BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local Procurement Obligations.	)))))	R.09-10-032

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION COMMENTS ON PHASE 1 WORKSHOP ISSUES

In accordance with the Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge Determining the Scope, Schedule, and Need for Hearing in this Proceeding ("Scoping Memo") issued by the California Public Utilities Commission ("CPUC") on December 23, 2009, the California Independent System Operator Corporation ("ISO") respectfully submits its comments on the Resource Adequacy ("RA") issues designated by the Scoping Memo to be addressed in Phase 1 of this proceeding and the proposals discussed at the workshops held on January 27 and 28, 2010 and February 25, 2010.

I. SUMMARY

On January 11, 2010, the ISO submitted its proposals on three issues identified in the Scoping Memo for consideration in Phase 1 of this proceeding: 1) extending the Standard Capacity Product ("SCP") to the deferred resource types, 2) eliminating the replacement rule, and 3) counting demand response under the load-impact protocols. The ISO developed these proposals to refine or enhance the RA program so that it better serves to facilitate open and efficient competition that will produce the optimal,

cost-effective mix of existing resources and new infrastructure investments sufficient to meet end-use demand at stable and reasonable prices and reliably provide for the operating requirements of the ISO balancing authority area. In these comments, the ISO will recap its proposals, discuss feedback on those issues that participants offered at the workshops, and present refinements and/or clarifications to our proposals in response to that feedback. The ISO's recommendations on these issues are as follows:

- **SCP – Deferred Resource Types**

  The ISO recommends that the CPUC modify its RA counting rules for RA resources whose qualifying capacity ("QC") for RA purposes is based on historical actual hourly output data from the CPUC or a local regulatory authority without removing or otherwise adjusting for forced outage hours that occur during the period when actual output is measured either to: (1) eliminate forced outage and de-rate hours from its calculation of the QC of RA resources, or (2) use proxy energy output values for those hours. The ISO does not propose that the CPUC address application of SCP to temporarily exempt demand response resources in Phase 1 of this proceeding.

- **Replacement Rule**

  The ISO recommends that the CPUC leave the existing replacement rule in effect while a collaborative process occurs with the CPUC and the parties in which they will have additional time to consider the ISO and SCE proposals, and any other suggested approaches, and potentially reach a consensus on an appropriate successor measure.

- **Demand Response Counting And Load-Impact Protocols**

  The ISO recommends that the CPUC modify the load impact protocols discussed in Section 11 of the QC Report[1] to appropriately recognize that demand response resources enrolled in summer air conditioning cycling programs should count as local RA capacity only in the summer months when the resources are actually available and capable of performing.

In addition, the ISO will provide its comments on other parties' proposals on certain Phase 1 issues. For these issues, the ISO's positions are:

- **"Show All Local Capacity" Requirement**

  The ISO recommends that the CPUC retain its current requirement that jurisdictional load serving entities identify in their year-ahead RA showing all local capacity they have procured, even if the total amount of that capacity exceeds their respective local RA capacity requirement.

- **Distribution System Level Resources**

  The ISO recommends that the CPUC not treat distribution system level resources not on the customer side of the meter as deemed deliverable. These resources should be processed in the same manner as other generators and be subject to a deliverability assessment by the ISO.

- **Treatment Of Avoided Line Losses In Demand Response Load Impact Protocol Estimates For RA QC Calculation**

  The ISO believes that the existing three percent total loss adder should be sufficient to account for all losses, including any losses attributable to demand response, and recommends that it remain in place.

[1] *Qualifying Capacity Methodology*, issued by the Energy Division on December 19, 2009 ("QC Report").

- **Energy Division's Proposed Changes To QC Counting Methodology -- Dispatchability Classification**

  The ISO supports the initial resource classification approach proposed by Energy Division in the QC Report, which is based on a dispatchable/non-dispatchable distinction. Since the CPUC has not specifically defined the term "dispatchable" for QC purposes, the ISO recommends that the CPUC work with the ISO and other interested parties to develop a definition of "dispatchability" for use in this context.

- **Energy Division's Proposed Changes To QC Counting Methodology -- Hydro Counting Methodology**

  The ISO requests that, in advance of the due date for reply comments in this matter, the Energy Division provide: 1) a more detailed narrative description of the methodology in Section 7 of the QC Report as it would be applied to hydro; and 2) sample calculations for dispatchable hydro resources, including calculations for a heretofore classified dispatchable hydro unit and a run-of-river unit.

II. ISO PROPOSALS

A. STANDARD CAPACITY PRODUCT – DEFERRED RESOURCE TYPES

On June 26, 2009, the Federal Energy Regulatory Commission ("FERC") issued an Order in Docket No. ER09-1064-000 that approved the ISO's proposed tariff amendment to adopt SCP and an ancillary services must-offer obligation for RA resources.[2] The June 26 Order also accepted the ISO's proposal that the SCP availability standards and incentives would not initially apply to: (i) RA resources whose QC for RA purposes is based on historical actual hourly output data from the CPUC or a

[2] *Cal. Indep. Sys. Operator Corp.*, 127 FERC ¶ 61,268 (2009)("June 26 Order").

local regulatory authority without removing or otherwise adjusting for forced outage hours that occur during the period when actual output is measured (the specific resource types affected are wind, solar, and Qualifying Facility ("QF") resources); and (ii) demand response resources.

The June 26 Order deferred application of the SCP availability provisions to wind, solar, and QF resources based on the ISO's concern that the temporary exemption was necessary in order to avoid "double counting" the impact of the resources' forced outages and derates in both the SCP availability metric and the current CPUC rules for determining a resource's QC for RA purposes. The SCP availability standard counts hours of forced outages, and ambient de-rates due to temperature against a resource's availability, and this can result in a financial charge if the outages and de-rates cause the resource's availability to drop below the availability standard (after taking into account the 2.5 percent tolerance band). The CPUC's existing counting rules for determining the QC of a wind, solar, or QF resource for RA purposes also take outages and de-rates into account because QC is based on actual, historical hourly energy production, including the hours where energy output was reduced due to forced outages and de-rates. The counting rules determine the QC value of the resource using its hourly energy output over the past three years. To the extent that the resource experienced forced outages or derates during that period, the resource's output in those hours would have been adversely affected and would thus lower the resource's QC value for the following RA compliance year. If the ISO were to apply the SCP availability metric to these resources, a resource could be penalized twice for the same outage or de-rate: once in the form of an SCP availability charge during the current

period and then again under the counting rules by reducing its QC value for the following year. The ISO's proposal to temporarily defer applying SCP to these resources was explicitly designed to avoid this outcome.

In the June 26 Order approving the ISO's SCP proposal, including the temporary exemptions for wind, solar, QF, and demand response resources, FERC made it clear that the exemptions are temporary and directed the ISO to work diligently with stakeholders, the CPUC, and local regulatory authorities to end the exemptions in a timely manner.[3] FERC also required the ISO to post biannual status reports so that FERC could monitor the progress of efforts to sunset these exemptions and determine whether the efforts to sunset the exemptions are being unreasonably delayed.[4]

The ISO submits that it is important that the CPUC and ISO in this proceeding resolve the "double counting" of outages issue for the deferred wind, solar, and QF RA resources so that the temporary exemptions can be terminated and the ISO can proceed to develop SCP availability standards for those RA resources as required by FERC's June 26 Order.

To that end, the ISO proposes that the CPUC modify its RA counting rules either to: (1) eliminate forced outage and de-rate hours from its calculation of the QC of RA resources, or (2) use proxy energy output values for those hours. The ISO believes that the second option could be implemented by adopting an approach similar to the methodology the CPUC has previously approved to account for scheduled outages in the QC calculation for these types of resources.[5] This methodology uses three years of

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[3] *Id*. at P. 58.
[4] *Id.*
[5] *See* CPUC Decision D.09-06-028, Adopting Local Procurement Obligations for 2010 and Further Refining the Resource Adequacy Program (June 18, 2009).

historical data to calculate QC, and substitutes proxy data for the hours of a scheduled outage. The proxy energy output for any particular scheduled outage hour is then calculated by averaging the output in the corresponding hours for the other two years of data, assuming those hours were not affected by scheduled outages. The ISO supports extending this approach to forced outage and derate hours because it will effectively remove the impact of forced outages and derates from the QC calculation, thus eliminating the problem of double counting when the ISO applies the SCP availability metric to the intermittent resources. The ISO intends to present its proposal to extend the SCP availability metric to these types of resources for consideration at the ISO Board of Governors' meeting on May 17-18, 2010, followed thereafter by a tariff filing at FERC to implement the proposal effective January 1, 2011.

As previously mentioned, the June 26 Order also accepted the ISO's proposal to defer the application of the availability standards to demand response resources because initiatives were underway at both the CPUC and the ISO to change the manner in which the resources participate in the California energy markets.[6] These market and regulatory initiatives, such as the ISO's SCP II stakeholder process and CPUC Docket No. R.07-01-041, which addresses a myriad demand response issues, are matters that are underway and active today. In addition, the ISO has undertaken an initiative to implement its proxy demand resource product. The ISO will continue to work with its stakeholders and the CPUC to complete these matters and therefore recommends that the CPUC not address application of SCP to temporarily exempt demand response resources in Phase 1 of this proceeding.

[6] June 26 Order, P. 57.

B. REPLACEMENT RULE

In D.06-07-031 (July 20, 2006), the CPUC adopted the replacement rule to require each jurisdictional load serving entity to procure additional RA capacity to meet its RA requirement in those months where some of its RA capacity is significantly affected by a scheduled outage. The replacement rule provides a methodology for determining how scheduled outages of RA resources will be counted to assess whether a load serving entity has procured sufficient RA capacity to meet its monthly RA obligations. The amount of capacity that counts toward a load serving entity's system RA requirement is determined by reducing the total net qualifying capacity ("NQC") for the month by the amount of capacity on scheduled outage, as computed under the replacement rule methodology.[7]

At the workshops in this matter, several parties suggested that the CPUC consider removing the replacement rule from its RA requirements. The ISO understands that the effect of eliminating the replacement rule would be to relieve CPUC jurisdictional load serving entities of any requirement to procure additional RA capacity to meet their RA requirement for months where some of their RA capacity is unavailable due to a planned outage. The parties that support eliminating the rule primarily argue that it limits the tradability of RA capacity as a standard capacity product by imposing an obligation on the individual load serving entity to replace RA capacity on scheduled outage that is not counted under the rule.

The ISO does not oppose removing the replacement rule from the CPUC RA program, subject to the following considerations. Most importantly, eliminating the

[7] The currently effective rule is summarized in the CPUC's *2010 Filing Guide for System and Local Resource Adequacy (RA) Compliance Filings*, page 13.

replacement rule must not adversely affect the reliability of the ISO balancing authority area. The fundamental purpose of the RA program is to ensure that sufficient resources are available when and where needed to maintain the reliability of the system. If the CPUC intends to eliminate the replacement rule, steps must be taken to ensure that scheduled outages will not cause shortfalls in available RA capacity that degrade system reliability or introduce market instability.

Two suggestions were discussed at the workshops of steps that could be taken to avoid shortfalls in RA capacity in the absence of the CPUC's replacement rule. The ISO proposed to conduct a stakeholder process to obtain input for developing an alternative mechanism for addressing potential reductions in the amount of available RA capacity due to scheduled outages, such as placing the replacement obligation on the scheduling coordinator for RA capacity suppliers, while at the same time fostering tradability of the standard capacity product as requested by market participants. Southern California Edison Company ("SCE") suggested instead that the CPUC could adjust the RA requirement for all scheduling coordinators for its jurisdictional load serving entities by including an adder in the RA requirement calculation to reflect a representative level of planned outages, approved by the ISO prior to the monthly RA showing, over an historical period.

The ISO believes that the CPUC should work collaboratively with the parties to transition the treatment of scheduled outages for RA purposes from the current replacement rule to another approach that will enable the ISO to ensure that sufficient capacity subject to the RA provisions of the ISO Tariff is available as needed to serve load and reliably operate the grid. The ISO also believes that the CPUC and the parties

should be afforded additional time to consider the ISO and SCE proposals, and any other suggested approaches, and potentially reach a consensus on an appropriate successor measure. Accordingly, the ISO recommends that the CPUC leave the existing replacement rule in effect while that collaborative process occurs. It is important that the timing of the end date for the replacement rule be coordinated to provide adequate opportunity for the alternative to be developed and implemented. Maintaining the status quo for the interim will help ensure that the sunset date for the existing replacement rule will be coincident with implementation of that the successor measure.

C. DEMAND RESPONSE COUNTING AND LOAD-IMPACT PROTOCOLS

Under the CPUC's existing load impact protocols, summer air conditioning cycling programs are allowed to be valued for local RA purposes at the amount of their August NQC value and counted as local RA capacity at that level for all 12 months of the year.

The ISO does not support this counting rule. The rule allows demand response resources enrolled in summer air conditioning cycling programs to count toward fulfillment of a local RA requirement at the same MW amount for each month of the RA compliance year, even though these programs are operative only in the summer months and the resources do not provide any actual "capacity" or service during the non-summer months. [8]

[8] For example, Southern California Edison Company's summer air conditioning cycling programs (both the base and enhanced cycling programs) are only eligible to operate and be paid under the CPUC-approved tariff schedule during the summer season, when demand for electricity is generally at its peak, which is the period June 1 through October 1.

The ISO's primary concerns with the counting rule are based on the fact that, at the current level of participation in demand response air conditioning cycling programs, this approach allows approximately 900 MW per month of "phantom" demand response to be counted as local RA capacity during each of the non-summer months.[9] An RA capacity shortfall of this magnitude could impact system reliability and increase the likelihood of backstop capacity procurement by the ISO. Further, counting demand response resources under air conditioning cycling programs as local RA capacity during months they are not available essentially allows the load serving entities that procured those resources to "lean" on the local RA capacity provided by other resources that are available on a 12-month basis, or ISO backstop procurement through Exception Dispatch or through the Interim Capacity Procurement Mechanism ("ICPM"), the costs of which are not allocated specifically to the entities that submitted these air conditioning cycling programs as local RA capacity. In addition, the ISO believes that it is fundamentally unfair and inequitable to count demand response resources participating in air conditioning cycling programs as local RA capacity throughout the year even though they are not physically available in the non-summer months, while determining the availability of generation resources under SCP by deducting the hours they are physically unavailable in a given month due to a forced outage or derate, which could result in a monetary charge.

[9] Based on enrolled MW values for the month of August 2009, as reported by the utilities in monthly reports to the CPUC on the operation of interruptible and demand response programs, specifically:

- Report of Pacific Gas and Electric Company (U 39 M) On Interruptible Load and Demand Response Programs for October 2009, dated November 23, 2009, Table I-1,
- Report of Southern California Edison Company (U338-E) on Interruptible Load Programs and Demand Response Programs, dated November 23, 2009, Attachment A, Table I-1, and
- Report of San Diego Gas &Electric Company (U 902 M) on Interruptible Load and Demand Response Programs for October 2009, dated November 20, 2009, TableI-1

During the January 27-28 workshops, some parties claimed that the capacity from the summer air conditioning cycling programs should be allowed to count as RA capacity in non-summer months because the CPUC allows other RA resources, such as thermal resources, to count at their August QC for all 12 months of the RA compliance year. These parties argued that such treatment of summer air conditioning cycling programs would be fair because thermal RA resources are allowed to count year-round at QC values that may have been determined for operations during non-summer months, which could produce a higher QC value than if the thermal RA resource been assessed during a summer month where ambient conditions would have lead to a lower QC value.

The ISO disagrees with these positions. First, the ISO notes that QC values for many RA resources are not fixed at a level amount throughout the year. For example, under the CPUC's current RA counting rules, wind, solar and non-dispatchable thermal RA resources have QC values that vary by month throughout the year, which reflects the QC value determined by the CPUC's counting methodology for those types of resources. The ISO understands, but is not certain that the CPUC's validation of RA showings each month during the year holds entities to the QC value for that month for each resource. Second, it is not correct that all thermal resources have 12-month QC values based upon their capacity ratings for non-summer months. There are RA thermal resources in the current NQC list that have QC values for the summer months that were lowered by the owner to reflect that resource's expected performance capability in a hot summer month. Therefore, the argument that summer air conditioning cycling programs should be allowed to count phantom capacity in non-

summer months because other RA resources get an equivalent break does not stand up under scrutiny. The alleged "equivalent break" does not really exist, and, more importantly, the off-peak values of these cycling programs are not just moderate derates of their summer values, they are actually zero. It would be unfair to count summer air conditioning cycling program capacity as RA capacity in the middle of winter when we know it cannot provide any decrease in load.

For these reasons, the ISO proposes that the CPUC modify the load impact protocols discussed in Section 11 of the QC Report to appropriately recognize that demand response resources enrolled in summer air conditioning cycling programs should count as local RA capacity only in the summer months when the resources are actually available and capable of performing.

III. ISO COMMENTS ON OTHER PHASE 1 ISSUES

A. "SHOW ALL LOCAL CAPACITY" REQUIREMENT

Under CPUC Decision D.06-06-064, the CPUC currently requires its jurisdictional load serving entities to identify in their year-ahead RA showing all local capacity they have procured, even if the total amount of that capacity exceeds their respective local RA capacity requirement.[10] SCE proposes that this requirement be eliminated, subject to the condition that any local resources listed on an load serving entity's year-ahead local filing be required to be included, if available, in its monthly system filing. SCE requests this modification to the existing RA rules in order to allow load serving entities to take advantage of the substitution rule under the ISO's SCP. SCE contends that by eliminating the requirement to include all local resources in the year-ahead filing, load

[10] *Order Instituting Rulemaking to Consider Refinements to and Further Development of the Commission's Resource Adequacy Requirements Program*, Docket No. R05-12-013, Decision 06-06-064 (June 29, 2006), p. 42.

serving entities that already have an excess of local resources under contract will better be able to mitigate customer costs by eliminating unnecessary acquisition of additional local capacity, or avoiding the imposition of unavailability charges.[11]

In the ISO Tariff provisions for SCP, Section 40.9.6.1 requires that RA resources be available for a percentage of the peak hours in a given month (with a 2.5% tolerance band) or face the imposition of unavailability charges. Under Tariff Section 40.9.4.2, the determination of an RA resource's availability is reduced by forced outages, but not scheduled outages. As a way to avoid counting a forced outage against the resource's availability, Tariff Section 40.9.4.2.1 allows the opportunity for the load serving entity to substitute capacity from non-RA units for the RA resource on a forced outage. If the resource on outage is a local RA resource, Tariff Section 40.9.4.2.1 requires that the substitute unit have equivalent characteristics to the RA unit.

In combination, the CPUC local capacity reporting requirement and ISO Tariff Section 40.9.4.2 may prevent a load serving entity from engaging in unit substitution. By requiring that a load serving entity include all local capacity it has procured in its year-ahead RA plan, that capacity is treated as RA local capacity and does not qualify as non-RA capacity that can substitute for RA local capacity on outage, even if the entity has procured local capacity in excess of its RA local capacity requirement. Instead, the load serving would either have to replace the capacity on forced outage with a local non-RA unit, if available, or be at risk of being assessed an unavailability charge under SCP for the forced outage.

The ISO does not support SCE's proposal. Of primary importance to the ISO, the ISO uses all the RA resources provided in the year-ahead RA showings (local or

[11] SCE Phase 1 Comments, p.15 (January 11, 2010).

system) in its validation to ensure that each local capacity requirement has been met. Because the ISO relies on all the reported capacity in the year-ahead showings to ensure the local capacity requirement is met, it is imperative that all of these resources also be included in the month-ahead supply plans and be available as RA capacity. To the extent that any procured RA resources are not included in the year-ahead showing, the ISO could be led to conclude that there is an individual and/or collective deficiency in meeting the local capacity requirements, which could result in ICPM procurement for a full year, with the cost allocated first to the individually short load serving entities and then to the "collective" deficiency.

Furthermore, by suggesting that load serving entities not provide to the ISO all the RA capacity they have procured, the SCE proposal is squarely at odds with a foundational aspect of the RA program. In Decision D.06-07-031, the CPUC found that: "The CAISO needs full authority to determine whether a substitution of assets can be made since the information and knowledge to do so is in its purview."[12] The decision additionally observed that the ability to pool units can reduce risk and allow for optimization of the generation fleet:

> pooling a portfolio of units with specific unit identification can help reduce the seller's counting risks and allow optimization of the generation fleet over different times of the year. An inability to pool assets or restrictions on capacity substitution may result in less generation being made available to the market, the report goes on to observe. Notwithstanding their benefits, the report states, there is uncertainty regarding both pooling and substitution of assets.[13]

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[12] *Order Instituting Rulemaking to Consider Refinements to and Further Development of the Commission's Resource Adequacy Requirements Program*, Docket No. R05-12-013, Decision 06-07-031 (July 20, 2006), p. 42.

[13] *Id. at* 21.

> the CAISO suggested that it must know which units will be available to commit and control in day-ahead and real time. Accordingly, the CAISO takes the position that RAR resources must be identified in the month-ahead reports so that it can configure the specific resources into its systems, as necessary, and effectively run the grid.[14]

Second, SCE has not supported its proposal with a cost/benefit analysis. While SCE claims that its proposal will better enable load serving entities to mitigate customer costs, SCE has not provided an economic analysis to show that advance procurement of capacity for use only as substitute local capacity under the ISO's SCP unit substitution provision, combined with an allocation of the cost of any ICPM procurement such reduced local capacity showing could require the ISO to undertake, would be less expensive to ratepayers than the potential exposure to SCP non-availability charges. While SCE's attempt to reduce costs is commendable, the proposal to eliminate inclusion of all contracted local capacity in the year-ahead RA local capacity requirement showing could potentially result in even greater costs being passed on to customers. Absent a cost/benefit analysis that supports SCE's proposal, the ISO recommends that the CPUC leave the existing show-all local capacity requirement intact.

B. DISTRIBUTION SYSTEM LEVEL RESOURCES

At the workshops, Pacific Gas & Electric Company ("PG&E") proposed to modify the CPUC counting rules to count distribution system level resources as RA resources. Specifically, PG&E proposes that distribution level resources not otherwise being counted for RA be (i) listed on a separate tab in the year-ahead and month-ahead RA compliance templates, (ii) included in the load serving entities' data submissions to the ISO for the local capacity requirements study to ensure that distribution level resources

[14] *Id. at* 22.

are properly accounted for in that study, and (iii) deemed deliverable, with their QC certified by the CPUC rather than the ISO which certifies transmission level resources . According to PG&E, this would include the majority of AB1969 Feed-in Tariff resources, as well as some renewable resources, that are not currently being counted for RA purposes.

The ISO does not support PG&E's proposal. The proposal would introduce unnecessary complication into the RA program. Distribution system level resources on the customer side of the meter are already accounted for by the California Energy Commission ("CEC"), which deducts the contributions of distribution system level resources from its load forecast. It would not be appropriate to count these resources on the supply side with a specific RA value unless the CEC also increases its load forecast by a like amount. This complication should not be introduced by the CPUC without prior validation and verification by the CEC.

In addition, it would be inappropriate to deem any such resources deliverable (whether on the customer side of the meter or not) and have their QC certified by the CPUC rather than the ISO which certifies transmission level resources. Such an approach would be inconsistent with the fundamental deliverability requirements set forth in the ISO Tariff[15] and in numerous CPUC decisions.[16] Deliverability for RA purposes ensures that the output of generation resources can reach load under peak

[15] ISO Tariff Section 40.4.6.1, Deliverability within the CAISO Balancing Authority Area, provides that in order to determine NQC from RA Resources subject to Section 40.4, the ISO will determine that an RA resource is available to serve the aggregate of load by means of a deliverability study." ISO Tariff Section 40.4.3 sets forth a number of general qualifications for supplying NQC, including that RA resources included on an RA Plan submitted by a scheduling coordinator on behalf of a load serving entity serving load in the CAISO balancing authority area must: (1) be available for testing by the ISO to validate QC and (2) provide any information requested by the ISO to apply the performance criteria.

[16] CPUC Decisions D.06-07-031, D.04-10-035, D.05-10-042, and D.06-06-064 regarding QC requirements.

conditions. With a growing number of renewable resources being added to the grid, both now and in the future, an assumption of deliverability is simply unworkable and could compromise reliability.

The ISO recommends that the CPUC not treat distribution level resources not on the customer side of the meter as deemed deliverable. These resources should be processed in the same manner as other generators and be subject to a deliverability assessment by the ISO. It is through this process that the ISO ascertains the exact location of each distribution RA resource for inclusion in the ISO's system model base case in order to recognize the resource and count it toward meeting local RA requirements. If PG&E wants to count distribution level resources not on the customer side of the meter for RA purposes then those resources should be processed as other generators are processed and should comply with all applicable ISO Tariff provisions.

C. TREATMENT OF AVOIDED LINE LOSSES IN DEMAND RESPONSE LOAD IMPACT PROTOCOL ESTIMATES FOR RA QC CALCULATION

Under the CPUC's current load impact protocols, RA values for dispatchable demand response resources are not grossed up for avoided transmission and distribution line losses. The CPUC applies a three percent adjustment for all losses,[17] but this adjustment factor does not expressly include line losses for demand response resources. Load serving entities, however, may include losses in their load forecasts, including distribution losses, transmission losses, and unaccounted for energy.

In its January 11, 2010 comments, PG&E stated that avoided line losses should be included in determining the QC amounts for DR. Specifically, PG&E recommended

[17] See Energy Division staff presentation at the January 27-28, 2010 workshop: "CPUC decisions [have a] 3% gross up to load forecasts" adder.

that (1) avoided line losses be included in the load impact protocol estimates for the QC calculation, and (2) the demand response cost effectiveness evaluation framework consider line loss rates in its calculations. The latter, according to PG&E is consistent with the cost effectiveness settlement in CPUC Docket No. R. 07-01-041.[18]

In its January 11, 2010 comments, SCE proposed that (1) the RA value for dispatchable DR resources be grossed up for avoided transmission and distribution line losses, and (2) the CPUC calculate the demand response resource RA value using a specific formula proposed by SCE, which would gross up demand response resource capacity by a factor of 25 percent.[19]

The ISO does not support either the proposal by PG&E or SCE. The fundamental assumption underlying the proposals is that demand response will in all locations and all circumstances reduce line losses but that the rest of the RA resources will not. The ISO disagrees with that assumption. Line losses are dependent on the length (impedance) of the electrical path that power needs to travel from a generating source to a load center. In the system, there are countless combinations of loads and resource scenarios. In fact, the ISO is aware of instances on its system where more line losses were avoided by dispatching a generation RA resource than if demand response resources had been used. This ISO experience refutes the assumption underlying both proposals. Avoided transmission and distribution line loss associated with demand response resources are highly dependent on line configurations as well as the output of other resources on the system and should not be simply assumed. The

[18] Joint Motion Of California Independent System Operator Corporation, California Large Energy Consumers Association, Division Of Ratepayer Advocates, Enernoc, Inc., Pacific Gas And Electric Company (U 39-E), San Diego Gas & Electric Company (U 902-E), Southern California Edison Company (U 338-E), And The Utility Reform Network For Adoption Of Settlement (February 22, 2010).

[19] SCE Comments, p. 9.

ISO therefore believes that the existing three percent total loss adder should be sufficient to account for all losses, including any losses attributable to demand response, and that it should remain in place.[20] There is no valid basis to treat demand response resources differently than other RA resources.

D. ENERGY DIVISION'S PROPOSED CHANGES TO THE QC COUNTING METHODOLOGY

The ISO commends the Energy Division for preparing the QC Report as a "cookbook" that describes the CPUC's qualifying capacity counting rules and the methodologies used to implement those rules. The discussion and detail in the QC Report provide greater transparency into the mechanics of the CPUC's RA program, to the benefit of all interested parties. In addition to the specific issues discussed below pertaining to the Energy Division's proposed changes to the counting rules, the ISO requests that the Energy Division consider enhancing the cookbook by making the formulas and algorithms for the methodologies publicly available. These formulas and algorithms would be extremely useful to the ISO and RA program participants for increasing understanding of the methodologies and how they work and for performing calculations to validate the QC results.

1 Dispatchability Classification

As described in the QC Report, resources are classified first by technology type and then by dispatchability in order to apply an appropriate QC methodology to specific resources. The QC values for wind and solar RA resources are calculated in accordance with Section 9 of the QC Report using the exceedance methodology, and the QC for hydro resources is calculated in accordance with Section 8 using a net

[20] The ISO notes that the demand response line loss formula proposed by SCE yields a 25 percent adder, which exceeds the existing adder for all losses by over eight times.

dependable capacity methodology. Following the classification of wind, solar, and hydro resources, the remaining resources are grouped according to dispatchability, and are classified either as dispatchable, in which case they receive QC values in accordance with Section 7, or as non-dispatchable and receive a QC value calculated in accordance with Section 10 of the QC Report, based on a three-year rolling average of production during certain hours. Because this current classification methodology is prone to error, the QC Report proposes to post an initial resource classification list and then allow stakeholders to comment on its accuracy.[21]

In its February 23, 2010 amended Phase 1 comments, the Cogeneration Association of California (CAC) presented a wide range of specific proposals designed to stretch the SCP construct to accommodate combined heat and power (CHP) resources. In a number of instances, the CAC proposals represent a significant departure from current practice. With regard to resource classification, CAC proposes in Section IV of its comments to abandon the current practice of resource classification based on the dispatchable/non-dispatchable distinction. Instead, according to CAC, the "counting methodology should differentiate between firm, as-available and hybrid CHP generation" (p.6). CAC states that this new method of "characterization would more accurately reflect the generators' operational characteristics" (p.6). However, the classification distinction proposed by CAC would simply allow a generator's Scheduling Coordinator (SC) to effectively determine the qualifying capacity for new and existing CHP outside the bounds of any established methodology for firm, as-available or hybrid CHP generator. The CAC resource classification proposal is not acceptable to the CAISO.

[21] QC Report, p. 3.

Instead, the ISO supports the initial resource classification approach proposed by Energy Division in the QC Report, which is based on a dispatchable/non-dispatchable distinction. With the resource classification approach proposed in the QC Report, the initial list will become more accurate through refinement. Its accuracy will also improve if the term "dispatchable" is specifically defined.

Since the CPUC has not specifically defined the term "dispatchable" for QC purposes, the ISO recommends that the CPUC work with the ISO and other interested parties to develop a definition of "dispatchability" for use in this context.

2. Hydro Counting Methodology

Under the current methodology, the CPUC determines the QC of hydro resources based on net dependable capacity, derated for scheduled outages and the capacity available during a one-in-five dry year, using separate equations for dispatchable and run-of-river hydro resources. In the QC Report, Energy Division states that there is "no reference table to look up [the] derate values … currently in use [and therefore], as implemented, there is no significant difference between these two equations".[22] Energy Division's proposed solution is to use the dispatchable generation methodology contained in Section 7 of the report for dispatchable-hydro resources and the non-dispatchable generation methodology contained in Section 10 of the report for non-dispatchable hydro resources.[23]

The ISO notes that in the CPUC's February 18, 2010 Revised Appendix 1 Classification List to the QC Report for QC calculation purposes, no hydro resources were classified as non-dispatchable hydro. All of the hydro resources identified on the

[22] *Id*. at 11.
[23] *Id.*

classification list are apparently considered “dispatchable” by the Energy Division; therefore, the dispatchable generation methodology would presumably be used to calculate the QC for these resources.

Based on Section 10 of the QC Report, it would seem that the Energy Division would classify run-of-river hydro resources as non-dispatchable and their QC value would be calculated using that methodology. Further, for dispatchable hydro, it is not clear how the Energy Division would apply the methodology described in Section 7 to dispatchable hydro resources. Since the Energy Division proposes to eliminate the current hydro counting methodology in favor of using the methodology described in Section 7 of the QC Report, the ISO believes that the actual effect of this change on QC values warrants further explanation. Accordingly, the ISO requests that, in advance of the due date for reply comments in this matter, the Energy Division provide: 1) a more detailed narrative description of the Section 7 methodology as it would be applied to hydro; and 2) sample calculations for dispatchable hydro resources, including calculations for a heretofore classified dispatchable hydro unit and a run-of-river unit.

IV. CONCLUSION

The ISO respectfully requests that the CPUC issue an order consistent with the ISO's proposals and comments herein.

Respectfully submitted,

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Date: March 12, 2010

CERTIFICATE OF SERVICE

I hereby certify that on March 12, 2010, I served, by electronic and United States mail, a copy of the foregoing: CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION COMMENTS ON PHASE 1 WORKSHOP ISSUES

to each party in Docket No. R.09-10-032.

Executed on March 12, 2010
at Folsom, California

/s/ Anna M. Pascuzzo //
Anna M. Pascuzzo
An Employee of the California
Independent System Operator