

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue
Implementation and Administration of
California Renewables Portfolio Standard
Program.

Rulemaking 11-05-005
(Filed May 5, 2011)

**CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES
COMMENTS TO SEC. 399.20 RULING OF JUNE 27, 2011**

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The Center for Energy Efficiency and Renewable Technologies (CEERT) respectfully submits these Comments to the Sec. 399.20 Ruling issued in this rulemaking on June 27, 2011 (June 27 Sec.399.20 Ruling). These Comments are filed and served pursuant to the Commission's Rules of Practice and Procedure and the June 27 Sec. 399.20 Ruling.

**I.
INTRODUCTION**

As instructed both in the June 27 Sec. 399.20 Ruling and at the Prehearing Conference (PHC) held in this rulemaking on July 13, 2011, CEERT has organized these comments using the paragraph identification for the questions posed by the June 27 Sec. 399.20 Ruling. In addition, based on direction provided by ALJ Mattson at the July 13 PHC, CEERT has further divided its responses between those issues to be resolved in 2011 and those deferred to 2012. CEERT, however, does recommend herein that the issue of "expedited interconnection procedures," targeted by the June 27 Sec. 399.20 Ruling for resolution in 2012, should in fact be considered together with those issues slated for resolution this year (2011). CEERT addresses this recommendation further under its response to Section 4.10.

II. ISSUES TO BE RESOLVED BY END OF 2011

3.1 Definition of Market Price

- 1) *Please respond in comments to the following questions: Define market price of electricity as used in § 399.20. Is there one market price of electricity relevant to all types of electricity procurement or are there different market prices depending on the type of electricity that is being procured? For example, is there a unique market price of electricity for the market segment targeted in § 399.20? Does the market price of electricity include all types of electricity contracts and technologies that a utility procures or a subset of contracts and technologies? If you propose a subset, please define the subset.*

In CEERT's view, the market price of electricity depends on the resource and technology used to generate electricity, as well as the locational attributes of the generation site. As CEERT stated in its Opening Brief on implementation of Senate Bill (SB) 32 filed on March 7, 2011:

“[The Federal Energy Regulatory Commission] FERC has confirmed that state regulatory commissions, and specifically this Commission, have broad latitude in determining the avoided costs used to pay or establish a rate for payment to independent generators, which can, in fact, be specific to that generator's costs when a state mandate exists requiring a utility to procure from that resource. In this regard, avoided costs not only reflect the cost of the next marginal unit of generation, but also ‘obligations imposed by the state that, for example, utilities purchase energy from particular sources of energy or for a long duration.’¹ Thus, this rate can ‘take into account actual procurement requirements, and resulting costs, imposed on utilities in California’ and mean that ‘where a state requires a utility to procure a certain percentage of energy from generators with certain characteristics, generators with those characteristics constitute the sources that are relevant to the determination of the utility's avoided costs for that procurement requirement.’”²

Further:

“[W]hile the FERC Orders confirmed that an avoided cost rate may not provide additional compensation above the full avoided cost, the calculation of the avoided cost can include ‘environmental costs’ that are ‘real costs that would be incurred by the utilities.’.... Finally, those avoided cost rates may also differentiate between the supply characteristics of different technologies used by

¹ CEERT Opening Brief on SB 32 Implementation, citing FERC Order Granting Clarification and Dismissing Rehearing, 133 FERC ¶ 61, 059 (October 21, 2010) (“FERC October 2010 Order”), at ¶23, ¶26, mimeo at pp. 11 - 12.

² *Id.*

independent generators and can be reflected in a ‘multi-tiered avoided cost structure.’”³

Thus, it is possible that each project that qualifies for participation in the SB 32 Feed In Tariff (FIT) could have a different market price of electricity, when defined as avoided cost, that would be specific to its resource, technology, and location. CEERT does not recommend that pricing be developed by individual project, of course. However, CEERT does recommend that the market price of electricity used to establish the SB 32 FIT price be differentiated according to resource types, with an avoided cost price determination that reflects their individual environmental, locational, and supply characteristics. In this regard, CEERT believes that the applicable avoided cost pricing can be tailored to the market segment targeted in §399.20, which includes projects uniquely situated closer to load centers and sized to interconnect at the distribution level. This approach is appropriate, especially when such projects have not been effectively incorporated into any other RPS procurement mechanism.

3.2 Continued Reliance on Market Price Referent

- 2) *Explain whether the price for electricity purchased under § 399.20(d), as amended by SB 2 1X, must or should be based on the MPR as currently calculated.*

CEERT does not believe that the price for electricity purchased under § 399.20(d), as amended by SB 2 1X should be based on the market price referent (MPR) as currently calculated. The MPR was developed in response to the original RPS legislation that required a point of demarcation for application of supplemental energy payments (SEPs), later named above market funds (AMFs). The Commission also used the MPR as a per se reasonableness price for RPS eligible procurement, but made clear that the MPR was not intended to serve as

³ CEERT Opening Brief on SB 32 Implementation, at p. 11, citing FERC October 2010 Order at ¶31, mimeo at p. 15.

either the floor or ceiling price paid for renewables procurement generally or that prices above the MPR were to be considered per se unreasonable.⁴

Given FERC's recent findings on avoided cost and the amendments in SB 1X 2 that no longer obligate or require the Commission to set an MPR, CEERT believes that the advent of SB 32 implementation offers a timely opportunity to calculate prices for the FIT based on appropriate avoided cost components identified in SB 32 and by FERC. Thus, while the current components of the MPR (i.e. the long-term ownership, operating, and fixed-price fuel costs associated with fixed-price electricity from new generating facilities, and the value of different products, including baseload, peaking, and as-available generation) can be a starting point for developing this avoided cost determination, this list must be expanded to include the supply, generation, and locational characteristics of each resource type.

- 3) *Explain whether the price for electricity purchased under § 399.20(d) must or should be based on the MPR as currently calculated with the addition of new adders, as suggested by parties in the March 2011 briefs.*

CEERT's answer to Question 2) above is incorporated herein. In terms of the *additional* costs to be reflected in the calculation of the avoided cost pricing to be used for the SB 32 FIT, the following should be included:

- Avoided emissions
- Health benefits of avoided in-state emissions
- Reliability and blackout avoidance
- Avoided transmission cost
- Avoided distribution cost
- Grid support
- Avoided water use
- Avoided fuel cost and fossil fuel price hedge

⁴ Decision (D.) 08-02-010, at p. 14 and footnote 15.

- Avoided losses (generation, transmission and distribution, and emissions)
 - Avoided generation fixed operation & maintenance costs
 - Avoided generation capital cost
- 4) *Explain the benefits and the drawbacks of continuing to use the MPR as the basis of the price for the program under § 399.20 given the statutory changes.*

CEERT has never believed that the MPR as currently calculated based on earlier versions of the RPS statute ever reflected the true or total costs avoided by utilities in procuring electricity generated from renewable resources. As noted in Answer 2) above, the current MPR calculation does embody some of the avoided costs associated with renewable energy, but certainly not all. As a result, the current MPR calculation is not a sufficiently robust tool to reflect the full avoided costs of procuring renewable energy. Therefore, CEERT believes that the Commission should begin to examine the various attributes of each technology eligible under SB 32 and conduct more rigorous analyses of the avoided costs of each one. While CEERT understands and supports the aggressive schedule for this proceeding, it is our belief that such analyses already exists (see, Answer 7) below) and can be relied upon to develop pricing appropriate for an SB 32 FIT by the end of the year.

- 5) *Under the current RPS program rules each annual RPS Solicitation triggers an update to the MPR values.... Parties should explain whether a new trigger for an MPR update is necessary and/or a schedule for how the MPR should be updated going forward.*

Given CEERT's preference for moving away from the MPR to a broader avoided cost basis, establishing a new trigger for an MPR update is unnecessary. However, like the MPR, an update for the new avoided cost calculation(s) may be appropriate to account for changes in that cost analysis over time.

3.3 Additional Pricing Proposals

3.3.1. Technology-Specific Rates and Product-Specific Rates

- 6) *Based on your definition of “market price of electricity,” explain whether a technology-specific or product-specific proposal is a viable option for the § 399.20 program as updated by the SB 2 1X amendments.*

Consistent with CEERT’s answers above, CEERT believes that technology-specific and product-specific rates are not only appropriate, but comply with SB 32 and FERC’s October 2010 Order. Additionally, CEERT believes that technology-specific and product-specific rates will more effectively diversify the market, providing the various developers with a level playing field. CEERT believes that this approach has both analytical and legal merit over recommendations to set-aside portions of the 750 MW cap for specific technologies.

- 7) *Explain the specific methodology and all calculations and data that would be required to implement the technology or product-specific rate that you propose.*

With reference to the methodology that can be used to achieve the goal of targeted avoided cost rates, CEERT strongly encourages the Commission to look to the work and analysis of Dr. Lori Schell, who was commissioned by the California Solar Energy Industries Association (CalSEIA) to quantify the incremental value of small-scale solar PV in California not captured by the 2009 MPR (“Small-Scale Solar PV Methodology Study”).⁵ Dr. Schell has also conducted analyses for large-scale solar power and is in the process of completing an analysis for the fuel cell industry. Through her detailed study, Dr. Schell has effectively quantified the avoided costs or values of the various technologies by looking at each technology’s specific attributes in relation to market prices. CEERT believes that this analysis, and the public

⁵ Schell, Small-Scale Solar Photovoltaics in California: Incremental Value Not Captured in the 2009 Market Price Referent – Description of Methodology (April 23, 2010) (“Small-Scale Solar PV Methodology Study”).

information Dr. Schell used for that analysis, should be the starting point for creating technology- and product-specific rates.

The FERC October 2010 Order also permits the Commission to include in its analysis the value of Renewable Energy Credits (RECs).⁶ As CEERT stated in its Opening Brief on SB 32

Implementation:

“[E]ven though a state may not include a bonus or adder unless it reflects actual costs avoided, [FERC has determined that] ‘a state may separately provide additional compensation for environmental externalities, outside the confines of, and, in addition to the PURPA avoided cost rate, through the creation of renewable energy credits (RECs).’”⁷

In addition, the Small-Scale Solar PV Methodology Study states:

“Although RECs are defined by the CPUC as including ‘all renewable and environmental attributes associated with the production of electricity from the renewable energy resource,’ there is also an explicit recognition that ‘although avoided emissions are included in the definition of the REC, this definition does not create any right to use those avoided emissions to comply with any [greenhouse gas] regulatory program.’ [Footnote omitted.] Whereas a REC can be used for compliance with California’s RPS program, separate emissions reduction credits must be purchased for compliance with individual air quality district regulations and separate greenhouse gas allowances will have to be purchased to comply with the mandates of California’s Global Warming Solutions Act of 2006 (‘AB 32’).”⁸

- 8) *If applicable, identify what specific subset of proxy plants is appropriate for the calculation. An example of a Commission-adopted methodology for calculating technology-specific costs would be the MPR model, which calculates the proxy costs of building and operating a Combined Cycle Gas Turbine (CCGT) facility.*

CEERT believes that it is appropriate to continue to calculate the proxy costs of building and operating a Combined Cycle Gas Turbine (CCGT) facility to determine the avoided costs.

⁶ See, CEERT Opening Brief on SB 32 Implementation, at p. 11.

⁷ FERC October 2010 Order at ¶31, mimeo at p. 15.

⁸ Small-Scale Solar PV Methodology Study, *supra*.

3.3.2. Market-Based Rate

- 9) *Do you support this approach? Please explain. Discuss whether and how this approach is consistent with the provisions in § 399.20(f). Also explain the mechanisms of how a competitive auction would be used to determine the price (e.g., are projects paid as bid, paid the market clearing price, or paid another price point determined through an auction), and how, if at all, the auction would differ from the design of the Renewable Auction Mechanism in D.10-12-048.*

CEERT does not support Southern California Edison Company's (SCE's) proposed approach to set the price based on a competitive auction. The purpose of a Feed-in Tariff (FIT) is to guarantee certainty and transparency in the marketplace; a competitive auction does not lend itself to either of those attributes. While a competitive auction may circumvent any perceived FERC jurisdictional questions, those questions have long been clarified through very specific direction from FERC that states can set the price of wholesale power based on technology-specific avoided costs. Furthermore, a competitive auction would not incorporate the important considerations required for diversity in technology for a robust FIT program.

3.3.3. Rate Based on Power Purchase Agreements

- 10) *Given that a significant number of RPS solicitations have occurred since this time, using your definition of the market price of electricity, explain whether a rate under § 399.20(d) should be based on RPS power purchase agreement prices. Parties supporting this methodology should identify what subset of power purchase agreements is appropriate for the calculation, whether the price should be the weighted average of PPA prices or some other price point, and provide specific recommendations and calculations, where appropriate and necessary to implement such a methodology. Lastly, parties should articulate if there should be one rate or multiple rates. If parties suggest multiple rates, parties should define what the multiple rates should be and how they should be derived.*

If the Commission's intent with the feed-in tariff were to set the price in terms of cost plus reasonable profit, then looking at power purchase agreement (PPA) costs could be a useful exercise. However, under the guidance from FERC on avoided cost-pricing in a tariff, the PPA prices become somewhat less necessary. In addition, as previously mentioned, a primary purpose

of a feed-in tariff is to provide transparency to the market. Currently, little transparency exists for non-market participants (i.e. the public) to view PPA prices. Therefore, CEERT's opinion is that setting the price at avoided cost, inclusive of all such costs avoided by the resources targeted by SB 32, is the most prudent approach.

11) *Provide all relevant details for other alternate pricing proposals, if any, consistent with the provisions of SB 2 1X.*

CEERT has offered its preferred approach above, which is consistent with SB 32, SB 2 1X, and applicable FERC orders. See Answers 1) – 10) above.

3.4 Additional Pricing Questions

12) *Identify relevant data sources that could be used to implement any proposed methodology and whether the data used to calculate the rate should be derived from public or confidential data. Please comment on the appropriateness of the data sources as identified by parties in opening comments, such as Fuel Cell Energy and CALSEIA.*

Again, as stated in Answer 7) above, CEERT strongly supports reliance on Small-Scale Solar PV Methodology Study conducted by Dr. Schell. CEERT has worked closely with CalSEIA in the development of its 2010 study, which offers the basis to assess the costs avoided by renewable generation in the manner intended by SB 32.⁹ In addition, the Commission should include in its analysis the suggested data sources proposed by Fuel Cell Energy and CalSEIA. To that end, CEERT recommends that the Commission make use of the UC-Irvine Fuel Cell Study upon its completion.

⁹ Small-Scale Solar PV Methodology Study, *supra*.

13) *Explain how often the price under § 399.20(d) should be calculated given your preferred price calculation approach. The price may be calculated once, at regular intervals, such as annually, or in response to a triggering event. For example, in March 2011 briefs, CALSEIA proposed that the price be modified quarterly and be increased or decreased based on market participation. The California Solar Initiative presented a different model for reducing prices over time in which incentive rates decline over the life of the program in multiple steps triggered by solar capacity additions to facilitate market transformation.*

CEERT believes that recalculations of the prices could be appropriate, but only once an event triggers a need to adjust the price. CEERT has no firm position on this issue at this time, but would initially suggest that the Commission determine at what point a reduced incentive level would be most prudent – or conversely at what point it becomes apparent that the price is not high enough – which would be tied to the amount of new capacity brought online as a direct result of the FIT program.

3.5. Ratepayer Indifference

14) *Respond to these interpretations of “ratepayer indifference” and explain how the SB 2 1X amendments to § 399.20(d) and any new pricing proposal that you suggest pursuant to these amendments impact these interpretations.*

The hallmark of pricing generation at the utility’s avoided costs is ratepayer indifference. CEERT, therefore, believes that its proposed avoided cost-based methodology addressed above achieves this goal.

3.6. FERC Order 134 FERC ¶ 61,044 - Order Denying Rehearing

15) *[With the statutory changes in SB 2][p]lease indicate how those positions [taken in March 2011 briefs] have changed, if at all.*

CEERT’s Opening and Reply Briefs on SB Implementation filed on March 7 and 22, 2011, remain both relevant and supportive of SB 32 implementation, inclusive of the statutory changes to Section 399.20 resulting from SB 2. No change in position is required by those SB 2 amendments to Section 399.20.

4. Compliance with SB 32

- 16)** *Parties are requested to comment on th[e] proposal [in the June 27 Sec. 399.20 Ruling to decide certain issues by 2011 and others by 2012].*

CEERT has divided these comments between those issues designated by the June 27 Sec. 399.20 Ruling to be decided in 2011 and those in 2012. As discussed in the following Section II of these comments, it is CEERT's position that the issue of Expedited Interconnection Procedures (Section 4.2, Question 26) below) should be brought forward and decided, to the extent possible, at the same time the tariffs are adopted.

4.1. Increase Size of Eligible Facility to 3 MW

- 17)** *Explain any further issues to be considered on capacity limitation under this program and next steps necessary to implement the provision. To implement § 399.20(b)(2), tariff language and form contracts may need to be amended. The investor owned utilities should submit tariff changes or revised contract language, if any, to implement this change with comments on July 21, 2011 and July 28, 2011.*

CEERT does not believe that any further issues need to be considered with respect to the capacity limitation under this program or the next steps necessary to implement the provision. It is CEERT's position that implementation of this program is long overdue, but within reach, and CEERT sees no reason to reconsider the expanded capacity limitation of the program.

4.2. Proportionate Share and Increased Program Cap to 750 MW

- 18)** *Explain the drawbacks and benefits to relying on the existing methodology for calculation of proportionate share. Does the statute require a recalculation of proportionate share based on the addition of publicly owned utilities? Would the Commission's calculation of proportionate share for local publicly owned utilities be restricted by any jurisdictional limitations?*

CEERT does not have an opening position on this issue. However, CEERT reserves the right to comment on this issue in its reply comments.

4.3. Separate Tariffs

- 19) *This ruling proposes to implement this provision [to consolidate the separate 399.20 tariff schedules that now exist for public wastewater customers and all other customers] by end of 2011. Explain the next steps necessary to implement this request.*

CEERT does not have an opening position on this issue. However, CEERT reserves the right to comment on this issue in its reply comments.

4.4. Retail Customer Requirement Eliminated

- 20) *Explain the next steps necessary to implement this provision [that the facility need not be owned by a retail customer of the IOU and that those participating in the FIT also do not have to own and operate the facility], what modification to tariffs are needed to reflect this change, and what changes to the form contract might be required.*

CEERT does not have an opening position on this issue. However, CEERT reserves the right to comment on this issue in its reply comments.

[Section 4.5/Q.21 is addressed in Section II herein (issues for 2012 decision), see *infra*.]

4.6. 10-day Reporting Requirement of Request for Service under Tariff

- 22) *Parties are asked to comment on this recommendation [to decide this issue by the end of 2011].*

CEERT does not have an opening position on this issue. However, CEERT reserves the right to comment on this issue in its reply comments.

4.7. Publicly owned electric utilities

- 23) *Identify any issues and explain why coordination [between IOUs and POUs in implementation of SB 32] would be helpful. Identify any potential matters that the Commission may address relative to § 399.20 that may impact the implementation of § 387.6. One issue already identified in March 2011 briefs is the calculation of proportionate share of the 750 MW program cap.*

CEERT does not have an opening position on this issue. However, CEERT reserves the right to comment on this issue in its reply comments.

[Sections 4.8, 4.9, and 4.10/Q.24, Q.25, and Q.26 are addressed in Section II herein (issues for 2012 decision), see *infra*.]

4.11. Adjustments for Small Electric Utilities

27) Parties are asked to comment on this recommendation [to exempt all electrical corporations with less than 100,000 service connections from the requirement of having SB 32 tariffs.]

CEERT does not have an opening position on this issue. However, CEERT reserves the right to comment on this issue in its reply comments.

[Section 4.12/Q.28 is addressed in Section II herein (issues for 2012 decision), see *infra*.]

II. ISSUES TO BE RESOLVED IN 2012

4.5. Yearly Inspection and Maintenance Report

21) Parties are asked to comment on this recommendation [to defer the requirement that participants in the FIT are to provide an inspection and maintenance report every other year to the IOU to 2012].

CEERT agrees that this issue can await decision in 2012.

4.8. Utility Discretion to Deny Tariff

24) Parties are asked to comment on this recommendation [to defer this issue to 2012]. Also, explain the existing procedure relied upon by electric utilities to deny tariff requests.

CEERT agrees that this issue can await decision in 2012, except to ensure that the electric utilities explain the existing procedures in 2011.

4.9. Tariff or Contract Termination Provisions

25) Parties are asked to comment on this recommendation. Also, explain the existing procedure relied upon by electric utilities to terminate contracts.

CEERT agrees that this issue can await decision in 2012.

4.10. Expedited Interconnection Procedures

26) Parties are asked to comment on this recommendation [to defer the issue of expedited interconnection procedures to 2012].

Any program attempting to interconnect large numbers of distributed generation projects to the grid may be seriously compromised without an efficient, reformed *process* for interconnection. In addition to Rule 21, each investor-owned utility (IOU) currently has its own interconnection tariff that, in many cases, takes a minimum of 2 years to achieve interconnect and to do so at high financial cost to the generator, many of whom may lack the time or financial resources necessary to complete this process. For this reason, CEERT believes that an SB32 tariff without significant interconnection reform may not achieve effective implementation of that law.

One significant barrier to interconnection is the time it takes for the grid operator to perform the necessary interconnection studies. Even when studied in clusters, this process is extremely time intensive. One key feature that exacerbates the complexity of this problem is that the grid operator typically does not have any visibility of the resource being interconnected, (i.e. real time generation data) or control to disconnect the resource should reliability issues arise.

A recent study by KEMA produced for the California Energy Commission (CEC) found that distributed generation in Germany and Spain does not suffer from the same overly cumbersome and time intensive interconnection process in part because grid operators have this visibility and forecast information for distributed generators down to 100 kW. Further, those

grid operations can at times use that information to disconnect distributed resources for reliability and safety purposes.¹⁰ Without visibility and some level of cutoff control, the interconnection process within California will remain extremely burdensome for distributed resources.

For this reason, CEERT does not believe that the effective implementation of an expanded FIT, pursuant to SB 32, requires significant interconnection reform. Therefore, CEERT recommends that the Commission prioritize these discussions for 2011, conduct workshops in 2011 to address the various interconnection processes, and examine opportunities to improve utility visibility of distributed generation systems.

4.12. Refunds of Other Incentives

28) *Parties are asked to comment on this recommendation [to defer to 2012 the requirement that CSI and Small Generator Incentive Program incentives be refunded by those participating in the SB 32 tariff].*

CEERT agrees that this issue can await decision in 2012.

¹⁰ KEMA, Inc. Memo to CEC Integrated Energy Policy Report Committee. Distributed Generation in Europe - Network Planning and Operational Impacts – Memorandum #2. April 22, 2011 (http://www.energy.ca.gov/2011_energypolicy/documents/2011-05-09_workshop/documents/Memo%202%20DG%20Network%20Planning%20and%20Operational%20Impacts.pdf).

III. CONCLUSION

CEERT appreciates the opportunity to offer its comments above on the implementation of SB 32, as revised by SB 1X 2. CEERT urges the Commission to follow its recommendations, which are designed to ensure the timely implementation of an expanded FIT, consistent with these laws.

Respectfully submitted,

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