



August 5, 2011

VIA ELECTRONIC MAIL

Ms. Barbara George, Executive Director
Women's Energy Matters
P.O. Box 548
Fairfax, CA 94978

**Re: ISO Response to the First Set of Data Requests of Women's Energy Matters
(WEM)**

Dear Ms. George:

Enclosed please find the ISO response to the First Set of Data Requests of Women's Energy Matters, propounded in the Long Term Procurement Proceeding, CPUC Docket R.10-05-006.

Please do not hesitate to contact me if you have any questions.

Sincerely,

/s/ Judith B. Sanders

Judith B. Sanders
Senior Counsel
California Independent System Operator

cc: Service List R.10-05-006

**BEFORE
THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Integrate)
And Refine Procurement Policies and) R.10-05-006
Consider Long-Term Procurement Plans)

**RESPONSE OF
THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
TO THE FIRST SET OF DATA REQUESTS OF WOMEN’S ENERGY MATTERS (WEM)**

Below are responses by the California Independent System Operator Corporation to the First Set of Data Requests by Women’s Energy Matters (WEM).

RESPONSES

Request Nos. 1(a) – 1(f)

QUESTIONS FOR CAISO (RE PREFERRED RESOURCES ON DISTRIBUTION LINES)

Description of issue:

How do CAISO models account for resources located on distribution lines (as opposed to transmission lines)? How are these resources actually utilized?

PG&E’s Testimony in the 2011 General Rate Case appeared to indicate that it does not account in its load forecast for solar PV and energy efficiency on its distribution system — ***because it doesn’t know where it is:***

18 PG&E load forecasting methodology *does not specifically adjust for*
19 changes in peak load because of *increased customer photovoltaic*
20 *installations, customer Energy Efficiency (EE) Programs, or increased load*
21 *due to EV increased penetration. The affect these system-wide programs*
22 *have on peak loads are not easily quantifiable on a DPA level, division or*
23 *geographic area. Therefore, PG&E cannot exactly know where reductions*
24 **or increases will occur.** PG&E Testimony, Vol. 3, p. 9-12 (A0912020).

Request No. 1(a)

1 (a). Does CAISO actually account for each type of preferred resources located on utilities’ *distribution systems* for (A) load serving, (B) Resource Adequacy, and/or

(C) Local Capacity Requirements? (In other words – this question relates to actual day-to-day practice of CAISO and utilities in recent years, not modeling.)

ISO RESPONSE TO No. 1(a)

Yes, the ISO attempts to account for the resources located on utilities distribution system. However, depending on the type and location of resource, the ISO may have limited or no visibility of such resources. The lack of visibility for some resources located in the distribution system can affect load and supply forecast errors that may increase the operational requirements to compensate for such uncertainty.

Request No. 1(b)

1(b). Describe whether CAISO models take into account each of the following preferred resources located on utilities' distribution systems for A through C above: (E) energy efficiency, (F) demand response, (G) solar photovoltaics (H) other Distributed Generation, (I) combined heat & power, and/or (J) other small renewables?

ISO RESPONSE TO No. 1(b)

Yes, the CAISO models take into account A, B, E, F, G, I. The model did not account for C, H and J (except for solar).

Request No. 1(c)

1(c) If so, is this data these rolled into larger categories, or can it be broken out separately for each resource?

ISO RESPONSE TO No. 1(c)

For renewable integration where the ISO has modeled these resources, the ISO has modeled distributed energy resources in aggregation at a service area level. In the case of energy efficiency, ISO models the quantity as a load side adjustment rather than as a supply. If the ISO had granular information about resources in category C, H, and J, the ISO would recommend adding aggregate resources at service area level if it were a resource, or it would added as a load adjustment if it were adjusted load but was not renewable or price sensitive.

Request No. 1(d)

- 1(d) Can (E) through (J) resources be broken out separately, *by substation*, in order to utilize them for determining Local Capacity Requirements?

ISO RESPONSE TO No. 1(d)

For determining Local Capacity Requirements, the ISO is moving to model the distributed energy resources at a more locational level. See response to 1(f).

Request No. 1(e)

- 1(e) Please describe what steps CAISO is taking (if any) to require utilities to improve tracking and reporting (to CAISO) of (E) through (J) resources located on utility distribution systems, according to substation.

ISO RESPONSE TO No. 1(e)

The ISO has a corporate strategic initiative dealing with distributed energy resources. The objectives of this initiative are:

- To establish a penetration level and location.
- To establish and agree with utilities on approach for getting updates regarding penetration and location of distributed energy resources.
- Understand how utilities will have visibility to this information.

Request No. 1(f)

- 1(f) By what date does CAISO anticipate having sufficiently clear information about preferred resources located on utility distribution systems in order for CAISO to recognize and approve (E) through (J) resources for (A) load serving, (B) Resource adequacy, and (C) Local capacity requirements?

ISO RESPONSE TO No. 1(f)

The ISO does not approve the need for resources--the ISO approves the need for transmission expansion projects. In its 2011/12 Transmission Planning Process, which will conclude in March of 2012, the ISO includes the most recent official

CEC load forecast which includes energy efficiency and some behind the meter generation sources. For purposes of meeting local resource capacity requirements, demand response is also considered in the ISO TPP studies. In addition, the ISO relies on annual estimates from the CPUC regarding demand response amounts that can be counted towards meeting local capacity requirements. Once distributed generation is included in the annual Net Qualifying Capacity list posted on the ISO web-site, it is eligible to be counted for load serving, resource adequacy and local capacity requirements.

Request Nos. 2(a) – 2(c)

QUESTIONS FOR ISO (RE ONCE-THROUGH-COOLING)

Request No. 2(a)

2(a) How was the decision made to exclude retirement of once-through-cooling resources from CAISO's modeling?

ISO RESPONSE TO No. 2(a)

The ISO followed the CPUC scoping memo regarding planned retirements for OTC resources. However, resources that had planned retirement dates at the end of 2020 were assumed to be retired for the 2020 scenarios.

Request No. 2(b)

2(b). Does CAISO anticipate that any OTC resources will be retired before 2020?

ISO RESPONSE TO No. 2(b)

See response to 2(a)

Request No. 2(c)

2(c) How might the lack of modeling in this proceeding impact the shutdown of OTC resources?

ISO RESPONSE TO No. 2(c)

See response to 2(a)

Request No. 3(a)

QUESTIONS FOR ISO (RE TRANSMISSION PLANNING)

For transmission planning CAISO generally assumes the largest transmission line and the largest generator are offline (or all large transmission lines in a corridor, or 2 large generators).

- 3(a) When determining grid reliability, resource adequacy and local capacity requirements, does CAISO assume both reactors in each pair are offline (at San Onofre or Diablo), or one reactor and one large line, or the whole transmission corridor?

ISO RESPONSE TO No. 3(a)

For general reliability study purposes, including system assessment and local capacity requirements (LCR), part of Resource Adequacy) , the ISO starts its studies with all elements in service – including both nuclear units at SONGS and Diablo.

Part of the process of checking compliance with applicable reliability standards (NERC, WECC and ISO) during annual system assessment the ISO simulates numerous contingencies on the system. During this process the ISO will check system performance compliance with applicable standards for contingency combinations including (among others): one nuclear unit outage, one nuclear unit out of service system adjustment followed by a single line out of service, one nuclear unit out of service system readjustment followed by the second nuclear unit outage, simultaneous loss of two nuclear units or extreme events like corridor outages.

The local capacity requirements studies have their own criteria as described in the LCR manual, LCT Report and the ISO tariff. During these studies (for SONGS only – Diablo is not located in a local area as defined by the ISO) the ISO will

check and assure compliance (among others) with: one nuclear unit outage, one nuclear unit out of service system readjustment followed by a single line outage, one nuclear unit out of service system readjustment followed by the second nuclear unit outage, one nuclear unit out of service followed by common mode double circuit line outage.