to no investment being made in the existing facilities. Setting aside the fact that this Commission does not have the authority to extend the OTC deadlines, OTC generation that is almost 70 or more years old is not a reliable solution to local capacity needs in 2020. Instead, the failure to procure the right mix of resources now may lead to the need to rapidly procure other, less optimal generation resources that may have much greater environmental impacts.

The Proposed Decision does recognize that "[w]ith long lead-time resources requiring several years of effort, and potential reliability issues surfacing … in 2018, we cannot wait for further information at this point."[7] However, the Proposed Decision goes on to note that "we will take the cautious approach to avoid over procurement."[8] It further relies on several factors as "directional indicators" to conclude that "it is not necessary at this time to authorize the utilities to procure all of the resources indicated to be necessary in the ISO's study."[9] These "directional indicators" that warrant reducing the procurement authorization include: (1) changes to the California Energy Commission's demand forecast, even though the Proposed Decision concludes it is not reasonable to adjust assumptions at this time;[10] (2) potential transmission projects, even though the Proposed Decision states that "[t]here is not enough information available at this time to make a specific finding that any transmission project will be able to reduce LCR need in the SONGS service territory by 2022;"[11] (3) additional demand response

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[7] PD at 11.

[8] *Id.*

[9] *See, e.g., id.* at 36.

[10] *Id.*

resources, even though the Proposed Decision "cannot quantify the LCR effect of such potential demand response resources;"[12] and (4) energy storage resources, even though the Proposed Decision "cannot quantify the LCR effect of potential energy storage resources."[13]

The Proposed Decision also fails to authorize SCE to procure the resources needed to eliminate the current Special Protection System ("SPS") that would shed potentially 1,000 MW of load in urban San Diego to address the limiting N-1-1 contingency. The Proposed Decision appropriately concludes that "[w]e do not find that long-term reliance on an SPS to resolve LCR need related to the retirement of SONGS is appropriate."[14] Yet despite expressly rejecting the concept that the SPS should be a long-term solution to local capacity needs, the PD also fails to authorize the utilities to procure the additional resources required to mitigate the limiting N-1-1 contingency without load shed. Instead, the PD suggests that the appropriate path forward is to "wait to see what resources develop" in the absence of any procurement authorization.[15]

Ultimately, the PD uses the "directional indicators," and its conclusion that resources needed to eliminate the SPS may appear without granting SCE additional procurement authority, to reduce the potential procurement authorization to significantly below the amounts determined by the ISO models on which the Proposed Decision relies. In part, the Proposed Decision bases this decision on concerns "about the potential excess

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(. . . continued)

[11] *Id.* at 52.

[12] *Id.* at 57.

[13] *Id.* at 60.

[14] *Id.* at 44.

[15] *Id.* at 46.

ratepayer costs resulting from over-procurement."[16] The Proposed Decision also assumes that although it does not authorize additional resources "at this time," additional procurement can be authorized in the future should that prove necessary.

That reasoning, however, has two critical flaws. First, as explained above, there is insufficient time to "wait to see" what develops, or to authorize further procurement at a later date. With less than seven years until significant new local capacity is needed in the LA Basin, the Commission needs to act now to ensure that SCE can procure the appropriate mix of resources.

Second, though over procurement may result in additional ratepayer costs, under procurement can be significantly more costly. The costs of impaired reliability and potential outages, including load shedding in urban areas, will have cost impacts that significantly outweigh the cost of generation needed to avoid those impacts. Further, untimely procurement decisions can result in a less than optimum resource mix that not only is more expensive, but also causes more environmental impacts than the timely procurement of necessary resources. Therefore, the Commission should not put reliability at risk due to concerns about over procurement, which would simply bring additional capacity to the market a little sooner than it may have otherwise been needed and be a good insurance policy. As the PD itself notes, "a primary responsibility of the Commission is to ensure safety and reliability in the electrical system …."[17] Instead, the Commission should authorize sufficient resources to ensure reliability, as shown by the power flow studies conducted for this proceeding. Those studies may be based on assumptions that fail to accurately capture events in 2020, but that is a risk incurred in any planning attempt. As the Proposed Decision itself notes, "[i]t is not reasonable, at

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[16] *Id.* at 60.

[17] *Id.* at 12.

this point in the proceeding, to delay the Track 4 decision until all of the assumptions prescribed in the revised Scoping Memo can be restudied, nor is it reasonable to selectively update assumptions."[18] Instead, the Commission must authorize sufficient procurement now, based on the information it currently has, rather than hope that further delay will result in a more accurate determination of future need.

Adding to the risks posed by failing to give SCE the authority and flexibility to procure sufficient resources now, the Proposed Decision fails to offer any concrete plans to procure additional resources in the future, should that prove necessary. There may not be a local reliability phase in the current LTPP.[19] That raises the possibility that local reliability will not be addressed again until the 2016 LTPP at the earliest, less than four years before the need arises in 2020. Furthermore, the Proposed Decision fails to fully embrace SCE's suggestion that it be allowed to enter into contingent contracts to backstop any failure to procure sufficient preferred resources. Instead, the Proposed Decision permits, but does not require, SCE to propose contingency contracts in connection with its current procurement, or in a separate application.[20] The lack of any clear path forward should additional resources be needed further emphasizes the importance of authorizing SCE to procure sufficient resources now.

B. The Proposed Decision's Assumptions Concerning Preferred Resources Are Overly Ambitious

According to the Proposed Decision, the Loading Order requires that, "[i]nstead of procuring a fixed amount of preferred resources and then procuring fossil-fuel resources, the IOUs are required to continue to procure the preferred resources 'to the

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[18] *Id.* at 35.

[19] At the prehearing conference for the 2014 LTPP, the schedule suggested by Administrative Law Judge Gamson did not include a phase for local reliability.

[20] PD at 103.

extent that they are feasibly available and cost effective.'"[21] (PD at 14-15.) Yet despite recognizing that obligation, the Proposed Decision would impose extremely aggressive targets for preferred resources, with little evidence that those resources are either "feasibly available," or "cost effective."

The level of preferred resources that the Commission has assumed will be feasibly available and cost effective is astounding, and there is no prescribed plan for what to do if these resources do not appear. For Track I, the Commission adopted assumptions for the studies in this proceeding that included over 1,800 MW of preferred resources, not including additional renewable resources procured through Renewable Portfolio Standard solicitations. The assumptions included 339 MW of rooftop solar, 180 MW of customer-side combined heat and power, 200 MW of demand response, and 1,121 MW of uncommitted energy efficiency. The May 21, 2013 Revised Scoping Memo adjusted these assumptions slightly, but the Track 4 assumptions still included over 1,600 MW of preferred resources. The Track 1 decision authorized a maximum of 600 MW of preferred resources or energy storage procurement, amounts that this Track 4 decision has assumed will be procured.[22] Thus, the demand-side assumptions, coupled with the procurement authorized in Track 1 that is assumed to be procured for purposes of Track 4, and the incremental minimum requirement proposed in the PD amount to over 2,600 MW (1,600 MW + 600 MW + 400 MW) of preferred resources or energy storage, far in excess of the 1,500 MW of gas-fired resources that the Commission has authorized SCE to procure in Track 1 and the Track 4 PD.

Yet there is significant uncertainty as to whether cost-effective preferred resources can be procured in that amount. As TURN noted in its testimony, the use of

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[21] *Id.* at 14-15.

[22] *Id.* at 28.

preferred resources "faces several key uncertainties, particularly as to the quantities that will be available, the ability of these quantities to meet local reliability needs, and the cost of such resources."[23] SCE concedes that its Preferred Resources Living Pilot "introduces reliability risks,"[24] and that "a significant amount of uncertainty exists around key element of the implementation of SCE's Preferred Resources strategy, including questions about the availability of Preferred Resources and the ISO's acceptance of some Preferred Resources as valid LCR resources."[25] As Pacific Gas and Electric Company argued in its opening brief, "the Commission should not simply assume, at this stage, that these resources will materialize, located in the right places and having the necessary operational attributes. The Commission should recognize that until and unless the hoped-for resources develop in the right places with the right attributes, there is an unmet need that leaves the CAISO grid in Southern California in a potentially vulnerable, unreliable state."[26]

Despite the uncertainties associated with its preferred resources strategy, SCE's requested procurement authorization in this proceeding assumed that its Preferred Resources Living Pilot would result in an additional 500 MW of local capacity resources. It further reduced its requested procurement authorization by assuming that the Mesa Loop-In Project would be in place by 2020, further reducing the demand for local capacity resources by 734 to 1,200 MW. It is worth noting that the PD concludes, contrary to SCE's assumption, that "there is not enough information available at this time to make a specific finding that any transmission project [including the Mesa Loop-In]

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[23] Ex. TURN-1 (Woodruff) at 7:9-12.

[24] SCE Brief at 30; Ex. SCE-1 at 63:4-64:4; Ex. SCE-2 at 30:5-12.

[25] SCE Brief at 25-26.

[26] PG&E Brief at 12.

will be able to reduce the LCR need in the SONGS service territory by 2022."[27] Based on these aggressive assumptions, SCE requested only an additional 500 MW of all source procurement, a request with which the ISO concurred. In fact, of the parties that recommended a specific procurement amount for SCE, the majority favored at least the 500 MW of all source procurement requested by SCE.[28]

The Proposed Decision, however, rejects the recommendations of the majority of the parties to this proceeding, including the recommendations of all three parties (SCE, ISO, and AES Southland) that conducted power flow studies to determine local capacity needs. Instead, it directs SCE to procure an additional 400 MW of preferred resources, limiting SCE's all source procurement to a mere 100 to 300 MW.

In the absence of evidence that cost-effective preferred resources are available in the amounts assumed by the PD, the PD's procurement authorization creates a significant risk to the reliability of the electrical system in Southern California. Should those resources fail to appear, there will be insufficient time to arrange for alternative procurement. Ultimately, the PD's overreliance on preferred resources may wreak far more environmental damage than allowing SCE to procure a diverse set of resources, including modern combined-cycle gas plants, to meet local capacity needs. If sufficient resources are not procured now, less effective solutions may need to be cobbled together at the last minute to ensure some level of reliability, increasing both costs and environmental impacts. In fact, SCE's own studies showed that its LA Basin Generation Scenario, which includes reliance on modern combined-cycle gas plants, had both a lower cost and fewer greenhouse gas emissions than its Preferred Resources Scenario.

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[27] PD at 52.

[28] *Id.* at Appendix 1.

AES Southland recommended in its briefing in this matter that the Commission authorize at least an additional 1,440 MW of new generation through SCE's currently pending request for offers. While AES Southland continues to believe that the evidence in this proceeding supports such an authorization, at a minimum the Proposed Decision should be revised to grant SCE more all source flexibility. This could be accomplished by reducing the mandatory preferred resources bucket from 400 MW to 200 MW or, more preferably, making the entire additional Track 4 authorization all source. Anything less would constitute a gross overreliance on uncertain preferred resources.

C. The PD's Procurement Authorization Is Inconsistent with Its Assumptions on Track 1 Procurement

The Proposed Decision's procurement authorization is also inconsistent with its assumption that SCE will procure the full 1,800 MW authorized in Track 1. As a result, the PD understates the minimum authorized procurement by 400 MW and thus the minimum preferred resources procurement by the same amount. That error lends further support to the argument that the Proposed Decision places too much reliance on preferred resources and should be modified to give SCE more flexibility.

With regard to Track 1 procurement, the Proposed Decision expressly assumes that SCE will procure the full 1,800 MW authorized in Track 1.[29] For this to be possible, at least 600 MW of preferred resources or energy storage must be procured to reach the 1,800 MW maximum. The Proposed Decision goes on to conclude that the assumed 1,800 MW procurement directly reduces forecasted need.[30] After reducing forecasted need by 1,800 MW to account for Track 1, the Proposed Decision goes on to conclude that SCE should be authorized to procure an additional 500 to 700 MW. If that range is

[29] *Id.* at 28.

[30] *Id.* at 28-29.

added to the assumed 1,800 MW of Track 1 procurement, the range of authorized procurement is from 2,300 to 2,500 MW and the minimum preferred resources requirement increases to 1,000 MW (600 MW + 400 MW).

The Proposed Decision, however, erroneously calculates the range to be 1,900 to 2,500 MW.[31] (PD at 138.) The error results when the PD calculates the minimum procurement by adding the minimum Track 1 procurement (1,400 MW) to the minimum additional Track 4 procurement (500 MW). However, having assumed that SCE would procure 1,800 MW from Track 1 in order to calculate overall need, the Proposed Decision should not use the 1,400 MW for calculating the minimum total procurement authorization. Instead, the proper authorized range should be between 2,300 and 2,500 MW. Thus, by its own assumptions, the Proposed Decision undercounts the minimum amount of need by 400 MW and also underestimates the balance between preferred resources and gas-fired generation.

III. CONCLUSION

Coupled with the preferred resource assumptions and procurement authorizations from Track 1, the procurement authorization specified in the Proposed Decision would result in the Commission relying upon the appearance of over 2,600 MW of preferred resources to meet local reliability needs in Southern California. There is no evidence that cost-effective resources in that amount are readily available and will be able to meet local reliability requirements. For that reason, the Proposed Decision should be revised to eliminate the mandatory preferred resources or storage procurement or, at a minimum, reduce it to 200 MW, which would permit SCE to procure at least 500 MW from all sources. SCE has repeatedly stated that it will comply with the requirements of the

[31] *Id.* at 138.

loading order. If sufficient cost-effective preferred resources are available, SCE can and is obligated to procure those resources in an all source solicitation. However, in the absence of such resources, SCE needs to have the flexibility to procure other types of resources to ensure that local reliability needs in Southern California are met by 2022.

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