

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

Order Instituting Rulemaking to Oversee the)	
Resource Adequacy Program, Consider)	Rulemaking 09-10-032
Program Refinements, and Establish Annual)	(Filed October 29, 2009)
Local Procurement Obligations.)	
_____)	

**Comments of
the California Wind Energy Association
and the California Cogeneration Council
on Phase I Issues**

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On behalf of
**CALIFORNIA WIND ENERGY ASSOCIATION and
CALIFORNIA COGENERATION COUNCIL**

March 12, 2010

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In accordance with the procedural schedule set forth in the December 23, 2009 Scoping Memo and Ruling of the Assigned Commissioner and Administrative Law Judge in this matter (Scoping Ruling), as amended, the California Wind Energy Association (CalWEA) and the California Cogeneration Council (CCC) respectfully present their opening comments in Phase I of this rulemaking on Resource Adequacy (RA) issues. CalWEA and the CCC are participating in this case in order to address two issues:

1. whether and how intermittent renewable resources and combined heat and power (CHP) projects should be subject to the availability incentive mechanism that is part of the Standard Capacity Product (SCP) that the California Independent System Operator (CAISO) has developed as part of the RA program, and,
2. the conditions under which the CPUC will eliminate the “replacement rule” that now requires load serving entites (LSEs) to replace RA capacity that is out for scheduled maintenance.

On January 11, 2010, CalWEA filed a proposal on the first of these issues. CalWEA also has participated in the three workshops that the Energy Division has conducted in this proceeding. The CCC has been monitoring this proceeding closely, and believes that the two issues listed above will impact its members who in the future may obtain new contracts to sell their excess power output to the California investor-owned utilities (IOUs). As a result, the CCC has filed a companion motion for party status in this case, and joins CalWEA in these comments.

I. The FERC Is Not Expecting To Remove the Current Exemption from the SCP Availability Incentive that Applies to Intermittent and CHP Resources.

Intermittent and CHP resources today are exempt, by an order of the Federal Energy Regulatory Commission (FERC),¹ from the SCP availability incentive mechanism, because the RA capacity of these resources is “counted” using their historical output. FERC found that this counting rule already provides such resources with an incentive to maintain high availability, and that applying the SCP availability incentive mechanism thus would represent a duplicative penalty for the same outage. The FERC’s discussion of this exemption is as follows:

We accept the CAISO’s proposal to exempt from the proposed availability standards resources whose qualifying capacity is determined by historical output. As the CAISO explains, existing resource adequacy rules treat certain resources differently in determining their amount of qualifying capacity. Under the existing CPUC market rules, resources whose qualifying capacity is determined by historical output are penalized for poor performance through a reduction of their qualifying capacity. Therefore, it would be a harsh result to apply the same availability standards, which are designed to penalize poor performance, to resources already subject to qualifying capacity adjustments. We find that doing so could potentially result in penalizing such resources twice for the same outage or de-rate. As long as this counting feature of the market continues, we find the proposed exemption to be permissible and not unduly discriminatory.²

CalWEA and the CCC note that the FERC stated that the exemption would continue “as long as this counting feature of the market continues,” in other words, so long as the current RA counting rules based on historical output remain in place. Significantly, the proposals advanced in this proceeding – in particular, the proposal from the CAISO – do not propose to change the current counting rules. As a result, based on the plain language of the FERC Order, we do not believe that the FERC would expect the CAISO or the CPUC to remove this exemption so long as the current counting rules are in effect.

¹ June 26, 2009 FERC Order in ER09-1064-000, 127 FERC ¶ 61,298 (FERC Order), at 17-22..

² FERC Order, at 21.

The CAISO may believe that the FERC has directed it to work to remove the exemption for intermittent and CHP resources based on the two paragraphs of the FERC Order which follow the one cited above. However, these paragraphs deal with a *temporary* exemption from SCP that the FERC granted to demand response (DR) resources.³ CalWEA and the CCC read these paragraphs as admonishing the CAISO to move quickly to remove the temporary exemption granted to DR resources, but as not applying to intermittent or CHP resources, for whom the exemption granted was not referenced as temporary. As a result, CalWEA and the CCC do not believe that the FERC is expecting action to remove the exemption for intermittents and CHP, so long as the current counting rules for these resources remain in place. Nonetheless, the Scoping Ruling determined that the issue of whether and how this exemption might be lifted to be within the scope of Phase 1 of this case,⁴ and the CAISO has presented a proposal that purports to remedy the “double penalty” problem without changing the RA counting rules. Accordingly, CalWEA and the CCC address this proposal below because the CAISO clearly has a different reading of the FERC Order.

II. Intermittent And CHP Resources Already Face Strong Availability Incentives As An Inherent Feature Of How They Are Paid For Their Power; Thus, To Impose The SCP Availability Incentive On Them Would Be Duplicative.

The FERC Order found that intermittent and CHP resources in California have duplicative incentives to maintain high availability. In fact, these incentives are more than duplicative, and in many cases such resources have three or four layers of availability incentives. CalWEA discussed these incentives at length in its January 11 Proposal, focusing on intermittent renewable resources. These points are summarized again below, and the CCC has added the parallel incentives in typical utility contracts with CHP projects.

- First, renewable projects selling power under Renewable Portfolio Standard (RPS) contracts are paid energy-only, dollar per megawatt-hour (MWh) prices,

³ See the emphasis in paragraph 57 of the FERC Order.

⁴ Scoping Ruling, at 3.

with no fixed capacity payments, and are paid only for energy actually produced. Because an RPS project's payments for both energy and capacity are combined in a single energy price and tied directly to performance, the availability incentive in an RPS contract is far stronger than the SCP availability incentive. In fact, this incentive alone is more than three times larger than the SCP availability incentive.⁵ Similarly, in order for a CHP project to receive full firm capacity payments under a typical CHP power purchase agreement, the project must achieve a certain capacity factor for the month.⁶ Thus, if a CHP project suffers a forced outage, it will lose capacity payments.

- Second, the *pro forma* RPS contracts also include additional incentives to maintain high availability. Southern California Edison's (SCE) *pro forma* RPS contract (including the proposed 2010 version) requires the Seller to provide an Availability Guarantee which mandates that the project achieve a specified availability or pay damages to SCE, and also includes an Energy Delivery Obligation which requires the project to deliver at least a certain amount of energy on an annual or biennial basis. Similarly, the 2009 RPS *pro formas* of Pacific Gas and Electric (PG&E) and San Diego Gas & Electric (SDG&E) require intermittent renewables to produce an annual Guaranteed Energy Production or to face liquidated damages or even termination of the contract.⁷
- Third, the qualifying capacity of intermittent renewable and CHP projects is based on historical production, and thus if these resources are not available to produce power, their future RA value will decline. The FERC Order found that the SCP availability incentive is duplicative of this incentive.

In sum, intermittent and CHP projects already have two or more incentives to maintain high availability. Some of these incentives are at least three times greater in

⁵ CalWEA Proposal, at 4.

⁶ This structure is common to both longstanding QF contracts and the new CHP contracts under development in the QF docket, R. 04-04-025 / R. 04-04-003. As the Commission required in D. 07-09-040, the new CHP firm capacity contracts include higher performance standards to earn full capacity payments than do the older QF firm capacity agreements.

⁷ See the PG&E 2009 *pro forma*, Section 3.1(e)(ii) and the SDG&E 2009 *pro forma*, Section 3.1(e).

dollar magnitude than the SCP availability incentive, and they apply to every forced outage, without the “deadband” of the SCP incentive. These incentives are fundamental features of the pricing structure of RPS and CHP contracts and will not change regardless of what happens in this proceeding with the RA counting rule and the SCP availability incentive. Thus, there is simply no need to apply the SCP availability incentive to intermittent or CHP generators selling power under RPS or CHP contracts, and doing so simply will add at an unnecessary and punitive third or fourth availability incentive to those already in place.

III. The SCP Availability Mechanism May Be Needed For Utility-Owned Intermittent and CHP Generation.

The discussion in the last section assumes that the generation from intermittent or CHP QF resources is sold under contracts that include strong incentives for high availability. However, in the future the utilities may develop and own wind, solar, and CHP projects, and would recover the costs for these projects through their rate bases. Indeed, PG&E recently announced that it will purchase, own, and operate a 246 MW wind project in the Tehachapi Wind Resource Area (WRA),⁸ and PG&E and SCE each plan to own 250 MW of solar photovoltaic generation.⁹ Instead of contractual incentives for high availability, the operations of utility-owned projects may be subject to direct Commission oversight through reasonableness reviews. The Commission should evaluate whether utility-owned intermittent and CHP generation has adequate incentives to maintain high availability, and on the basis of that assessment should decide whether there is a need to ask the FERC to remove the SCP exemption for such utility-owned projects.

⁸ See the PG&E news release at http://www.pge.com/about/newsroom/newsreleases/20091203/pge_agrees_to_purchase_and_operate_major_california_wind_energy_project.shtml.

⁹ See A. 09-02-019 and A. 08-03-015.

IV. Applying the SCP Availability Incentive to Intermittent and CHP Resources Is Not Needed to Advance the SCP Program.

The FERC Order states that the fundamental purpose of the SCP is to “facilitate the selling, purchasing, and trading of resource adequacy capacity.”¹⁰ There has been no showing in this proceeding that achieving this goal requires the immediate integration of intermittent and CHP resources into the SCP availability incentive. First, as we have just discussed, these resources already are subject to very strong incentives for high availability, and layering on yet another incentive is clearly duplicative and simply is not needed to ensure that these resources achieve high availabilities.

Second, it is important to keep in perspective the amount of resources that are exempt from the SCP. According to the CAISO, 12% of generation resources are now exempt from the SCP incentive.¹¹ Intermittent renewable resources currently constitute just 1.9% of the RA generation capacity located on the CAISO grid, and thus represent less than one-sixth of the exempt resources.¹² Furthermore, many of the existing wind and solar resources operate under grandfathered QF contracts and thus will not be subject to the SCP until those contracts expire. CHP resources probably comprise a significant share of the 12% of exempt resources, but virtually all of these resources now operate under grandfathered QF contracts and are not subject to CAISO tariff provisions such as the SCP. As these contracts gradually expire over the next ten years, the existing CHP resources that re-contract with the utilities will do so under new power purchase agreements that will require compliance with the CAISO tariff. In short, in 2010 and for the several years thereafter, only small amounts of intermittent and CHP resources will be eligible for inclusion in the SCP program, and adding them to the program clearly is not necessary to produce a more viable market in RA capacity.

¹⁰ FERC Order, at 1.

¹¹ CAISO, “Issue Paper: Standard Capacity Product II” (December 4, 2009), at page 6.

¹² The CAISO’s 2010 qualifying capacity list shows that intermittent renewables represent 991 MW out of 52,182 MW of RA capacity (i.e. 1.9%) on the CAISO grid. This is based on annual average RA QCs for those resources that have monthly QCs. This percentage would be even smaller if one considered the RA capacity available from power imported from out-of-state.

Finally, RA capacity from intermittent and CHP resources is not likely to be an attractive source of tradable RA capacity, even if these resources somehow can be made to look exactly like other SCP resources. The RA capacity of these resources is contractually dedicated to the purchasing utility, which clearly has a need for and will use this capacity. Why would the utility want to trade RA capacity that it needs, can use, and has under contract?

Thus, the success of the SCP initiative does not at all depend on whether intermittent renewables and CHP projects can be shoehorned into the SCP mold. This issue should be reviewed again in several years, when more intermittent resources are on-line, when more CHP contracts become subject to the CAISO tariff, and after experience has been gained in the trading of conventional RA capacity using the SCP. That experience will show whether the development of the RA market really requires subjecting intermittent and CHP resources to another duplicative layer of incentives to ensure that they make available their stated RA capacity.

V. The CAISO's Proposal To Integrate Intermittent Resources Into The SCP Is Inconsistent With The RA Counting Rule For Intermittent Resources And May Not Be Workable.

The CAISO has proposed to remedy the “double penalty” problem that the FERC Order identified by adjusting the historical output data for intermittent renewables to remove forced outages, and then to increase wind and solar QCs accordingly. This would remove the duplicative incentive for these resources to increase their QCs by achieving high availability. However, as summarized above, even after this step is taken, multiple incentives to achieve high availability would still remain for independently-owned intermittent and CHP resources under contract to the utilities.

Furthermore, it remains unclear whether the CAISO has adequate historical data on the forced outages for these resources to make this adjustment. Only a fraction of the existing intermittent and CHP generation is under the CAISO's outage reporting system; the remainder is existing QF generation that is grandfathered out of these reporting

requirements. Perhaps the CAISO SLIC outage data that exists for new intermittent generation could be applied as a proxy for all intermittent projects, but it is unclear how representative this data would be. This problem will moderate over time, as existing QF contracts expire and a higher proportion of intermittent and CHP resources come under the CAISO outage reporting regime. Again, this argues for waiting until more of these resources are on-line and subject to the CAISO tariff before reviewing whether and how to bring them into the full SCP program.

More troubling is the fact that the CAISO already has had to modify the so-called “Standard” Capacity Product as it applies to intermittent resources, due to the fact that the RA counting rule for intermittent renewables is much different than the counting rules for other types of resources. As the CAISO has conceded in its recently-revised Phase 1 proposal, the strict application of the SCP availability incentive to wind and solar resources, using the same equations that apply to other resources as set forth in Sections 40.9.4.2 and 40.9.6 of the CAISO tariff, would result in significant availability incentive awards for wind and solar resources in most if not all months. In order to remedy this problem of guaranteed rewards, the CAISO recently modified its SCP proposal as it applies just to intermittents and CHP, thus abandoning the CAISO’s stated goal of including exempt resources in the SCP availability incentive without changing how that mechanism works.¹³ Thus, with respect to intermittent and CHP resources, the SCP is no longer a “Standard” Capacity Product.

To determine the percentage availability of a non-intermittent resource, the CAISO simply divides a unit’s available capacity (i.e. capacity not reported on forced outage) by the unit’s NQC. In contrast, for intermittent and CHP resources, the CAISO now proposes to calculate the percentage availability of these resources by dividing available capacity by the project’s nameplate capacity, not by its NQC (which, especially for intermittents, is lower than nameplate).

¹³ CAISO, “Issue Paper: Standard Capacity Product II” (December 4, 2009), at page 3. The CAISO states in this issue paper that “the intention of this proposal is not to change the current SCP rules provided in the Tariff, but to standardize the existing rules for all RA resources to the extent possible.”

For example, a 100 MW non-intermittent RA Resource with a 90 MW NQC that has a 10 MW de-rate would have a 100% availability percentage, because 100% of the 90 MW NQC is available. However, that same resource, if intermittent (e.g., a solar plant), would be treated as only having 81 MW (90%) available, because the CAISO would apply the 90 MW/100 MW ratio to the 90 MW of available RA capacity. The NQC of the intermittent resource already has been reduced for intermittency through the lower-than-otherwise NQC, per the CPUC counting methodology. The CAISO de-rate of the physical plant availability effectively amounts to a second penalty for the same thing. In addition, the second de-rate is purely theoretical, as the solar plant may actually produce its full 90 MW in the hour in which only 81 MW is assumed available. For all other resources, the availability incentive is based on actual, real de-rates. Thus, it is possible for an intermittent resource to be penalized for an hour in which it actually delivered its full RA capacity.

The CAISO is not proposing to apply this new calculation methodology to any generators except intermittent and CHP units, despite its rhetoric about the importance of uniform application of the RA SCP provisions to ensure a truly standard capacity product. The CAISO seems to have proposed this discriminatory treatment in order to ensure that intermittent resources do not qualify too often for availability incentives because of their relatively low NQCs. The result, however, may be to penalize intermittent resources even though they have delivered their full RA capacity.

The CPUC's adopted 70% exceedance counting rule for intermittent resources differs markedly from how the RA capacity of other resources is counted. As a consequence, CalWEA and the CCC submit that it is not possible to develop a "standard" availability incentive that works equitably for all types of resources. For non-intermittent resources, all forced outages reduce the amount of available RA capacity. In contrast, forced outages at a wind or solar project will have no effect on the RA capacity that the project provides, so long as the outage does not result in the project producing less than its NQC as a result of the outage. This is because production that is above the NQC level

(i.e. above the 70% exceedance level) does not count toward the project's RA value. Thus, the only hours in which a forced outage can impact the wind project's RA value are the limited set of hours when a project's output is close to its NQC using the 70% exceedance approach. In these hours an outage may result in a reduction in the amount of RA capacity delivered. This is shown in the attached **Table 1**, which shows three different sets of forced outages for a 100 MW wind farm in a simplified month with ten hours. Only the third set of forced outages (Case 3) actually results in a reduction in the amount of RA that is delivered in the month, to a level below the wind project's NQC of 10 MW. Yet the wind farm would be penalized by the CAISO in all three cases, assuming that a 90% availability was below the lower limit of the dead band for target availability in that month. The CAISO's proposal would assume incorrectly that forced outages reduce the availability of an intermittent resource's RA capacity no matter when the outage occurs. Thus, the CAISO proposal is plainly inconsistent with the RA counting rule for intermittent renewables, and discriminates unfairly against such resources by penalizing them even in cases when they are delivering their full RA capacity.

Given the disparate RA counting rules, it is simply not possible to fashion an equitable and workable standard availability incentive for all types of resources. Given the strong existing incentives for intermittent and CHP resources to maintain high availabilities, CalWEA and the CCC submit that it is not worthwhile to try to "de-standardize" the SCP availability incentive simply so that it can be applied to these resources. As a result, it is reasonable to retain the exemption for these resources.

VI. The CPUC Should Endorse Southern California Edison's Proposal for a New "Replacement Rule" for RA Resources on Planned Outages.

Today, the RA "replacement rule" requires Load Serving Entities (LSEs) to provide substitute RA capacity in months when RA Resources will be on planned outages with durations longer than a certain minimum period. An issue in this case is how to end the "replacement rule" such that LSEs no longer have this obligation.

Table 1

Example of the Problem with the New CAISO SCP Availability Incentive for Intermittent Resources

Assumptions:

1. Ten peak hours in the month (for simplicity)
2. 100 MW wind farm (100 one-megawatt turbines)
3. 350 MWh of net generation (35% capacity factor) with zero outages
4. NQC of 10 MW based on the 70% exceedance method
5. 1000 possible unit-hours of available turbines in these peak hours.
6. 100 unit-hours of forced outages in these peak hours (10% forced outage rate)
7. Hours ranked from greatest to least generation.
8. Output in Hour 8 represents the 70% exceedance level.

CAISO Proposal would assume that 90% of the 10 MW of RA QC (9.0 MW) was available in this month. As shown below, the actual RA QC delivered in this month is below 10 MW only in Case 3.

Max Output with Zero Forced Outages		Case 1			Case 2			Case 3		
Hour	Maximum Output	Outages	Max Output Available	Net Output	Outages	Max Output Available	Net Output	Outages	Max Output Available	Net Output
1	85	40	60%	51.0	0	100%	85.0	0	100%	85.0
2	70	10	90%	63.0	0	100%	70.0	0	100%	70.0
3	58	30	70%	40.6	0	100%	58.0	0	100%	58.0
4	41	20	80%	32.8	0	100%	41.0	0	100%	41.0
5	36	0	100%	36.0	40	60%	21.6	0	100%	36.0
6	28	0	100%	28.0	20	80%	22.4	40	60%	16.8
7	20	0	100%	20.0	0	100%	20.0	30	70%	14.0
8	10	0	100%	10.0	0	100%	10.0	10	90%	9.0
9	2	0	100%	2.0	30	70%	1.4	20	80%	1.6
10	0	0	100%	0.0	10	90%	0.0	0	100%	0.0
Total	350	100	90%	283.4	100	90%	329.4	100	90%	331.4
NQC	10.0			10.0			10.0			9.0
Capacity Factor	35%			28%			33%			33%

The CAISO has proposed to transfer the replacement obligation to generators, such that RA suppliers would be required to provide substitute RA capacity during planned outages longer than that minimum duration. The CAISO would amend its RA tariff to implement this requirement. If generators failed to provide replacement capacity, they would be in violation of the CAISO tariff, the CAISO would procure replacement capacity through the Interim Capacity Procurement Mechanism (ICPM), and the CAISO would charge the delinquent supplier the \$41/kW-year replacement capacity cost.

Southern California Edison has proposed an alternative to have the LSE estimate in advance the additional RA capacity needed to cover planned outages each month, based on historical data. This additional RA capacity to cover “likely” planned outages would be added to the required RA procurement target for the LSE for that month.

CalWEA and the CCC support the SCE proposal. If the replacement obligation is transferred to RA suppliers, as the CAISO proposes, this new requirement will represent an important new risk that must be incorporated into bids to provide RA capacity. This will not be the best outcome for ratepayers, because the developers and operators of renewable and CHP resources have far less experience than the LSEs in buying and selling RA capacity in California, and are less likely to procure replacement capacity in the most cost-effective manner. The owners of intermittent and CHP projects are in the business of building and operating generation plants, not buying and selling RA capacity, and do not participate in the still-unorganized market for RA capacity. They will not understand fully the magnitude of this risk, and thus will tend to overestimate its cost in their bids. On the other hand, LSEs are actively in the market for RA capacity, and typically will have many sources of replacement capacity, including annual RFOs, unsolicited offers, and their own generation capacity. CalWEA and the CCC agree with SCE that it will be more cost-effective, and reduce the need for additional CAISO ICPM procurement, simply to meet this additional expected need through the RA forward procurement process.

VII. Conclusion

The current exemption of intermittent and CHP resources from the SCP availability incentive should be maintained. These resources already have multiple incentives to maintain high availability, incentives that are even stronger than the SCP availability incentive. Attempting to include these resources in the SCP would add very little additional capacity to the RA resources that are under the SCP, and may not be possible given the very different RA counting rules for these resources. The only possible exception to this recommendation is utility-owned, rate-based generation, which will not have the same contractual incentives to maintain high availability as independent generation.

Finally, the Commission should adopt SCE's proposal for a new "replacement rule" for RA resources on planned outages.

CalWEA and the CCC appreciate the Commission's attention to these opening comments.

Respectfully submitted,

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On behalf of
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March 12, 2010

CERTIFICATE OF SERVICE

I hereby certify that I have this day caused to be served a copy of the foregoing document, **Comments of the California Wind Energy Association and the California Cogeneration Council on Phase I Issues**, by Electronic Mail where possible and First-Class Mail where not, on all known parties to R. 09-10-032, named on the service list attached to the original certificate of this document pursuant to the Commission's Rules of Practice and Procedure.

I declare under penalty of perjury that the foregoing is true and correct.

Executed at Berkeley, California, Friday, March 12, 2010.

/s/ Christa Goldblatt

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