

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

Order Instituting Rulemaking to Continue  
Implementation and Administration, and  
Consider Further Development, of California  
Renewables Portfolio Standard Program.

Rulemaking 15-02-020  
(Filed February 26, 2015)

**COMMENTS OF THE CALIFORNIA WIND ENERGY ASSOCIATION  
ON THE RENEWABLE AUCTION MECHANISM PROPOSAL**

June 19, 2017

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**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)

**COMMENTS OF THE CALIFORNIA WIND ENERGY ASSOCIATION  
ON THE RENEWABLE AUCTION MECHANISM PROPOSAL**

**I. INTRODUCTION & SUMMARY**

Pursuant to the May 26, 2017, ruling by Assigned Commissioner Rechtschaffen and Administrative Law Judge Mason identifying issues and schedule of review for 2017 Renewables Portfolio Standard (“RPS”) procurement plans and inviting comments on its new Renewable Auction Mechanism (“RAM”) proposal (“Ruling”), the California Wind Energy Association (“CalWEA”) respectfully submits these comments on the Ruling’s RAM proposal (“RAM Proposal”).

In these comments, CalWEA recommends and provides justification for an additional RAM-based procurement program (the “Small-Wind RAM Program”) that furthers the goals identified in the RAM Proposal and promotes the revitalization and repowering of California’s small, 1980s-vintage wind energy projects, and then responds to the specific questions posed in the Ruling.<sup>1</sup> CalWEA’s proposal for a Small-Wind RAM Program is aligned with the thrust of the RAM Proposal because it would prevent future renewable energy curtailment, among other substantial benefits, including the capture of expiring federal tax benefits. If these vulnerable projects are to be preserved, there is no better time to accomplish that than now, through our proposed Small-Wind RAM Program, with federal support.

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<sup>1</sup> At this time, CalWEA takes no position on the RAM Proposal described in the Ruling.

## II. DESCRIPTION OF PROPOSED SMALL-WIND RAM PROGRAM PROPOSAL

CalWEA supports the continued use of RAM to target beneficial procurements that may not be competitive under broader RPS competition, and recommends that, separate from any proposal to promote energy storage, additional RAM-based procurement should be authorized with elements fashioned to encourage the repowering of California’s small, 1980s-vintage, wind energy projects.<sup>2</sup> These projects are primarily located in Kern and Riverside Counties. CalWEA agrees with the Ruling that, despite the fact that the investor-owned utilities (“IOUs”) do not need additional resources to meet immediate RPS requirements and face loss of bundled customer load, the Commission needs to proactively insure that California’s longer-term RPS and greenhouse-gas-reduction requirements can be met.<sup>3</sup>

In particular, CalWEA notes that RPS-eligible generation – namely, some 325 MW of small (20-MW and under), early-generation wind energy projects -- is under-utilized and that preserving and revitalizing this capacity will reduce future renewable energy curtailment, which is a growing problem that warrants immediate attention. Moreover, CalWEA highlights the fact that the federal Production Tax Credit (“PTC”) for wind energy is currently being phased out and will be unavailable for projects starting construction after 2019. As a recent letter from the Senate President Pro Tempore to President Picker and Energy Commission Chair Weisenmiller recently pointed out, the PTC expiration represents a “closing window of opportunity” to save ratepayers billions of dollars over the 20-year timeframes of a power purchase agreement. This letter is appended to these comments. A Small-Wind RAM Program would be an effective tool for seizing this short-term opportunity, as it pertains to small, early-generation wind projects whose aging turbines are in need of repowering.

Specifically, CalWEA proposes that the Small-Wind RAM Program include the following components:

- (a) The Commission should establish a procurement target of at least 280 MW, to be allocated among the IOUs on a load-share basis.** This capacity represents about 75%

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<sup>2</sup> Alternatively, a single RAM program could seek to promote both the repowering of small wind projects and solar, or solar-and-storage, projects, where bids are compared using the utilities’ least-cost, best-fit (“LCBF”) methodologies to compare value. However, to the extent that the Commission desires to promote both sets of resources, which serve different as well as overlapping purposes, it should establish two separate RAM procurement requirements.

<sup>3</sup> Ruling at 21-22.

of the approximately 375 MW of small (20-MW and under), at-risk projects, which will ensure robust competition in a small-wind-RAM program.<sup>4</sup>

- (b) Each IOU should be required to hold two solicitations, an initial solicitation in late 2017, and a second solicitation in mid-2018 to procure any remaining unsubscribed capacity.**
- (c) The solicitation should be limited to individual projects located within the CAISO balancing authority area that are no larger than 20 MW and that seek to repower.<sup>5</sup> The Commission should also reinstate the restriction on sub-divided projects to ensure that small resources are afforded an opportunity to successfully compete.**

### **III. JUSTIFICATION FOR SMALL-WIND RAM PROGRAM PROPOSAL**

#### **A. Wind Energy is Needed to Balance California's RPS Portfolio**

Several studies performed by and for the CPUC, CAISO and others have shown that a significant quantity of wind energy will be needed to cost-effectively achieve California's 50% RPS requirement. Because solar and wind energy have complementary output profiles, studies show that a 2030 50% renewable energy portfolio that balances solar and wind energy will substantially reduce renewable energy curtailment, as compared to a solar-dominated portfolio, and thereby substantially reduce costs.<sup>6</sup> One study found marginal curtailment for solar PV to be 65% in a solar-heavy 50% RPS scenario.<sup>7</sup> It is the already-emerging problem of curtailment resulting from a solar imbalance that the Ruling's RAM Proposal apparently seeks to address with storage resources. It is at least equally important, however, to begin to correct that portfolio imbalance and avoid future curtailments by adding wind energy to the resource portfolio.

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<sup>4</sup> Another approximately 200 MW of un-repowered capacity under 30 MW could potentially bid for 20-MW RAM contracts, further adding to the competition for this program.

<sup>5</sup> The definition of repower should parallel that used by the IRS in determining eligibility for the federal Production Tax Credit. See IRS Notice 2017-04, Section 5. .

<sup>6</sup> See, e.g., CPUC Staff Presentation to RETI 2.0 (March 18, 2016, revised 4-18-16) at slide 12. Available at [http://www.energy.ca.gov/reti/reti2/documents/2016-04-18\\_workshop/2016-04-18\\_presentations.php](http://www.energy.ca.gov/reti/reti2/documents/2016-04-18_workshop/2016-04-18_presentations.php).

<sup>7</sup> See E3's Investigating a Higher Renewables Portfolio Standard in California (January 2014), at p. 15. Similar results were found in E3's January 2016 Western Interconnection Flexibility Assessment, where almost 9% of all renewables are shown to be curtailed on average in a high-solar case (slide 30). See also E3's Update on the 2015 Special Study presented at a June 29, 2015, CPUC-CAISO Webinar.

## **B. California Has Very Limited Potential for New Wind Energy Development**

In recent years, severe restrictions have been placed on new, in-state wind energy development owing to local and federal land-use restrictions.<sup>8</sup> Wind energy faces land-use restrictions in Solano, Los Angeles, San Bernardino, Inyo and San Diego Counties as well as in the vast federal-land areas covered by Desert Renewable Energy Conservation Plan. Whether they take the form of outright prohibitions, moratoriums, or sound restrictions, the effect is to largely, if not entirely, restrict wind development in these areas. CalWEA has estimated the *maximum* new wind development potential as just 1,000 MW in the desert region and 2,000 MW in all of California in the 2030 timeframe.<sup>9</sup> This compares to an incremental renewable energy need of as much as 20,000 MW by 2030.<sup>10</sup>

As a result, preserving and enhancing California's historic wind energy fleet represents one of California's best opportunities for obtaining local economic benefits in association with wind energy in the 50% RPS portfolio. In fact, as discussed below, California's wind energy capacity could actually decline if the 1980s fleet of wind turbines continues to age without capital improvements.

## **C. A Significant Portion of California's Early Wind Energy Projects Is At Risk**

Under the first Jerry Brown administration, California pioneered renewable energy development by successfully implementing the federal Public Utility Regulatory Policies Act (PURPA) of 1978. Virtually all renewable energy projects that were operating in California prior to the adoption of the RPS in 2002 were "qualifying facilities" ("QFs") operating under "standard offer" PURPA contracts. Most of these contracts were 30 years in length. For a variety of reasons discussed below, a large fraction of these projects is currently at risk of shutdown.

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<sup>8</sup> See Nancy Rader, CalWEA, "The (Limited) Wind Energy Potential in California," presented at the March 16, 2016, workshop of the Renewable Energy Transmission Initiative (available at [http://docketpublic.energy.ca.gov/PublicDocuments/15-RETI-02/TN210716\\_20160315T103155\\_The\\_Limited\\_Wind\\_Energy\\_Potential\\_in\\_California.pdf](http://docketpublic.energy.ca.gov/PublicDocuments/15-RETI-02/TN210716_20160315T103155_The_Limited_Wind_Energy_Potential_in_California.pdf)).

<sup>9</sup> See RETI 2.0 Report at p. 23 (available at <http://www.energy.ca.gov/reti/reti2/documents/index.html>).

<sup>10</sup> *Id.* at p. 4.

Approximately 1,600 MW of QF wind contracts will have expired between 2014 and 2020.<sup>11</sup> Approximately 1,000 MW of these projects are still comprised of 1980s-vintage wind turbine technology,<sup>12</sup> and many of these early projects are small in size. Un-repowered projects with a nameplate capacity of 40 MW or less total about 600 MW and, of that, projects with a nameplate capacity of 20 MW or less total about 375 MW.<sup>13</sup> Small projects do not have economies of scale over which to spread costs (e.g., permitting, construction, interconnection and transaction costs).

Aggregating these small projects is often exceptionally difficult (and costly) because of differences in interconnection points, land lease agreements, contract expiration dates and other factors. In many cases, particularly in Kern and Riverside Counties, circumstances are such that these pioneer projects cannot be repowered with typical modern turbines that are 2 MW to 3 MW in size. These circumstances include fragmented parcels, wind “shadowing” on neighboring projects, and military height restrictions. A larger number of smaller new turbines in the 500-kW to 1-MW at lower hub heights are often needed to address these challenges.

New, long-term power purchase agreements will be required to support the capital investment that is needed to repower the remaining legacy projects so that they can continue to operate at full capacity. However, the QF contracts are expiring at a time when there has been a considerable slow-down in the RPS market due to IOU procurement of renewable (largely solar) resources over the past several years in advance of their RPS targets.<sup>14</sup> Meanwhile, as the Ruling notes, utilities are losing bundled customer load due to the growth of Community Choice Aggregators (“CCAs”) and customer-sited distributed generation. While demand for renewable energy from CCAs is currently growing and promising, CalWEA member experience to date is that long-term contracts at prices necessary to support small-project repowering have not been

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<sup>11</sup> CalWEA estimate based on expiring contract data contained in the investor-owned utilities’ 2014 CPUC RPS compliance filings.

<sup>12</sup> CalWEA estimate based on review of IOU RPS compliance filings and trade press reports of repowering.

<sup>13</sup> Ibid. CalWEA-member projects account for approximately 110 MW of QF projects sized 20 MW or under.

<sup>14</sup> See CPUC Biennial RPS Program Update (January 1, 2016). Currently, the Large IOUs are forecasted to have contracted enough RPS-eligible resources to meet both their RPS compliance obligations in the second compliance period (2014-2016) and their 33 percent RPS compliance obligations by 2020.

available, and it is not yet clear that CCAs will have the creditworthiness necessary to support renewable energy project financing.<sup>15</sup> Meanwhile, many projects are selling into the CAISO market at low prices that are insufficient to sustain the operations of these aging facilities.<sup>16</sup>

As a result, California's wind energy resources have actually declined by over 250 MW since 2015.<sup>17</sup> Without immediate action, CalWEA expects this decline to continue.

**D. A Small-Wind RAM Program Offers an Important Tool for Preserving and Enhancing California's Early Wind Generation Fleet While Capturing Federal Tax Credits Before They Expire**

The RAM program, with its standard contract that reduces transaction costs and contract-approval time, is well-suited to small-wind projects which, as explained above, are at risk of deterioration and closure. Immediate Commission action will enable the federal PTC to be captured in repowering these vulnerable facilities, which otherwise will have a difficult time competing in the marketplace after the PTC expires, given that solar tax benefits continue several years beyond the PTC's expiration.<sup>18</sup>

Tax benefits for wind energy are currently being phased out and will be unavailable for projects starting construction after 2019. The federal PTC is scheduled to decline to 80% of its 2016 value of \$0.023/kWh for projects starting construction in 2017, 60% for projects starting in 2018, and 40% starting in 2019, and is eliminated thereafter. Bonus depreciation is also scheduled to end after 2019. Bonus depreciation allows project owners to depreciate up to 50% of project costs in the first year, for projects placed in service before the end of 2017, falling to 30% for projects placed in service in 2019.

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<sup>15</sup> While a limited number of projects with CCA contracts have been financed, it is important to understand that this does not necessarily mean that all projects will be able to obtain project financing based on a CCA contract. For example, a developer might include a CCA contract within a package of many IOU and/or commercial contracts and finance them together. In this way, the risk of the CCA contract can be spread. By contrast, many of the small QF projects are owned by operators with limited assets and not amenable to project bundling.

<sup>16</sup> Average prices in the CAISO market in SP-15 averaged 2.8 cents/kWh over the past year. Scheduling and other fees are subtracted from these prices.

<sup>17</sup> Based on data from the AWEA California Wind Energy Fact Sheets for 2015 and 2017.

<sup>18</sup> The Investment Tax Credit for solar energy projects does not begin to decline until 2020, phasing out by 2023.

A technical analysis of the value of federal wind PTC benefits and solar investment tax credit benefits was performed recently by MRW & Associates for the Independent Energy Producers Association (“IEP”), which was submitted by IEP on September 1, 2016, in this proceeding. MRW found that total levelized fixed costs for wind projects decrease by 15% in 2019, using Version 6.2 of the RPS Calculator and the baseline cost assumptions contained therein.<sup>19</sup>

While MRW’s 15% cost-reduction figure is substantial, it understates the savings possible from the PTC because it assumes only 40% of the PTC can be captured. However, IRS rulings enable 100% of the PTC value to be used for projects that commence service well beyond 2016, and 80% of the PTC value to be used for projects that commence service well beyond 2017.<sup>20</sup> Therefore, substantially greater savings are possible if the Commission acts quickly to provide contracting opportunities for these projects.

#### **IV. RESPONSES TO RULING’S SPECIFIC QUESTIONS**

CalWEA responds to the Ruling’s questions as those questions apply to CalWEA’s Small-Wind RAM Program Proposal.

##### **1. Would there be benefits from this proposal? If no, please explain why or why not. If yes, please explain the benefits.**

A Small-Wind RAM Program would provide the substantial ratepayer benefits described above, namely (a) preserving and enhancing RPS resources whose production is complementary to solar production and generally does not contribute to overgeneration conditions that lead to

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<sup>19</sup> See R.15-02-020, Comments of the Independent Energy Producers Association (September 1, 2016), Appendix A: MRW & Associates Analysis Estimating the Value of Federal Tax Credits (ITC and PTC) and Bonus Depreciation to RPS Project Development.

<sup>20</sup> The Internal Revenue Service provides that the PTC can be claimed as long as construction on an eligible project “commences construction” prior to January 1 of the relevant year. The guidelines establish two methods—a “physical work” test and a 5% safe harbor to determine when construction has begun on a qualified facility. The facility must be placed in service during a calendar year that is no more than four calendar years after construction of the facility began. Thus, capturing the full PTC value under “safe harbor” provisions requires wind projects to be installed by the end of 2020. See <https://energy.gov/savings/renewable-electricity-production-tax-credit-ptc>. (Note, however, that using safe harbor provisions may entail significant risk.)



renewable energy curtailment,<sup>21</sup> and (b) capturing substantial federal tax benefits before they expire. In addition, revitalizing California's historic wind energy fleet would bring many other benefits to California, including:

- **Improved technical capabilities that benefit grid operations.** The sophistication of wind energy technology has improved dramatically since the first turbines were installed in California in the 1980s. Modern turbines can now support the state's electrical grid with active capabilities, such as the ability to provide frequency regulation, reactive power and voltage support. As the penetration of variable renewable energy sources on the grid increases dramatically, it is important to improve the operational characteristics of the existing fleet via repowering.
- **Continued and more efficient use of existing development sites.** Repowers have low land-use impacts compared to greenfield projects because they make better use of existing project sites – substantially increasing energy production from the same already-disturbed area – and use existing roads, substations, and transmission lines. Repowering 1980s-vintage projects would raise project capacity factors from the low-20% range to the mid-to-high-30% range, doubling or tripling energy production.
- **Generation of property and sales tax revenue, and job creation.** Currently, 1980s-vintage projects have lower assessed value and therefore pay less in property taxes. If the remaining 1,000 MW of un-repowered capacity were repowered with new turbine technology, it would produce approximately the following investment and tax benefits for California and the counties hosting wind repower projects: \$1.6 billion in total investment, generating \$18 million in annual property taxes and \$96 million in sales taxes. In addition, repowering would bring significant, but unquantified, lease payments to ranchers and other land owners. CalWEA estimates that repowering all existing facilities with new turbine technology would produce approximately 1,225 short-term construction jobs, and 270 long-term operations-related jobs. Note, however, that CalWEA's proposal for a Small-Wind RAM Program would address only about one-third of the entire fleet of aging turbines, and thus would bring about one-third of these benefits.

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<sup>21</sup> We note that storage-plus-solar projects, as contemplated in the ruling, will prevent only the curtailment caused by the added solar resource, assuming the storage is properly sized, and assuming that the storage is under the project's control. If the storage is placed under the control of the CAISO, it would benefit the grid and all generators experiencing overgeneration conditions, but the solar component would still be contributing to overgeneration conditions.

**2. Should there be a minimum and/or maximum project size? Why or why not? If yes, what should the size limits be?**

CalWEA's proposed Small-Wind RAM Program is aimed at smaller projects that do not benefit from economies of scale. Therefore, we propose that maximum project size for a RAM contract be limited to 20 MW.

The total Small-Wind RAM program should be at least 280 MW, divided among the IOUs based on load-share, to capture approximately 75% of existing projects sized 20 MW or under. To capture even more benefits, the total Small-Wind RAM Program size could be expanded to 450 MW or more with a project size-limit of 40 MW to repower 75% of the approximately 600 MW of <40-MW projects with QF contracts that have expired or soon will expire. A program size of 400 MW would represent a small fraction of the total wind energy (at least 5,000 MW) that will be required to achieve an optimally balanced 50% RPS portfolio, as discussed above.

**3. Should there be a single or multiple solicitations? If multiple, how many? Explain reasoning for response.**

CalWEA recommends that two solicitations be held for its proposed Small Wind RAM Program. Experience with the prior RAM program demonstrates that it may be difficult to procure all required capacity in a given solicitation, thus there should be at least two solicitations to allow for an opportunity to contract for any unsubscribed capacity remaining after the initial solicitation.

**4. What should the timeframe of the solicitation(s) be? Explain and provide justification for response?**

In order to maximize the capture of federal PTCs, CalWEA strongly recommends that the first solicitation be held in late 2017, and that a second solicitation be held in mid-2018. This would require the Commission to split this element of the decision from the adoption of LSE procurement plans so that a Commission decision on the RAM program can be made early within the fourth quarter of 2017 to enable the first RAM solicitation to be held by the end of the year. This action is warranted by the numerous ratepayer and taxpayer benefits to be gained, outlined in sections III and IV.1, above.

**5. Does the RAM process need to be modified to accommodate the proposal? If yes, how should it be modified and why?**

The RAM process does not need to be modified in order to accommodate CalWEA's proposed Small-Wind RAM Program proposal. However, certain parameters should be established or modified as described above: specifically, program size and allocation, solicitation schedule, project size limit, repowering requirement, and restriction on sub-divided projects.

**V. CONCLUSION**

For the foregoing reasons, the Commission should adopt a Small-Wind RAM Program as described herein. CalWEA appreciates this opportunity to comment.

Respectfully submitted,

/s/

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June 19, 2017

## VERIFICATION

I, Nancy Rader, am the Executive Director of the California Wind Energy Association and am authorized to make this Verification on its behalf. I declare under penalty of perjury that the statements in the foregoing *Comments of the California Wind Energy Association on Renewable Auction Mechanism Proposal* are true of my own knowledge, except as to the matters which are therein stated on information and belief, and as to those matters I believe them to be true.

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

Executed on June 19, 2017, at Berkeley, California.

/s/ \_\_\_\_\_

Nancy Rader  
California Wind Energy Association