

**The State of California
California Energy Commission**

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Comments of the Distributed Wind Energy Association

**Staff Workshop on Possible Changes to the Emerging Renewables
Program Guidebook**

Energy Commission Docket No. 02-REN-1038

Submitted by:

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Representing DWEA

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Honorable Commissioners and CEC Renewable Energy Program Staff:

Thank you for providing this opportunity to offer input on the proposed changes to the Emerging Renewables Program (ERP) Guidebook. The Distributed Wind Energy Association (DWEA) appreciates the thoughtfulness of the CEC in addressing the specific problem areas in the ERP and providing appropriate additional protections for the legitimate wind industry, consumers, and ratepayers. We think the new rules will provide a solid foundation for the growth of distributed wind projects in California in furtherance of the goals of AB 32 and the Governor's call for 12,000 MW of new local renewable energy capacity.

In particular, DWEA supports the following proposed changes:

- 1. Limiting rebates to 50%.** This goes to the heart of the "something for nothing" schemes that led to the ERP shutdown in March. Customer must retain some

financial risk for poor performance so that they will do the proper due diligence on the wind resource, products and vendors. The huge run-up in rebate applications earlier this year was not due to the introduction of innovative, more cost-effective wind turbines and towers, but rather the ability of the bad actors to game the old rules and offer customers a 100% subsidy. The first edition of the ERP Guidebook limited rebates to 50% and we believe this is the proper level, particularly in light of the federal small wind and fuel cell incentives that are now available.

- 2. Withholding 10% for a year and requiring performance reporting.** This provides further “skin in the game” for consumers and will provide useful feedback to the CEC on the actual performance of participating installations. The CEC should bear in mind, however, that a one-year snapshot of performance will be influenced by the inter-annual variation in average wind speed. Depending on whether it happens to be a “good wind year” or a “bad wind year” during the first 12 months, the reported performance could be +/- 30% of the long-term average.
- 3. Requiring certification to AWEA 9.1-2009 and providing for a transition period.** This will go a long way towards improving the quality of products supported by the program and provide consumers with credible and comparable specifications upon which to judge the value of different small wind products. California will be joining a number of other states, such as New York and Oregon, in setting this requirement. A number of additional states as well are in the process of requiring third-party certification to the AWEA standard.

The parties critical of this requirement, who coincidentally are the same bad actors offering “something for nothing”, have fundamentally misunderstood the differences between a standard and a certification body and they, rightly, fear the risk to their business model that imposition of certification represents. Their concerns about conflict of interest at the SWCC due to my serving on the Board are baseless, as detailed by Brent Summerville, Technical Director of SWCC, during the Workshop on August 3rd. SWCC Board members have no special access to applicant's technical information and they have no role in the review and approval of certification applications.

DWEA does have some serious concerns on the requirements proposed for the transition period, which we will elaborate on in a later section.

- 4. Setting a maximum claimed efficiency of 59.3%.** We support the goal of this new check on the reasonableness of performance claims in light of the prior abuse. However, we would point out that 59.3% (Betz Limit) is an aerodynamic physical limit and there are additional, unavoidable, losses in the generator, inverter, and wiring. For reference, most of the best-selling small wind turbines from the leading international manufacturers have peak total efficiencies in the range of 28-34%. The best reported so far is 36%. So, the proposed limit would allow manufacturers to claim roughly double the performance they realistically can produce. DWEA thinks the best way to achieve what this provision is intended to accomplish is to require a third-party power curve, as we outline in a later section.

5. **Ability to review field experience and rescind product eligibility where appropriate.** We support the powers that will be granted to the CEC in Appendix 3 because it will allow more effective policing of the program.

DWEA does believe, however, that the new Guidelines should be modified in several areas to make the program more effective and to close some remaining loop-holes:

1. **The rebate for 10 kW and under turbines should remain at \$3/W at least through 8/1/2012 and preferably for two years following program restart.** DWEA was advising CEC staff prior to the program shutdown that the rebate should not be reduced to \$2.50/W for the first 10 kW on April 7th as scheduled because the recession and permitting barriers had limited the growth of the California market over the last year. DWEA felt there had not been enough growth in sales volume to provide reductions in market prices and reducing the rebate would blunt the momentum in the market.

Since then the situation has gotten far worse because the new sales and installation infrastructure that the higher rebate spawned has been out-of-business for five months and will remain out-of-business for at least another two months. Retailer salaries and overhead costs have continued while sales revenues have not. The cut to \$2.50/W and the imposition of the 90% upfront payment schedule will cut the upfront incentive by 25% for these smaller systems. Since the upfront cash requirements are critical to consumer affordability the result will be lower sales. This is not a recipe for recovery of the sales and installation infrastructure, particularly in light of growing evidence that the economy is slowing once again.

Oregon, Nevada, New Jersey, and New York provide rebates higher than \$3/W, though the New Jersey and New York rebates are based on projected performance. With the new 50% cap we believe that over-subsidization will not be a problem if the higher rate is maintained.

2. **Eligibility during the certification transition period needs to be tightened to avoid gaming by bad actors.** As proposed, a bad actor could sign up for certification, pay the ~\$2,500 application fee, never start actual testing, and enjoy up to 18 months of eligibility before the rules caught up to them. As we proposed in our April 14th testimony, DWEA recommends that manufacturers should be required to also provide an SWCC or Intertek certified power curve in accordance with AWEA 9.1-2009 to be eligible during the transition period.

The data requirements for these curves can be satisfied in under a week, depending on the season, at most of the existing 3rd-party test sites, so the imposition on the industry is minimal. It is the 6 month/2500 hour duration test requirement that leads to the typical 9-12 month certification cycle, not the power performance test. SWCC has created a special category of power curve certification to specifically accommodate this anticipated requirement. DWEA is recommending this requirement for the transition period of in other states as well.

3. **The entire current Eligible Turbine list should be voided and the transition period requirements should be applied to all small wind turbine products.** As we interpret the proposed Guidebook changes, the CEC will maintain the existing 180+ turbines on the list unless they can be shown to violate the 59.3% maximum claimed efficiency rule in Section F of Appendix 3. This would have caught DyoCore and it appears that a few others may fail the efficiency test. But the vast majority of the questionable products that took advantage of lax prior oversight will remain eligible for at least 12 months. For reference, the Energy Trust of Oregon has 16 models on their eligibility list¹ and NYSERDA has 31². Making this change would move the CEC from having the weakest turbine list in the nation to the strongest list. At this critical juncture, we believe that this approach would help blunt legislator concerns over the level of quality assurance in the program in light of the DyoCore debacle.
4. **We recommend setting a cap of 28 mph on the rated wind speed for the purposes of determining the rebate.** Although we acknowledge that the 50% rule will effectively police over-subsidization, we do believe that it would help consumers make better choices if manufacturers could no longer claim a “CEC certified” rated power at an abnormally high wind speed. If the CEC does not follow DWEA’s recommendation on voiding the current list then this becomes more critical. DyoCore could have claimed 1.6 kW at ~ 40 mph and been fully compliant. The top twelve (by sales volume) small wind turbines have rated wind speeds ranging from 22 – 28 mph and AWEA 9.1-2009 sets the AWEA Rated Power at 11 m/s or 24.6 mph. We believe 28 mph is a fair maximum wind speed for the CEC to use in determining rebate levels.

We believe a current example illustrates the value to the CEC and ratepayers of adopting these last two recommendations by DWEA. The “Son of DyoCore” program manipulation poster child is the 1.8 kW TLG turbines on ~ 30 ft towers promoted heavily by Gridnot. Gridnot has sold these systems for \$1 and they are leasing them with no upfront cost. By their testimony at the workshop on August 3rd they have sold nearly 1,000 of these systems. The basis for this “something for nothing” deal and the incredible sales volume is their ability, under the previous rules, to fully pay for the installation with the CEC rebate.

The TLG-1800-GT turbine uses the same Chinese generator (Ginlong) and inverter as DyoCore and also has pressed metal aluminum blades. The TLG turbine’s power curve shows peak system efficiencies of 52%, which is 44% higher than the peak efficiency demonstrated by a certified small wind turbine (36% by the Evance 5 kW turbine from the UK). Based on this unlikely performance, it is unlikely that the test procedures employed by TLG would comply with AWEA 9.1-2009. TLG rates their power at 30 mph. There is 23% more energy available in a 30 mph wind compared to a 28 mph wind. If you combine these factors we would expect TLG’s AWEA-compliant rating at 28 mph to be ~ 960 Watts. The resulting rebate in this case would be ~ \$2,880. This would leave customers with some “skin in the game” and an incentive to do their homework before buying.

¹ See <http://energytrust.org/business/incentives/other-businesses/equipment-upgrades/WindSmallScale/WindSmallScale/>

² See http://www.powernaturally.com/Programs/Wind/eligible_wind.asp?i=8

Performance Based Incentives

During the Workshop CEC staff specifically asked for comments on Performance Based Incentives (PBI's). PBI's or Feed-in-Tariffs do place greater customer emphasis on actual performance, but for small wind turbines they create more problems than they solve. First, they don't address the first-cost barrier well and, therefore, to be effective in residential markets they have to be complemented with a readily accessible financing program. This is largely why the performance based small wind incentive programs in New York, Wisconsin, New Jersey, and Massachusetts are structured as upfront rebates based on projected performance, as opposed to true PBI's.

Secondly, since wind energy varies with the cube of velocity the difference in performance from the same turbine model at a fair wind site and a good wind site are much greater than the differences experienced in solar. So, program administrators face the challenge of setting payments high enough for the fair sites, but not obscenely high at the good sites. It can be done with ratcheted rates and percentage caps, but it is tricky. Done incorrectly it can lead to an inactive market, such as in Ontario, or a market bubble such as the PV market in Spain a few years ago.

DWEA would support a transition to a performance based upfront (or mostly upfront) incentive such as the one used by LIPA³. We would not support a pure PBI or FiT due to the upfront cost barrier and the small wind industry's lack of access to financing.

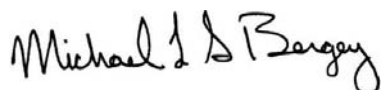
Closing

We know the Commission is well aware of the need to restart the ERP program as soon as possible and we appreciate the Commission's efforts to expedite the process within its procedural limitations.

We thank the Commission for taking strong action in regards to DyoCore.

Finally, we want to thank the CEC for the assistance that the Emerging Renewables Program has provided the small wind turbine industry over the last eleven years. As an industry, we sincerely hope that the Commission will respond positively to our recommendations.

Respectfully submitted,



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³ See http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NY55F&re=1&ee=1