BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of San Diego Gas & Electric Company (U902 E) for Authority to Enter into Purchase Power Tolling Agreements with Escondido Energy Center, Pio Pico Energy Center and Quail Brush Power	Application 11-05-023 (Filed May 19, 2011)

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COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION ON THE PROPOSED AND ALTERNATE DECISIONS

I. Introduction

This proceeding involves two important topics: 1) San Diego Gas & Electric Company's (SDG&E's) future needs for local area capacity given the anticipated retirement of generating resources in compliance with California's once through cooling (OTC) requirements; and 2) SDG&E's requested approval of purchase power tolling agreements (PPTAs) with Escondido Energy Center (Escondido), Pio Pico Energy Center (Pio Pico) and Quail Brush Power (Quail Brush). The California Independent System Operator Corporation (ISO) participated actively in this proceeding, presenting its OTC study results that identified substantial local capacity area resource deficiencies starting in late 2017 and explaining in detail its contingency-based study methodology underlying these findings. The ISO also presented testimony supporting the need for flexible generation in the load pocket, and resource operating characteristics required to meet that need.

On November 20, 2012, ALJ Yacknin issued a Proposed Decision (PD) on these topics and on the same day Assigned Commissioner Ferron issued an Alternate Decision (AD). Both decisions made adjustments to the ISO's OTC study results, and both decisions declined to

approve the Quail Brush and Pio Pico PPTAs. The AD granted SDG&E authority to enter into a PPTA with Escondido.

Although the ISO agrees with many aspects of the decisions, the ISO also has concerns with both decisions. Accordingly, in these comments the ISO identifies these specific concerns and proposes revised language to be inserted into the final decision.

II. Determination of Local Capacity Needs and Proposed Adjustments to the ISO Study Results

A. The PD and AD Correctly Support and Approve the ISO's OTC Study Methodology

Both decisions agree that the ISO's OTC study methodology, which was based on the Local Capacity Requirements (LCR) methodology performed annually for the Commission's resource adequacy proceedings, is appropriate for determining the LCR need for new resources in the San Diego area. The decisions found that the spreadsheet analyses presented by SDG&E and DRA are overly simplistic calculations of demand and supply resources whereas the ISO's approach uses power flow and stability models that take into account, among other things, load and resource locations.[1] This finding is consistent with the position presented by the ISO in testimony and briefs. In addition, the decisions correctly reject arguments put forth by various intervenors that the ISO's study methodology should be adjusted for items such as the 2.5% transmission planning reactive margin, possible future transmission solutions not considered during the study process and failing to include load shedding as a mitigation solution for local area needs.[2] Finally, the decisions both declined to make other adjustments to the ISO's studies, such as the consideration of special protection systems and other operation protocols advocated

[1] (Page numbering in the AD stops at page 2. For the purposes of page references, the ISO has numbered the rest of the pages in the AD, using the pdf version of the document.) PD, page 5; AD, page 6.
[2] PD., page 10; AD page 11.

by DRA and CEJA that would purportedly reduce LCR needs.[3] The ISO certainly agrees with these conclusions reached in the respective decisions and appreciates the Commission's support for the ISO's OTC study methodology and detailed planning analysis.

The decisions also correctly found that the San Diego LCR needs should be based on the ISO's Trajectory scenario, which is based on current information and provides a very plausible forecast of load and the build-out of renewable resources. With all of these findings, the Commission has approved a very reasonable path to assuring reliable service in San Diego.

B. While the ISO is Willing to Accept Adjustments to its Local Area Capacity Need Results for a Conservative Level of Uncommitted EE and Incremental CHP, the Proposed Adjustment for Incremental Demand Response is Not Supported By the Record and could Adversely Impact Reliability.

At page 9 of both decisions, the ALJ and ACR determine that it is appropriate to take into account reasonable forecasts of uncommitted EE, DR and incremental CHP in order to ensure just and reasonable rates by limiting unnecessary ratepayer expense. The decisions find that the ISO's results should be reduced by 151 MW of uncommitted EE, 219 MW of demand response and 17 MW of incremental CHP for a total reduction of 387MW in each scenario without evidence or technical analysis as to the impact this reduction has on the reliability needs of the local area.[4] These values were taken from the updated spreadsheet analysis presented by SDG&E in Table 1 of Robert Anderson's supplemental testimony.[5]

As the decisions recognize, the ISO did not model uncommitted EE, incremental CHP and demand response in its OTC studies. For the reasons set forth below, the ISO remains concerned about the uncertainty that is caused by reducing LCR needs for uncommitted EE, but

[3] PD and AD, page 8.
[4] PD, page 13; AD page 14
[5] Ex. 11, page RA-5.

will not propose modifications to the decisions for this adjustment. However, the ISO is quite concerned about the DR adjustment and urges the Commission to modify the decisions.

To be clear, the ISO supports the state's preferred energy resource goals and has been working very hard with this Commission and other agencies in order to move the state forward towards reaching its goals. In particular, the ISO has worked with the CPUC and stakeholders since 2007 to develop a pathway forward for demand response to participate directly in the ISO market as a generation-substitutable resource. Successfully, the ISO and stakeholders developed the Proxy Demand Resource (PDR) product, which was approved by FERC that allows the direct participation of demand response in the ISO market, like any other generation resource. The ISO encourages SDG&E to develop a portfolio of proxy demand resources that are configured to be used and useful to the ISO for planning and operational purposes.[6] The ISO's OTC study is another aspect of this collaborative effort in support of preferred energy resource goals.

Furthermore, the ISO understands that Commission must perform a very delicate balancing act between approving the development of generation resources required to maintain reliable service, ensuring just and reasonable rates, and overseeing procurement policies that align with the loading order embodied in Cal Pub. Util. Code §454. Nonetheless, the Commission's proposed "solution" to achieve this balance between ratepayer expense and reliability overlooks the record evidence that SDG&E's DR programs do not meet the ISO's reliability and operational needs in the local capacity area.

[6] The ISO is encouraged that the pathway forward for demand response is clearer given the Commission's recent approval in D12-11-025 that allows the direct participation of demand response in the ISO market once final refinements are made to CPUC tariff Rule 24.

Incremental Energy Efficiency

The ISO expressed its concerns with the certainty that uncommitted EE would actually achieve the forecasted megawatt savings. As Mr. Sparks explained, the ISO used the 2009 IEPR load forecast which included a certain level of committed EE but did not contain uncommitted EE. [7] In contrast, the 151 MW of uncommitted EE adopted by both decisions was taken from the low savings scenario in the CEC Preliminary Energy Demand Forecast 2012-2022 Draft Staff Report, dated August 2011, and used by SDG&E in its spreadsheet analysis.[8] SDG&E witness Athena Besa explained that the updated 2011 IEPR load forecast (also used by SDG&E in its spreadsheet analysis) contains different levels of *committed* EE because programs that were previously uncommitted were forecast to become committed in later years. [9] Thus, the ISO would note that mixing the two load forecasts could perhaps be double-counting the amount of uncommitted EE. The ISO would also remind the Commission of the ISO's concerns with the uncertainty that uncommitted EE will actually materialize as forecasted.[10] Further, the ISO notes that the decisions acknowledge the uncertainty regarding the length of the outages affecting the SONGS generation.[11] Such factors should be taken into account in deciding how optimistic one should be in assessing other uncertainties.

Nonetheless, the ISO accepts that there simply is no better and more useful energy efficiency information available at this time that mitigates these concerns, making it even more important in the future that the CPUC work with the industry to provide a higher degree of resource certainty and integration into the ISO market of these programs in the future. The conservative estimate of uncommitted EE adopted in the decisions provides the ISO with a

[7] Ex. 27, pages 2-3.
[8] Ex. 11, page RA-6.
[9] Ex. 26, page AB-3.
[10] Ex. 27, page 2.
[11] PD, page 16; AD, page 17

certain level of confidence that some or all of it will materialize as forecast. Accordingly, in this proceeding the ISO will not press for further adjustments to the uncommitted EE megawatt amount and is willing to accept the load impact benefits of the uncommitted EE as assumed in the proposed decisions.

Incremental DR

The ISO is not similarly willing to accept the uncommitted demand response megawatt amount as a substitute local capacity resource. Unlike EE, which can permanently reduce load, the suite of utility dispatchable and emergency-responsive demand response programs offered do not possess the appropriate attributes needed to safely offset new dispatchable generation resources in the local area.

As introduced above, the ISO is quite concerned about potential reliability impacts that could result from the conclusion to reduce the ISO's OTC results by 219 MW to reflect SDG&E's DR programs. The decisions have unreasonably ignored the testimony and evidence provided by the ISO about the DR characteristics required for the ISO to rely on such programs as viable mitigation solutions for transmission contingency events. Mr. Sparks agreed that DR resources can clearly aid reliability when these resources are available to the ISO where and when needed, and for how much energy is needed.[12] He provided specific details as to the DR characteristics that the ISO would need for DR resources to be used to address local capacity needs:

- DR must be dispatchable when and where needed for a specific MW quantity (generation substitutable).
- DR must be dependable over a significant period of time (durable).

[12] *Id.* , page 7

- DR must be able to respond in less than 30 minutes in order to provide the ISO with resources needed to address contingency-driven requirements[gvp1]. DR able to respond in this time period must be visible to the ISO in real-time.

In his testimony, Mr. Sparks emphasized that no DR programs have the characteristics needed to be counted as supply-side resources in the ISO's local area studies.[13]

Consistent with Mr. Sparks' observations, there is absolutely no record evidence that the 219 MW of DR programs SDG&E included in its spreadsheet analysis meet the DR characteristics required by the ISO to offset generation in the local capacity area, yet the PD and the AD recommend that the OTC results be reduced by this amount. In fact, SDG&E's testimony makes it clear that its DR programs are not designed to provide the generation-substitutable attributes needed by the ISO to participate in the wholesale market and, by implication, to perform the responsibilities required by the NERC/WECC reliability standards for the transmission operator and balancing area authority functions. To begin with, Ms. Besa in her rebuttal testimony explained that the 219 MW was based on SDG&E's June 2012 updated 2020 DR forecast that was based on a lower *ex post* evaluation. During re-direct examination, she noted that DR growth had been much lower than expected, amounting to only 64 MW in 2010 and 62 in 2011.[14] She also testified, in response to cross-examination questions by CEJA, that the DR programs included in the forecast do not take into consideration the types of programs that would be generation-substitutable and ultimately able to bid into the ISO wholesale market.[15] Finally, again in response to questions on redirect, Ms. Besa explained that SDG&E's DR programs are not long term and must be revisited with customers on an annual

[13] *Id.*
[14] Tr.213:8-16
[15] Tr. 177:4-23

basis. When called upon frequently during a short period of time, customers often grow fatigued and may not participate in the next year.[16]

Reducing the ISO's OTC results by 219 MW has no basis in evidence and is not an appropriate outcome. This is especially borne out when the record clearly indicates that the DR programs reflected in the forecast are not long-term (*i.e.*, with little or no certainty they will be continued by customers in subsequent years), that actual growth of DR has been below expectations, and most importantly that even if available to the ISO, these programs do not provide the operating characteristics necessary to address local area needs, The decisions should be modified to eliminate this adjustment.

Role of Preferred Resources in the Procurement Process

As discussed above, the decisions should be modified to eliminate the incremental DR assumption. Accordingly, the decisions should be modified to find that the local need for the San Diego area, based on the Trajectory scenario, is 562 MW, which includes adjustments for uncommitted EE and incremental CHP. While the ISO supports the use of preferred resources, reliance on them must be well founded such that there is a high level of confidence that preferred resources will develop in the right amounts at the right locations with the right operational attributes.

The ISO remains technology neutral in the satisfaction of the local need, and further believes that the procurement process should include participation by preferred resources wherever feasible and reliable, including DR programs that have the characteristics described in the ISO's testimony. The ISO looks forward to working with the Commission, SDG&E and all interested parties to help develop, preferred resources, like demand response, that are well suited and responsive to address future local capacity needs, and the ISO is willing provide input into a

[16] Tr. 213:23-215:8

solicitation process that is technology-neutral and will enable further development of preferred resources.

C. The Commission's Failure to Approve All of the PPTAs Could Delay Resource Procurement Beyond the Need Date.

The ISO's OTC study identified local capacity needs in the San Diego area beginning in early 2018. Based on this finding, and the fact that all three PPTAs would bring new capacity online ahead of this date, in mid-2014, both decisions did not approve the Quail Brush and Pio Pico PPTAs.[17] The PD also denied approval of the Escondido PPTA but the AD approved it.

In both this proceeding and the LTPP Track 1 (R.12-03-014) the ISO urged the Commission to identify local area needs and direct SDG&E (and SCE) to enter in to a procurement process as soon as possible so that resources will be online by 2018. Although both decisions do identify a local need in San Diego (at a level the ISO does not agree with) on the time frame that the ISO envisioned, it seems illogical to send SDG&E" back to the drawing board" and open a new solicitation process for resources that have already been procured. Even with a 2018 need date, it is highly likely that the anticipated online dates of the resources at issue in this proceeding will be extended due to permitting and construction issues. It is also troublesome that the decisions could require SDG&E to ultimately submit the same PPTAs for approval once again in a proceeding that could, once again, take well over a year to conclude and might cause the online dates lag behind the need date. It is particularly troubling at a period of greater than usual uncertainty, given the increased reliance on uncommitted programs and the uncertainty facing the future operation of the SONGS generation. This is exactly what the ISO was trying to prevent.

[17] PD, page 14; AD page 18.

As discussed above, the ISO urges the Commission to remove any adjustments, due to the proposed DR resources, from the determination of local capacity needs. In doing so, the Commission will make a finding of 562MW local capacity needs in San Diego which exceeds the level of the proposed PPTAs. At a minimum, San Diego should be authorized to procure new resources at that level, including preferred resources.

Respectfully submitted,

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APPENDIX
MODIFIED LANGUAGE FOR BOTH DECISIONS
(insertions are shown in italics)

Proposed Decision

A. Findings of Fact

~~5. SDG&E's forecast of demand response takes account of the Commission's recent decision approving SDG&E's demand response programs in D.12-04-045; the 2010 LTPP standardized planning assumptions do not reflect this.~~

7.The OTC study results, adjusted for uncommitted energy efficiency ~~and demand response~~ and for incremental CHP, show an LCR need in 2021 ranging from ~~-81 MW (surplus)~~ *81 MW* to ~~343 MW~~ *562 MW.*

B. Conclusions of Law

3. In the absence of a power flow modeling study that models these resources, it is reasonable to account for conservative but reasonable forecasts of uncommitted energy efficiency ~~and demand response~~ and incremental CHP by subtracting them from the results of the OTC study.

4. The CAISO's modeling assumptions, other than with respect to uncommitted energy efficiency ~~and demand response~~ and incremental CHP, are reasonable.

5. SDG&E's forecasts of uncommitted energy efficiency, ~~demand response~~ and incremental CHP are conservative but reasonable.

6. It is reasonable to authorize SDG&E to procure up to ~~343 MW~~ *562 MW* of local generation capacity to come on-line beginning in 2018, as coordinate with the anticipated retirement of Encina or other changing conditions in its service territory.

Order

2. San Diego Gas & Electric Company is authorized to issue a request for offers to meet a local capacity requirement need of up to ~~343~~ MW *562 MW* beginning in 2018.

Alternate Decision

A. Findings of Fact

~~5. SDG&E's forecast of demand response takes account of the Commission's recent decision approving SDG&E's demand response programs in D.12-04-045; the 2010 LTPP standardized planning assumptions do not reflect this.~~

10.The OTC study results, adjusted for uncommitted energy efficiency ~~and demand response~~ and for incremental CHP, show an LCR need in 2021 ranging from ~~-81 MW (surplus)~~ *81 MW* to ~~343 MW~~ *562 MW.*

B. Conclusions of Law

4. In the absence of a power flow modeling study that models these resources, it is reasonable to account for conservative but reasonable forecasts of uncommitted energy efficiency ~~and demand response~~ and incremental CHP by subtracting them from the results of the OTC study.

5. The CAISO's modeling assumptions, other than with respect to uncommitted energy efficiency ~~and demand response~~ and incremental CHP, are reasonable.

6. SDG&E's forecasts of uncommitted energy efficiency ~~and demand response~~ are conservative but reasonable.

8. It is reasonable to authorize SDG&E to procure up to ~~298MW~~ *517 MW* of local generation capacity to come on-line beginning in 2018, as coordinate with the anticipated retirement of Encina or other changing conditions in its service territory.

Order

3. San Diego Gas & Electric Company is authorized to issue a request for offers to meet a local capacity requirement need of up to ~~298MW~~ *517MW* beginning in 2018. San Diego Gas & Electric Company shall adjust the timing of the request for offers, as appropriate, to coordinate with the anticipated retirement of Encina and other changing conditions in its service territory.

SUBJECT INDEX
RECOMMENDED CHANGES TO THE PROPOSED AND ALTERNATE DECISIONS

The ISO recommends that the following changes be made to the body of the PD and AD. Proposed insertions are shown in italics:

Modifications to the PD:

1. Summary (page 1)

This decision determines a local capacity requirement need and directs San Diego Gas & Electric Company to procure up to *562* ~~343~~ megawatts of local generation capacity beginning in 2018. This decision denies San Diego Gas & Electric Company authority to enter into purchase power tolling agreements with Escondido Energy Center, Pio Pico Energy Center, and Quail Brush Power, without prejudice to a renewed application for their approval, if amended to match the timing of the identified need, or upon a different showing of need. This proceeding is closed.

3.2 OTC Study (language on pages 9-10)

While we respect the CAISO's statutory responsibility and its discretion to model its OTC study modeling based on assumptions that flow from it, the record of the proceeding highlights the limitations of our reliance on the OTC study for purposes of this Commission's statutory responsibility to ensure just and reasonable rates by, among other things, limiting unnecessary ratepayer costs. For the Commission's purposes, it is appropriate to take into account 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. These 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.

(NOTE: footnote 8 should be deleted).

We recognize that subtracting these resources (or the incremental 2021 demand) from the OTC study results is a crude solution. The power flow study results do not correlate, MW for MW, to resource assumption inputs, as shown by the results under the four RPS scenarios. Nevertheless, in the absence of OTC study results that model reasonable forecasts of uncommitted energy efficiency ~~and demand response~~, it is appropriate to otherwise account for *it* ~~them~~. In the absence of any record evidence of an alternative, ~~and consistent with the approach taken in D.06-06-064 to account for demand response with respect to the utilities' local resource adequacy requirements (D.06-06-064 at 53-54),~~ it is reasonable to subtract conservative forecasts of uncommitted energy efficiency ~~and demand response~~ from the OTC study results for purposes of determining the LCR.

Insert on 10 after the paragraph above:

In contrast to accepting incremental EE and CHP adjustments as discussed above, we agree with the CAISO that a one-for-one megawatt reduction of the OTC results due to demand response are not appropriate at this time. As demonstrated in the CAISO's testimony, and supplemented by the cross-examination testimony of SDG&E witness Besa[1], the demand response programs do not have the operating characteristics required by the ISO in order to safely offset new dispatchable generation resources in the local area.[2] Although the CAISO acknowledges that demand response resources can clearly aid reliability when these resources are available with the right operating characteristics where and when needed, and for the amount of energy needed, there is no evidence on the record of this proceeding that the current demand response programs will be re-configured and available to meet local capacity needs.

[1] *Tr. 213:23-215:8*
[2] *Ex. 27 (Sparks rebuttal), page 7.*

The Commission will work with the CAISO, SDG&E and all interested parties in developing the demand response characteristics and specific details required for such programs to participate in SDG&E's resource procurement process.

On page 12 the following language should be deleted:

~~Demand response:~~

~~SDG&E forecasted demand response consistent with the forecast underlying SDG&E's demand response programs that the Commission recently approved in D.12-04-045. (Ex. 11 at RA-10 through RA-11.)~~

~~CEJA objects to this forecast for deviating from the 2010 LTPP standardized planning assumptions and as unduly conservative for failing to account for anticipated increases due to Advanced Metering Infrastructure (AMI) and other investments in technology. (CEJA opening brief at 32.) As discussed above with respect to uncommitted energy efficiency, the 2010 LTPP standardized planning assumptions are not controlling, and it is appropriate to assume a conservative forecast of demand response for the purpose of making the crude adjustment to the OTC study results.~~

3.3 LCR Need (page 13)

The OTC study identifies an LCR need ranging from 300 MW to 730 MW under the four 2010 RPS scenarios in 2021, without accounting for uncommitted energy efficiency or demand response. Imputing this 2021 LCR need to 2020, and accounting for uncommitted energy efficiency ~~and demand response~~ response by subtracting their forecasted amounts in 2020 (151 MW of uncommitted energy efficiency ~~and 219 MW of demand response~~) from the OTC study

results for yields an LCR need in 2020 ranging from *81MW to 562 MW* ~~-87MW (surplus) to 343MW ,~~ as follows:

	Environmentally-Constrained	Time-Constrained	Cost- Constrained	Trajectory
OTC study result	300 MW	540 MW	630 MW	730 MW
Uncommitted energy efficiency, ~~demand response~~ and CHP	*168* ~~387~~ MW	*168* ~~387~~ MW	*168*~~387~~ MW	*168*~~387~~ MW
LCR need	*81MW*~~[87 MW]~~	*372MW*~~153 MW~~	*462MW*~~243 MW~~	*562MW*~~343 MW~~