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)

COMMENTS OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E) REGARDING ENERGY DIVISION STRAW PROPOSAL ON 2012 LTPP PLANNING STANDARDS

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In accordance with the direction provided in the *Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge* ("Scoping Memo"), San Diego Gas & Electric Company ("SDG&E") provides these comments regarding the straw proposal ("Staff Proposal") developed by the California Public Utilities Commission's ("Commission's") Energy Division ("ED") in the above-captioned proceeding. The Staff Proposal "seeks to inform future decision-making by presenting broad choices of assumptions for scenario creation in order to inform policy-makers of the options available to them."[1/] SDG&E provides its comments on the Staff Proposal in the template form provided by the ED in Attachment A hereto.

SDG&E supports the ED's effort to transparently develop a broad set of planning assumptions for use in the 2012 long-term procurement plan ("LTPP") planning process. In developing these assumptions, SDG&E believes that it is critical for all parties to recognize that a large degree of uncertainty exists in the forecasting process. History makes clear that the future is unpredictable and that circumstances can change very rapidly. Thus the planning process must examine a wide range of possible futures. Only by doing so will the Commission

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1/ Staff Proposal, p. vi.

fully comprehend the implications of decisions made today in a future that will undoubtedly unfold in a manner different from what is expected.

While certain parties to this proceeding may oppose evaluation of a wide range of future outcomes, and may urge the Commission to consider only those assumptions that support their view or preferred outcome, the Commission should reject efforts to unreasonably limit the assumptions considered. An unduly restrictive evaluation would deprive the Commission of the robust analysis that is required to reach a well-reasoned determination; if the assumptions developed in this process and later assembled into scenarios result in an overly narrow view of potential future outcomes, the Commission will be unable to render an informed decision. Development of the assumptions and scenarios in this proceeding should be undertaken with the goal of providing comprehensive information to the Commission, and expanding rather than limiting the information provided to it. While the Commission must determine, as part of its decision making process, how much to weight to place on each scenario, it can do so effectively only if it is provided with scenarios that fully explore potential future outcomes.

Dated this 31st day of May, 2012 in San Diego, California.

Respectfully submitted,

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ATTACHMENT A

SDG&E Comments on Staff Proposal

GENERAL

1. Guiding Principles

In developing assumptions for use in the LTPP proceeding, a number of guiding principles in addition to those articulated in the Staff Proposal should be observed. These include:

- Values Used to Create Assumption Ranges should be Meaningfully Different: In developing assumptions with low, medium and high values, the range between these numbers should be meaningful. Establishing a high/low value that is only 5% higher/lower than the mid value does not provide a meaningful range. Such a narrow range covers only the uncertainty within that one number. As a practical matter, if all parties agree that a variable will only vary by a small percentage, there is no compelling reason to analyze three values for that variable. In order to be useful, the ranges must represent materially different outcomes.
- Agreeing to Analyze a Wide Range of Assumptions does not Signify that a Party Favors or Disfavors a Particular Outcome: In some instances, a party's recommendation or support for a "low" value for a given variable could be misinterpreted as a lack of support by that party for that particular resource type or policy direction related to that resource. Assumptions of this type are misguided; a party might support a policy the favors a particular resource type while simultaneously recognizing the uncertainty regarding future availability of that resource type.

  For example, a group of parties might unanimously support the State's policy directing that all cost-effective energy efficiency ("EE") be sought. That same group of parties may disagree, however, on the actual MW impact that will result from that policy

direction. Evaluating different outcomes does not signify lack of support for the State's policy initiatives. The reality is that there is a significant interaction of EE with the load forecast and there is a large degree of uncertainty regarding how much EE is incremental to the EE that is implicitly in the load forecast. Accordingly, it is important to evaluate a wide range of outcomes for preferred resources or policy driven resources. Doing so ensures that the Commission has adequate information to make resource determinations; it does not imply a lack of support for the relevant policy direction or preferred resource.

- Assumptions to be Used Might Vary Depending on the Analysis: SDG&E was encouraged by ED's comments at the May 17 workshop acknowledging that the assumptions that are relied upon for one analysis may be different than the assumptions that are relied upon for another analysis. For example, the Commission may find that a set of more conservative assumptions should be used to determine local resource need since it will be critical to maintain system reliability, and that a second more aggressive set of assumptions can be used for overall system planning. This would make sense inasmuch as the implications of being wrong in each case, and the time required to react and rectify an erroneous determination, may be different in the two cases.
- Overlap Between LTPP and Transmission Planning: The ED's proposed standards should be designed to minimize gaps between the planning assumptions used by the Commission and those used by the California Independent System Operator ("CAISO") in its Transmission Planning Process ("TPP"). The ED's proposed range of scenarios ("low," "mid" and "high") should, at a minimum, include a scenario used by the CAISO in its TPP. SDG&E suggests that the Commission adopt a CAISO-defined "high" scenario where the "high" scenario would incorporate underlying assumptions that are consistent

with a larger amount of load for which a larger amount of dependable capacity is required. The CAISO's TPP would identify the transmission system upgrades that accommodate this "high" scenario. This approach would help to identify the LTPP resource additions and transmission expansion options that would minimize the risk of the CAISO engaging in back-stop procurement.

A secondary concern is the range of retirements in San Diego and SP26. With problems at the San Onofre Nuclear Generating Station ("SONGS") and some combustion turbines reaching the end of their normal life-span, the range of scenarios must include the possibility of additional retirements within the LTPP study period.

2. Planning Area and Planning Period

SDG&E agrees with the Staff Proposal that all resources should be categorized to a local area if they meet the requirements to serve as a local resource. SDG&E supports the use of a 20-year planning period so long as the assumptions used for the final ten years are based on a simplified set of assumptions. The second ten years assumptions may vary depending on the specific studies to be undertaken.

3. Economic and Demographic Assumptions

SDG&E supports the use of economic and demographic drivers that are consistent with the other assumptions.

4. Load Forecast.

SDG&E supports the use of the three scenarios in the California Energy Commission's ("CEC's") 2011 Integrated Energy Resources Plan ("IERP") load forecast. SDG&E supports the use of annual growth rates to extend the load forecasts beyond the period provided in the forecast to develop outer years.

DEMAND SIDE ASSUMPTIONS

5. Incremental Energy Efficiency

With regard to uncommitted energy efficiency, SDG&E strongly believes that only EE savings that are reasonably expected to occur can be considered for resource planning purposes and that in order to be reasonably expected to occur, these EE savings must meet the statutory requirement of being "cost effective, reliable and feasible."[2/] SDG&E disagrees with the Staff Proposal's range; the proposed range of a low of only 5% less than the mid case does not reflect the overall level of uncertainty associated with future EE savings. For example, the CEC staff developed low, mid and high uncommitted EE assumptions in the CEC Preliminary Energy Demand Forecast 2012-2-22, DRAFT, Staff Report, August 2011, CEC-200-2001-011-sd. That report found that on a statewide basis in 2022, the low uncommitted EE was about 40% lower than the mid case and the high was 16% higher than the mid. The range by service area was even more extreme. For example, the low in the San Diego area was 48% below the mid case.

Thus, the more appropriate way to develop low and high uncommitted EE scenarios would be to first analyze the components of EE in the base case uncommitted EE and then build low and high cases off the base case by increasing/decreasing EE savings in a way that balances uncertainty with other attributes being considered when building low, medium and high economic scenarios. This work needs to be performed on a service area by service area basis. SDG&E suggests that the task of developing the base case uncommitted EE and the low and high scenarios be assigned to the CEC Demand Forecasting staff and Energy Division staff, with input from Demand Analysis Working Group.

2/ Public Utilities Code § 454.5(b)(9)(C).

6. Non-Event Based Demand Response

SDG&E supports the Staff Proposal's recommendation that the values already imbedded in the load forecast are used and that it is therefore not necessary to develop a separate range for this assumption.

7. Incremental, Small Photovoltaic (demand side)

Since the CEC's low, mid and high forecasts have varying levels of behind-the-meter photovoltaics ("PV"), the amounts included in the forecasts should be used and no additional ranges are needed.

8. Incremental Combined Heat and Power (demand side)

The Staff Proposal recommends using three scenarios for the amount of behind-the-meter combined heat and power ("CHP") – (1) zero additional CHP as new replaces existing; (2) 1672 MW of incremental CHP; and (3) 1968 MW of incremental CHP. The latter two scenarios rely on the draft analysis of CHP resources presented by ICF International in February 2012.[3/] SDG&E notes that it submitted comments to the CEC concerning this draft report; SDG&E does not support reliance on the report unless the changes to the report proposed in SDG&E's comments are made.

For the reasons described in Section 19 below, the base case should be used for both the mid and high scenarios. In addition, several adjustments are required. First, for the scenarios based on the ICF report, the CHP assumptions should be adjusted to account for the annual CHP additions embedded in the California Energy Demand ("CED") forecast. The Staff Proposal states that "some combined heat and power resources are embedded in the CED forecast,"[4/] but historical annual additions would affect the growth of measured load so an implicit amount of

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[3/] Available at: http://www.energy.ca.gov/2012publications/CEC-200-2012-002/CEC-200-2012-002.pdf.
[4/] Staff Proposal, p. xiv.

CHP annual additions is incorporated into the CED load forecast. Some amount related to these implicit CHP additions should be deducted from the ICF figures in order to prevent double-counting of CHP additions.

Second, CHP assumptions should be adjusted to account for the interaction of rooftop solar and CHP. In the ICF base case, less than 50% of new CHP in the base case is in the industrial sector. With so much CHP coming from commercial, residential, and cooling, it is likely that CHP is competing with rooftop solar to supply electricity. ICF evaluated CHP in isolation, however. Thus, the LTPP assumption should be reduced in order to account for this competition from rooftop solar. One simple, although perhaps not perfect, means of accomplishing that aim would be to eliminate low load factor CHP from the ICF analysis. Most low load factor CHP is likely associated with businesses that operate 8 am – 5 pm and cooling, which occurs in the daylight hours. The low factor CHP would likely have a good match for electricity produced by rooftop solar. Based on Table A-3 of the ICF report, approximately 50% of the cooling and 6% of other CHP is low load factor CHP. If the ICF numbers were adjusted to eliminate low load factor CHP as being better candidates for rooftop solar, the ICF modified assumptions would be roughly 1500 MW in the base case (based on Table 57 of the ICF draft report and applying the percentages of low load factor CHP).

The Staff Proposal assumes that "[a]ll MW values are attained by 2030, and linear growth is assumed"[5/] so that the net amount of CHP added each year in the State is zero, 93 MW, or 109 MW over the 18 years to 2030. SDG&E believes the linear assumption is reasonable because it does not appear that the ICF Report accounts for the lag due to permitting and construction of facilities from the time it makes economic sense to install CHP.

[5/] *Id.*

Since behind-the-meter CHP is subtracted from the load forecast, an adjustment must be made between the installed capacity and capacity delivering at time of peak. SDG&E has observed that there can be quite a difference in these two values. For example, SDG&E has seen applications delivering only about 60% of installed capacity at time of peak.

9. Traditionally, local area and other assessments utilizing a higher peak forecast have been based on a middle forecast for energy and peak. If this should be changed, please explain why?

The Staff Proposal suggests that a 1-in-10 weather conditions should be used for the middle scenario only. SDG&E does not support this proposal. First, SDG&E believes that it is too early in the process to limit when and for which scenarios an adverse weather peak condition should be modeled. In addition, there exists no rational basis for the claim that an adverse weather scenario, which could happen under the high, mid or low cases, should *only* be examined for the mid case. Since the adverse weather could happen in any scenario, logic dictates that the implications of an adverse weather condition should be evaluated in all three.

Finally, SDG&E notes that some planning criteria use the 1-in -10 adverse weather to determine resource needs. This is the case, for instance, in determining reliability needs in local load pockets. Since the needs for local capacity should be assessed for all scenarios, there will be a need for an adverse weather peak in all cases.

10. Are there any significant demand-side assumptions that have been missed? If so, please identify, provide sources, and the MW and GWh magnitude and likelihood.

SDG&E has not identified any at this time.

11. Other comments on demand-side assumptions.

None.

SUPPLY SIDE ASSUMPTIONS

12. Should all resources be accounted for by their NQC or a forecast of NQC?

SDG&E agrees that the Net Qualifying Capacity ("NQC") values should be used for reserve margin calculations. However, actual production cost modeling should use the full installed capacity. SDG&E submits the Staff Proposal must be clarified regarding units without a NQC in the CAISO data base. For these resources, the NQC should be based on the actual or expected installed capacity, as stated in the Staff Proposal, but also based on the relationship between the NQC and the installed capacity of similar technologies.

13. What year and data source should be used for variable resource' production profiles?

SDG&E does not have any non-renewable resources, such as hydro, where the available product would vary significant by year so we will not propose the use of any specific historical year data. It may be necessary in some analysis to make sure that the wind and solar profiles are correlated with the load forecast.

14. How should transmission capacity be considered?

The assumptions to be used for imports will need to vary depending on the analysis. For resource adequacy ("RA") purposes, the ability to count imports should match the current rules used in the RA proceeding. However, for production cost modeling, actual transmission line limits should be used.

15. Should all "known" and "planned" (non-RPS) resources be used in all supply-side scenarios?

SDG&E supports the recommendation in the Staff Proposal regarding the treatment of non-renewable planned and known additions.

16. Deliverability

The Staff Proposal suggests that:

> [A]ny additional resources, including renewable resources, will only be assumed deliverable if they meet one of two criteria:
>
> - Fits on existing or CPUC approved transmission, or
> - Baseload or flexible resources.
>
> New resources not meeting these criteria would be modeled as energy only."[6/]

It is unclear how the ED envisions determining whether "additional resources" would "fit[]" on existing or CPUC-approved transmission. On its face, this suggestion appears to contemplate a full deliverability analysis using the CAISO's deliverability study methodology. SDG&E has concerns with certain elements of the CAISO's deliverability study methodology and does not believe that the methodology should be used to establish whether the "additional resources" that a Commission-jurisdictional load serving entity believes are appropriate for its LTPP are "deliverable" for RA counting purposes.

Further, SDG&E does not believe that an "additional resource" should be assumed undeliverable for RA counting purposes if it fails to "fit[]" on existing or Commission-approved transmission. The purpose of an LTPP is to identify resource choices that will guide commercial decisions as to what, when and how many specific resources should be procured. It would be improper to use the LTPP process to identify which resource choices will be given RA counting rights and which will not. Moreover, decisions as to whether the network upgrades that would make "additional resources" deliverable for RA counting purposes are cost-effective are highly dependent on the study assumptions that are used when these resources seek to interconnect to

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[6/] Staff Proposal, p. xvi.

the existing grid. These study assumptions will not be known until the interconnection requests are actually made.

It is also unclear why "baseload or flexible resources" that do not "fit[]" on existing or Commission-approved transmission would be deemed deliverable for RA counting purposes. The RA concept is designed to ensure continued grid reliability. If a resource is not deliverable, it would not -- according to the CAISO's deliverability study methodology -- contribute to grid reliability.

SDG&E recommends that rather than subjecting "additional resources" to a full deliverability study, Commission-jurisdictional load serving entities should model the resources in their LTPPs in a peak load power flow case. Contingencies would be taken to determine whether, under peak load conditions, there would be any reliability issues. Modifications to the mix, location and/or amounts of "additional resources" could then be made.

17. What additional information is needed for resource location?

SDG&E is very concerned with how resource locations are defined in each scenario. Depending on the analysis being conducted, the location will have more or less of an impact. In general, SDG&E is concerned with assumptions that just spread state-wide resource assumptions across service area and especially into load pockets. When conducting reliability analysis, careful analysis must be undertaken to assess the likelihood that the resources will be physically located in the load pocket. Also, the assumption is sometimes made that that the resources relied upon to that meet a utility's procurement obligation (*e.g.*, the Renewable Auction Mechanism procurement obligation) will be located in the utility's load pocket. This is often not the case.

18. Event Based Demand Response

SDG&E supports the recommendation in the Staff Proposal regarding use of the most recent Load Impact reports filed with the Commission to serve as the mid demand response scenario. SDG&E also agrees that for the sake of simplicity and transparency, the low and high scenarios should be a fixed percentage of the mid scenario. However, SDG&E believes that 10% is too low to reflect the uncertainty in long-term demand response forecasting. There are many policy changes in the demand response area expected in the next ten years. The Commission has recently adopted new cost-effectiveness protocols that may affect the number of demand response programs approved by the Commission in the future. Aggregators who have signed long-term demand response contracts with SDG&E have not always achieved their contract commitments. Also, Commission policy favors moving toward having aggregators that provide demand response participate directly with the CAISO instead of through the utility. Therefore, SDG&E recommends that the high and low demand response scenario be 20% higher and lower than the mid scenario.

19. Incremental Combined Heat and Power (supply side)

The Staff Proposal is to use three scenarios for the amount of "export CHP" - electricity exported to the grid and purchased by utilities: (1) zero additional CHP as new CHP replaces existing CHP; (2) 213 MW of incremental CHP associated with the ICF base case; and (3) 1661 MW of incremental CHP based on the ICF mid case.

While SDG&E agrees with the proposal to use zero as the low case, subject to the locational issue noted below, it does not support using the ICF base case as the mid case. It is inappropriate to use the ICF mid case as a scenario. The LTPP proceeding is intended to determine the amount of must-take CHP that provides a portfolio fit for the investor-owned

utilities ("IOUs") as part of the QF Settlement.[7/] The ICF mid case, on the other hand, assumes portfolio fit exists.

Under the QF Settlement, the LTPP proceeding must determine utility need for baseload non-dispatchable power beyond the 3000 MWs contracted for in the first phase of the settlement (designed to maintain the greenhouse gas ["GHG"] savings of the existing CHP fleet). Therefore, using zero or the ICF base case (with export assigned to publicly-owned utilities ["POUs"]) will allow the Commission to determine how much must-take baseload power will fit into each IOU's portfolio after renewables, flexible generation to enable reliability of the grid, and existing owned and contracted for resources (including with other CHP) are considered.

For both behind-the-meter and export CHP, geographic distribution is important for understanding the effects on the grid and for purposes of local generation needs. For example, SDG&E is aware of several existing CHP facilities in its service area that are expected to close once the current contract expires, which should be modeled. At the same time, the analysis should consider the locations of new CHP by considering the location of new CHP from bids in the recent CHP-only RFO. To the extent few or no bids are received from a given area, that should be considered. It is worth noting that the ICF study found technical potential for greater-than-20 MW CHP, the type with the most export capability, to be only 46.7 MW (with more than half in a petroleum refinery that SDG&E has yet to find in its service area).

20. Renewable Resources

SDG&E supports the general proposal in the Staff Proposal to use the Renewable Portfolio Standard planning work performed in R.11-05-005. SDG&E submits that the renewables portfolio should be based on the Commission-approved contracts in the IOUs' respective portfolios.

[7/] QF Settlement Term Sheet, sections 6.7 and 6.9.

Although the details regarding what information should be provided would be worked out in the RPS proceeding, SDG&E does offer a few observations herein regarding the Staff Proposal. First, the Staff Proposal states that existing RPS generation with contracts expiring before the expected retirement age will remain in service until the retirement age. It should be noted that this approach is inconsistent with the approach used by SDG&E to determine its need under the 33% RPS compliance framework. For contract planning, SDG&E assumes that *no* contracts are renewed at the end of their terms and plans future procurement based upon this assumption. SDG&E is concerned that if it is assumed that all projects will deliver until their respective retirement ages, the Commission may require that a retail seller pick up these facilities when their current contracts expire. Modeling should not assume continuation past the contract date and instead should have a generic replacement, if needed, to meet the RPS requirements in aggregate.

The Staff Proposal provides that "[g]eneration projects will be selected based on a supply stack of the different resource types made up of all projects with PPAs."[8/] The methodology should leave room to consider shortlisted bid prices, in addition to prices from projects with PPAs, in the event the LTPP process is initiated soon after an RFO. At this point, valuable, up-to-date data on market prices is available, but signed PPAs that reflect this data do not exist. Considering pricing from shortlisted bids would allow the most up-to-date data to be used to reflect current market conditions.

The Staff Proposal states that "[i]n addition to these two portfolios, staff recommends a sensitivity portfolio based on a preference for sitting projects in preferred locations."[9/] The Commission defines distributed generation ("DG") as being sited close to load. This means that

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[8/] Staff Proposal, p. xx.
[9/] Staff Proposal, p. xix.

there will be fewer required upgrades. It is not clear to SDG&E what other "preferred location" characteristics exist. If the assumption is that all DG will be sited close to load, it does not appear that an additional "preferred locations" case is necessary; it will not result in any additional avoided costs.

For resource planning, SDG&E believes the main purpose of the final ten years analysis is to see the longer-term impact of decisions made during the first ten-year period. In this case, SDG&E would support maintaining the same assumptions used for the tenth year for the remaining planning period. This would mean maintaining a 33% RPS procurement requirement.

For transmission planning, where the lead times are longer than for resources planning, it may make sense to use a 40% RPS target to determine if and what amount of new transmission would be needed should the RPS mandate be increased beyond the current statutory level.

21. Retirements

The Staff Proposal for the retirement assumptions regarding once-through cooling ("OTC") plants appears to be inconsistent with the Commission's direction to the IOUs regarding contracting with OTC units. In D.12-04-046, the Commission adopted rules that discourage the IOUs from relying on units subject to the OTC regulation for the final two years prior to their compliance dates. By contrast, the Staff Proposal planning assumptions assume that the OTC plants will remain in the IOUs' portfolios until their current compliance date or even later. It is important to note, however, that for OTC units in load pocket, the IOU may be required to rely on such OTC units until replacement units are developed and built.

Thus SDG&E proposes that a high retirement case be used that retires all units two years prior to the retirement date. The mid case should assume that all units retire based on the relevant compliance dates. A low retirement case could then assume that some units are able to

meet compliance requirements and are able to remain open.

22. Are there any significant supply side assumptions that have been missed? If so, please identify, provide sources, and the MW and GWh (if appropriate) magnitude and likelihood.

SDG&E has not identified any at this time.

23. What is a reasonable number of overall scenarios for supply-side assumptions? What is the purpose behind having that number of scenarios?

The reasonable number of scenarios is the number needed to broadly analysis the specific questions being addressed. Until the specific issue is defined, SDG&E does not believe this question can be fully addressed.

24. Other comments on supply side assumptions.

None at this time.

ALLOCATION METHODOLOGIES

SDG&E has no comments on the allocation methodologies at this time.