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The State of California
California Energy Commission

Comments on Possible Changes to the Emerging Renewables Program Guidebook (CEC-300-2009-002-F)

Energy Commission Docket No. 02-REN-1038

Staff Workshop Held on July 21, 2009

Submitted by:

Mike Bergey
President
Bergey Windpower Co.
2200 Industrial Blvd.
Norman, OK 73069

And representing the AWEA Small Wind Turbine Committee

August 3, 2009

Honorable Commissioners and CEC Renewable Energy Program Staff:

Thank you for providing this opportunity to offer input on possible changes to the Emerging Renewables Program (ERP) Guidebook. These comments elaborate on my testimony and PowerPoint slides presented at the July 21st Workshop. The PowerPoint slides from my testimony are appended.

Bergey Windpower Co. (BWC) is one of the leading suppliers of small wind systems in the world and the leading supplier of small wind systems funded by the ERP. We have been in business 30 years and have over 6,000 systems installed worldwide. BWC has been deeply involved with the ERP from the beginning of the program and I have presented testimony in numerous proceedings relating to Docket No. CEC-REN-1038. BWC has also been active in legislative and county initiatives aimed at streamlining the permitting of small wind projects.

AWEA and the small wind turbine manufacturers and retailers are appreciative of the market stimulation provided by the rebate program. Small wind technology has faced significant permitting barriers in California (as outlined in the KEMA report and the recent UC Davis report) and, as a result, has not enjoyed the explosive sales growth seen for solar under the rebate program. Nevertheless, progress has been made and the potential remains large.

The potential for small wind in California is significant. A 2003 study funded by the CEC[1] showed that 24% of California has sufficient resources for small wind (as opposed to a much smaller percentage with wind sufficient for large wind systems) and 1.8 million acres are prime for small wind. The study identified a 400+ MW potential in just a portion of the suitable properties (1 acre or more).

California was the first State to offer rebates for small wind (1999) and was for several years the largest State market for small wind. In 2001, for example, California accounted for an estimated 35% of U.S. grid-intertied small wind system sales. The ERP program has also helped create the highest volume small wind dealership in the nation, Guasti Construction near Hesperia in San Bernardino County.

But things are very different today. Over the last three years, only ~ 30 small wind turbines on average have been installed with ERP support each year. This is one-quarter of the peak annual rate from 2001 and the rate of installations has been declining at ~ 20% per year over the last three years. Equally problematic, the small wind dealer and installer network has shrunk by ~ 75% in the last six years.

This trend is in the wrong direction to meet the program goals stemming from the original legislation (SB 1038). Quoting from Page 1 of the ERP Guidebook:

> "The ERP was created to help develop a self-sustaining market for renewable energy systems that supply on-site electricity needs across California. Through this program, the Energy Commission provides funding to offset the cost of purchasing and installing new renewable energy systems using emerging renewable technologies.
>
> The goal of the ERP is to reduce the net cost of on-site renewable energy systems to end-use consumers, and thereby stimulate demand and increased sales of such systems. Increased sales are expected to encourage manufacturers, sellers, and installers to expand operations, improve distribution, and reduce system costs."

<u>We contend that strong measures are necessary to resurrect the Emerging Renewables Program and make it function as intended.</u>

The KEMA report, for all its useful and interesting metrics and insights, clearly fails at delivering a roadmap for future program success. KEMA's "high importance" recommendations of third-party certification of turbine performance curves, turbine certification to international standards, new production estimation tools, better wind maps, monitoring industry efforts on permitting, installer training, and maintaining

[1] "Permitting Small Wind Turbines: A Handbook", Peter Asmus, et al, September 2003, funded by the CEC, see http://www.bergey.com/School/Cal.Permitting.Handbook.pdf

current rebates, have no chance of increasing sales of small wind turbines under the ERP.

Four of KEMA's five top recommendations address quality of products and energy performance predictions when KEMA's own survey's showed that these are not barriers to greater program participation. 69% of the owners surveyed reported turbine performance to be "as expected" or "better than expected" and 68% said they would purchase their system again. If the survey results were filtered to exclude earlier installations in poor wind areas we think both numbers would be higher and that it would provide a better snapshot of the current market situation.

KEMA should have also done more homework on the product certification issue, particularly since KEMA is also in the business of independent testing and certification (see www.kema.com). I chair the AWEA Small Wind Standards Committee and serve on the committee that drafts the IEC small wind standards. IEC 61400-2 is not a workable standard and that fact has led to the initiative to develop the AWEA certification standard, the establishment of the Small Wind Certification Council, and a current initiative to revamp the IEC standard. I have attached a presentation that outlines the case for the AWEA standard and provides an overview of its structure. That standard is in the final stage of approval at AWEA. The British have already adopted the AWEA standard (with some minor changes) and several other countries are in the process of doing so. To recommend that certification to a discredited international standard is critical to the ERP is surprising and disturbing. We think the CEC should take into consideration that KEMA is in the certification business when evaluating the value of these particular recommendations.

On the matter of maintaining the current rebates, we believe the consultants have presented an extensive, but flawed, analysis that they contend shows that people should be buying systems - while the real world data shows that they are not. We think it is relevant that people have not responded to the new federal tax credit as the KEMA analysis says they should. We are in a national recession and parts of California have been hit particularly hard. In the area of San Bernardino County where small wind system sales are concentrated the unemployment rate is ~ 16% and people who bought homes in the last few years have seen their equity evaporate. People who are financially secure are reluctant to make significant capital investments because they are uncertain about their financial future. There are also large blocks of potential customers, such as retirees, that cannot take full advantage of the new federal tax credit because they do not pay enough in taxes. The new federal tax credit is an important milestone, but in the short-term it appears to be insufficient to transform the sales of small wind systems in California.

The 21 pages of economic analysis provided by KEMA starts with an installed cost of 10 kW systems that is 25% below the current average and then failed to factor in the cost of property taxes, the "hassle factor" of permitting, and the market retarding effects of the current recession. They failed to connect the dots between the survey results showing that 95% of respondents said the rebates were "very important" or "essential", the historical correlation of rebate levels and program activity, and the failure of the new federal tax credit to turn around the sales trend. Nor did they look at other states, such as Oregon, New York, or New Jersey, that have larger rebates than California. They didn't ask why California should be the only state that starts reducing rebate levels at 7.5 kW, particularly when the most popular product in the program is a 10 kW turbine.

They didn't look at the marginal cost to the program of increasing the rebate level or eliminating the penalties for self-installation. They didn't look at the build-up of funds in the ERP account because of low program activity and ask how the activity could be increased. The KEMA analysis was very disappointing.

Particularly so in view of the memo they and staff had from the industry in March 2008 outlining specific changes to the program that the leading suppliers felt would reverse the downward trend. The Innovo memo, which I have appended, was ignored by KEMA. We contend that the recommendations in that memo are much more likely to change the rate of program participation than the recommendations put forward by KEMA. Therefore, we believe the KEMA recommendations should not be the straw man for proposed Guidebook changes.

Instead, we propose a series of measures based on the Innovo memo that we believe would turn the program around:

1. **Raise the rebate up to $3.00/Watt, eliminate the "step-down" at 7.5 kW, and eliminate the derating for inverter efficiency.** This would provide a robust rebate for installations up to 30 kW, which we believe is essential to spur the market. This rebate level would be comparable to New York (except Long Island) and Wisconsin, but still less than Oregon, New Jersey, and Long Island. A strong financial incentive is critical to enticing consumers to take on the permitting barriers and to spend some of their savings in these uncertain times. The marginal cost of the increased rebate is low compared to the pay-off and the ERP has the money on hand to fund it. The CEC can re-examine the rebate issue in a year to judge effectiveness.

2. **Create a new cash incentive for cities and counties that facilitate small wind permits.** The CEC should offer cities and counties ~ $0.50 – $1.00/Watt in cash for every new ERP funded small wind installation in their jurisdiction provided that 1) they have a small wind zoning ordinance that is no more restrictive than the provisions of AB 1207 and allows towers 25% higher than AB 1207, and 2) the total permitting fees do not exceed 1% of the project cost. A CEC "Wind-Friendly Communities" program we believe could be an effective stimulus for communities to streamline small wind permitting. A precedent exists in the Connecticut Clean Energy Communities Program, which rewards communities with PV systems when they reach certain clean energy goals. See the attached Connecticut Clean energy Fund press release for an example. A combined rebate expenditure of $4.00/W ($3/W to customer and $1/W to the city or county) is still less than the $4.50/W rebate the ERP paid for PV systems in 2001 ($5.70 in 2009 dollars). The industry will continue its legislative efforts aimed at streamlining permitting and a new CEC initiative in this area would provide much needed leverage.

3. **Eliminate the inverter efficiency test and associated derating of rebates.** As outlined in our letter of July 2nd, the CEC has been double-counting inverter efficiency on small wind systems for a number of years and reducing rebates by 5-10% inappropriately. Also, the unique and unnecessary UL efficiency test is a barrier to listing new inverters and is currently keeping ERP rebates from being paid on installed and otherwise qualifying Bergey 10 kW turbines. This test would cost ~ $20,000 and we had expected it to be eliminated over a year ago.

The delays in updating the Guidebook are costing Bergey Windpower dearly.

4. **Eliminate the "self-install penalty".** Owner- or self-installed wind systems currently receive a 15% lower rebate, to account for the supposedly free labor. However, this penalty has severely depressed the self-install market and we believe that this is not in the best interests of the ERP. Owner-installed systems are the forerunners of market clusters. These systems go in before there is a professional installer in the area and they serve to validate efficacy and attract market attention. Joe Guasti is a perfect example. He installed his own system in 2001, which led him into the business of small wind, which resulted in the largest concentration of small wind installations in the nation. California needs more market clusters and facilitating owner-installs is a proven way to find them. The owner-install penalty was eliminated from the solar program in 2007, so it makes sense to also remove it from the small wind program.

5. **Increase the rebate reservation period to 12 months.** Small wind turbine permits can take longer than 9 months and a 12 month reservation period would help eliminate the administrative and dealer burden of reapplications.

6. **Reduce the turbine qualification requirements and grant the staff the right to remove products that are not providing sufficient reliability or performance.** Until there are a number of small wind turbines certified to AWEA 9.1-2009, which should occur in mid-2010, the CEC should maintain the current ERP turbine qualification criteria with the exception that the 12 month period should be reduced to 6 months. The 6 month duration period is more in line with the requirements in AWEA 9.1-2009 and will serve to help expand product selection and competition. If the staff has the ability to remove and relist immature products then we believe the proper checks and balances will be in place to ensure effective use of ERP funds. Once the AWEA standard and the SWCC certification program are in place the CEC can set a deadline, of say 9 months, beyond which all ERP approved small wind turbines must be certified. Even then we still believe that staff should have the ability to remove bad products from the program.

   Next year the ERP can transition to a rebate based on AWEA Estimated Annual Energy rather than rated power. This has essentially been done in New York, New Jersey, and Wisconsin already, albeit with slightly different ways of calculating their rebates. We do not recommend that the CEC make this change in the rebate formula at this time because of the urgent need to modify the ERP Guidelines and resurrect the program. The consultant study has already delayed this enough now id not the time for a radical reformation of the rebates.

In closing, I want to thank the CEC for the assistance that the Emerging Renewables Program has provided the small wind turbine industry over the last ten years. As an industry, we sincerely hope that the Commission will respond positively to our request for an increase in the small wind rebate and create an incentive for streamlined permitting, and other ERP Guideline revisions, so that we can reverse the downward trajectory in the marketplace and fulfill the intent of SB 1038 for our emerging technology.

Respectfully submitted,

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Michael L.S. Bergey
Bergey Windpower Co.
And representing the AWEA Small Wind Turbine Committee

August 3, 2009

Comments on the Future of the CEC ERP Small Wind Program

Staff Workshop on the Proposed Changes to the ERP Guidebook

CEC Docket No. 02-REN-1038

Mike Bergey
Bergey Windpower Co.
Also Representing AWEA Small Wind Turbine Committee

July 21, 2009

Californians Want Small Wind

Small Wind's Potential in California is Significant

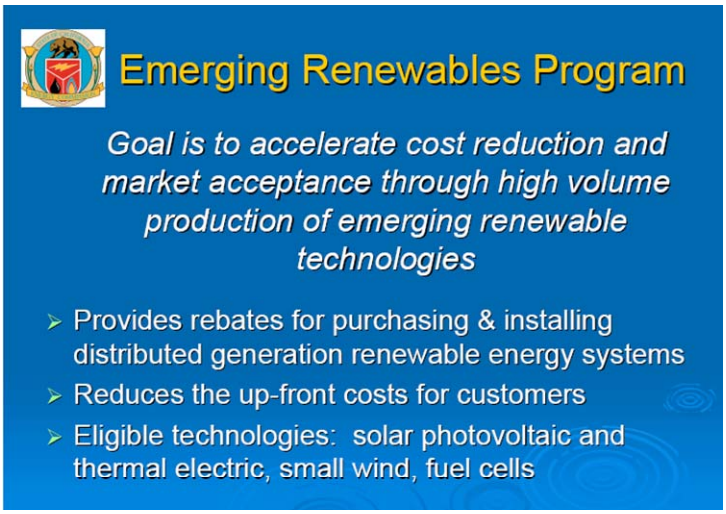
- 24% of California has sufficient resources for small wind*
- 1.8 M acres are prime for small wind*
- Top 200 ZIP Codes have ~ 52,000 suitable properties* … ~ 400 MW potential
- CA has the Nation's Largest SWT Dealer

*Source: CEC Small Wind Permitting Guide

The Small Wind ERP Program is Dying

- Over last 3 years ERP sales have averaged 30 units/yr, ~ ¼ of the 2001 peak, and they are declining at ~ 20%/yr
- Over the last 6 years the retailer/installer infrastructure has shrunk by 80% and only a handful of dealers are actively installing
- The Recession has exacerbated the problem
- ERP funds are piling up: $93 million on hand

Legislative Policy and Program Goals are Not Being Met



Consultant's Report Not Worth the Wait

- Missed the main point (ERP effectiveness) and failed to connect the dots
- The recommended actions will not significantly affect program results – <u>they should not be the "straw man" for proposed Guidebook changes</u>
- The report's customer feedback and barriers overview were valuable
- The industry recommendations from March 2008 were better thought out

How to Revive the ERP Program

- Raise the rebate to $3.00/W, up to 30 kW, with no “break”, for one year
- Initiate a “Wind-Friendly Community” cash awards program, complementing customer rebates
- Eliminate inverter efficiency aspects for integrated systems
- Reduce self-install penalty to 0% or 5%
- Increase reservations to 12 months
- Transition to AWEA standard and AEO-based rebates in 2010

Change is Good

Certification of Small Wind Turbines

Mike Bergey

Chair, AWEA Small Wind Certification Committee

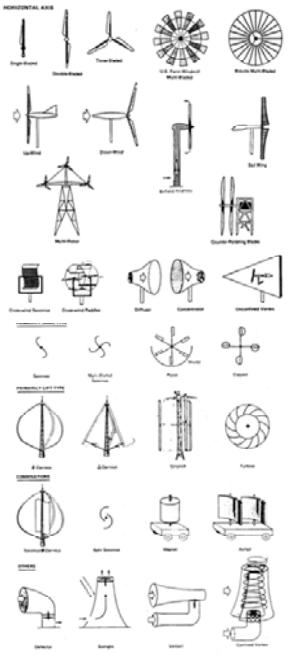
June 2007

The Problem

- Manufacturers performance specifications are optimistic
- Performance specifications are not standardized
- Lack of gate-keeping mechanism for safety, functionality, and basic “ruggedness”
- Small wind market attracts “Bozos and Shysters”
- State and federal agencies need a quality assurance mechanism

Turbine Configurations

- Hundreds of Possible Configurations ... Most are Bad
- Bad Configurations Keep Showing-up and Wasting Valuable Resources:
  - Savonius Vertical-Axis Rotor
  - Flow Concentrators or Diffusers
  - Small-scale Darrieus Vertical-Axis Rotors
  - Car Alternator based HAWT's
  - Windmill Rotor with Electrical Generator



Bozos & Shysters

- General public wants to believe that there's been a performance and cost breakthrough
- **Bozo:** Clueless on physics and engineering
- **Shyster:** Aware that their claims are bogus and don't care
- Identification: 1) Performance claims that exceed Betz Limit (59.3%) or the total kinetic energy in the wind; 2) Selling dealerships & distributorships; 3) Often use vertical-axis configuration
- Chinese fakes
- **Partial Cure: Certification**

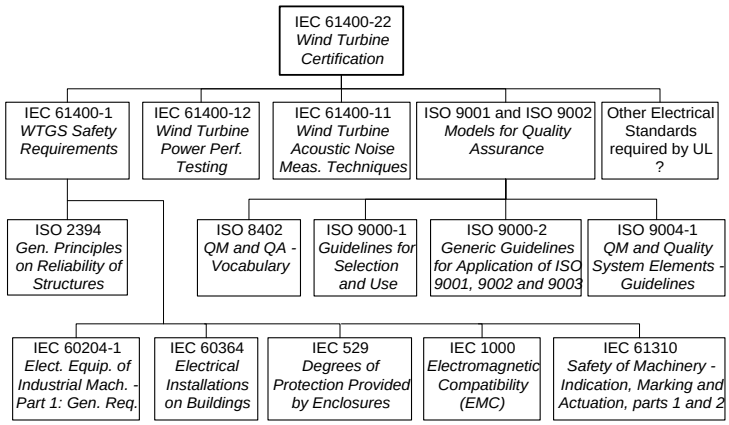
Chinese copy of Bergey turbine

What Do We Need?

- **Consumers** need realistic, useful and understandable small wind turbine specifications
- **States** that provide a subsidy need a better way to qualify products
- **Manufacturers** need timely and affordable certification
- **AWEA** needs to be in the lead

Existing IEC International Standards

International Electrotechnical Commission, IEC 61400 … created primarily for large turbines



Problems with IEC Standards

- IEC 61400-11, Performance, needs technical changes to work for small wind and is not "consumer friendly"
- IEC 61400-2, Safety, is well crafted, but will be very expensive and has implementation problems:
  - Doesn't accommodate multiple models of same turbine well
  - System includes tower, but some turbines have 20 or more tower options
  - Overkill on safety issues (safety not a significant issue)

Solution: New AWEA Standard

- Performance tests per IEC61400-12 (with minor exceptions), with consumer-friendly reporting
- Acoustic tests per IEC61400-11 (with minor exceptions), with consumer-friendly reporting
- Simplified loads analysis from IEC61400-2, appropriate for actual property and personnel risks

Solution: New AWEA Standard

- Duration field test, with minimum “time at speeds” requirements
- Certification to AWEA standard granted by new **Small Wind Certification Corporation**, modeled after the Solar Rating and Certification Corp. (SRCC)

AWEA Certification Standard

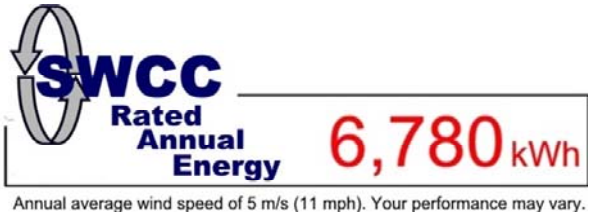
- AWEA draft largely based on the August 2003 NREL document, Evaluation Protocol for Small Wind Turbines, by van Dam, Forsyth, and Link
- AWEA added reporting requirements
- Final product will be an ANSI recognized standards document
- Manufacturers will produce their own tests or contract with others, producing several prescribed test reports
- SWCC will review reports and grant certifications
- States likely to require compliance/certification to qualify for rebate / subsidy programs

Scope

- On-grid and Off-grid wind turbines
- Applies to 200 m2 or less (~ 16m or 52 ft rotor diameter; ~ 50 kW)

Reporting

- Set “SWCC Rated Power” at 11 m/s (25 mph)
- Introduce “SWCC Estimated Annual Energy” modeled after EPA Estimated Mileage for cars



Reporting

- Introduce “SWCC Rated Noise Level”, calculated as weighted average
- Standardized power curves, AEO curves/tables, and performance parameters
- Publicly available performance report summary

AWEA Standards

- AWEA is an accredited standards writing body under the American National Standards Institute (ANSI)
- Consensus standards process … addresses potential anti-competitive practices and liability concerns, involves any “materially affected party”
- Governed by AWEA’s “Standard Manual of Procedures”, revised in 2007
- AWEA Standards Coordinating Committee (SCC), chaired by Dave Blittersdorf, administered by John Dunlop

AWEA Standards

- New AWEA standards committee: Small Wind Certification Committee, Chaired by Mike Bergey
- The Canadian Wind Energy Association (CanWEA) is participating
- The British have adopted the AWEA/CanWEA standard and are ahead now in implementation
- Low budget operation … no funding

Standard Development Committee*

Mike Bergey, Chair	Bergey Windpower Co.	Manufacturer
David Calley	Southwest Windpower	Manufacturer
Dave Blittersdorf	Vermont	Manufacturer
Steve Turek	Wind Turbine Industries	Manufacturer
Jito Coleman	Northern Power Co.	Manufacturer
Robert Preus	Abundant Renewable Energy	Manufacturer
Craig Hansen	Windward Engineering	Technical Expert
Robert Poore	Global Energy Concepts	Technical Expert
Ken Starcher	Alternate Energy Institute	Technical Expert
Hal Link	NREL	Researcher
Jim Green	NREL	Researcher
Trudy Forsyth	NREL	Researcher
Dora Yen	California Energy Commission	State Energy Office
Jennifer Harvey	NYSERDA	State Energy Office
Alex DePillis	Wisconsin Energy Office	State Energy Office
Mike Klemen	North Dakota	Consumer
Paul Gipe	California	Consumer
Mick Sagrillo	Wisconsin	Consumer
Brad Cochran	Colorado	Interested Party
Samit Sharma	CanWEA	Canadian Industry

* Some changes in membership are expected Mid-Summer 2007

AWEA Standard Progress

- Committee produced 5th Draft in Jan. 2006
- AWEA's SCC reconstituted in March 2007 – now active
- SWCC progressing well
- British (BWEA) have adopted the AWEA standard
- CanWEA has requested cold weather certification
- Draft standard will go out of one final general review ("materially affected parties")
- Hope to finish up in late 2007 or early 2008

M E M O R A N D U M

To: Payam Narvand, Sandy Miller, and James Lee - CEC
Cc: Jim Fulkman, Mark Hutchison, Suzanne Korosec, Peter Ward, and Tim Tutt - CEC
From: Rick Margolin and Daniel Emmett, Innovo Energy Solutions Group
Date: March 14, 2008
Re: Recommendations to Enhance Small Wind Under the ERP

On behalf of the California small wind industry, we would like to thank you for the opportunity to brief the Emerging Renewables Program on January 29 on the status of the small wind industry. We value the feedback you shared with us and appreciate the invitation to continue to work with CEC to identify opportunities to increase deployment of small wind under the ERP.

As per our discussion, included below is a list of recommended changes to the ERP Guidebook we believe would result in greater utilization of small wind under the ERP in a manner similar to the success the program produced for solar.

The following is a summary of recommendations representing our group's consensus for changes to the ERP Guidebook to help California meet its renewable energy goals through increased deployment of small wind in California:

1. Increase the small wind rebate value
2. Apply rebates per turbine instead of per system
3. Base future rebate reductions on total statewide installed capacity benchmarks
4. Correct the method for evaluating inverter efficiencies
5. Eliminate the 15% self-installation penalty
6. Begin the transition to the AWEA Small Wind certification standard.

1. **Increase the small wind rebate value**

   We recommend the ERP rebate for small wind be increased to $3.50 per watt for individual turbines up to 10kW, and $2.00 per watt for each watt in excess of 10kW up to 30kW. This is the most important recommendation we offer because it will have the greatest affect on the creation of market momentum.

   The small wind rebate should be increased for the same reason the CEC raised the solar rebate by 50% ($3.00 to $4.50/W) in 2001 – to reinvigorate sales and spur widespread adoption. A rebate of $3.50/W would move California from 6th to 2nd place in the national rankings of support levels for small wind systems and we believe this rate will create the exponential growth rates experienced by solar in California after the CEC rebate increase in 2001. Figures 1 and 2 demonstrate the effects such rebate increases had on solar sales.

Figure 1

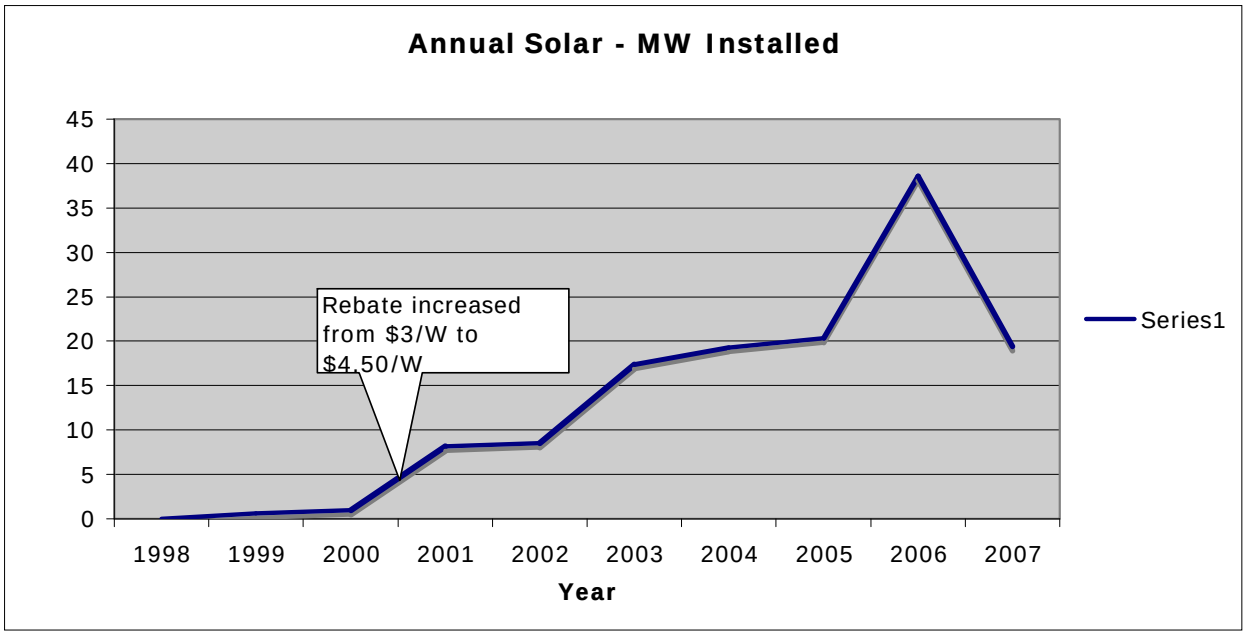
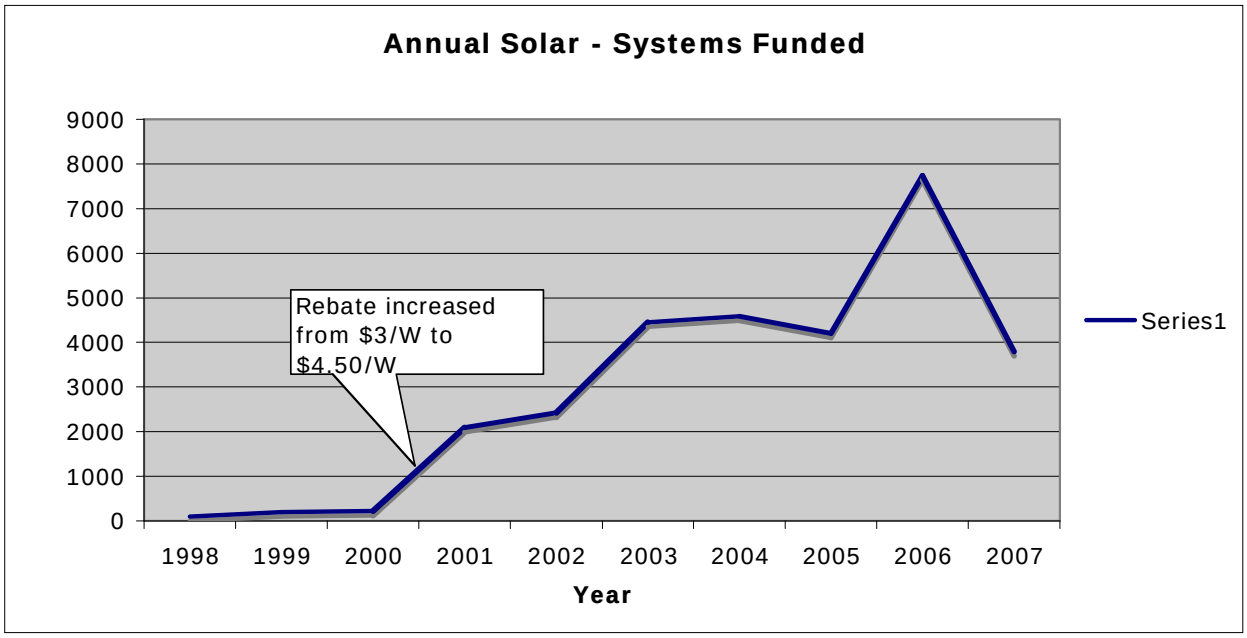
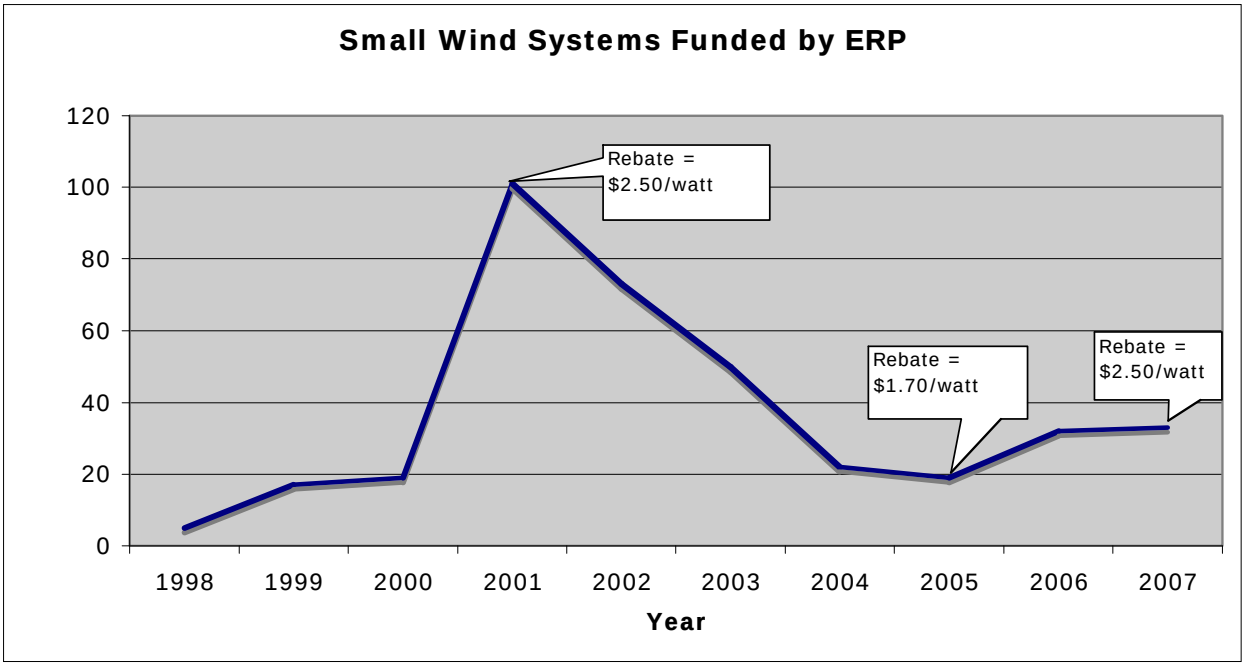


Figure 2



Contrary changes to the incentive level for small wind under the ERP have demonstrated similar price-responsiveness of small wind to rebate levels. As shown in Figure 3, when the rebate dropped from $2.50 to $1.70 per watt during the 2001 to 2005 timeframe, the number of installed small wind systems under the program dropped. When the rebate was increased back to the $2.50/W level in 2006, the number of systems installed under the program increased. Given this clear price-responsiveness to the rebate level, it stands to reason that an increase in the rebate level to $3.50 would stimulate growth under the program.

Figure 3



It is also worth pointing out that small wind does not benefit from the property tax exemption and federal tax credits enjoyed by solar. It also faces more difficult and costly permitting. Again, the successful solar program can be looked to for precedent for increasing rebates. The solar program provides a higher rebate ($3.25/W) to government and non-profit entities to compensate for the inability to access federal tax credits as a result of their status as non-taxable entities.

The small wind industry has recently provided information documenting California consumer interest, the market potential, underutilization of the ERP for small wind, and the arrival of new suppliers and products which we believe demonstrates that the ingredients are right for a new CEC success story in small-scale clean energy technology.

2. **Apply rebates per turbine instead of per system**

Applying rebates per turbine instead of per project would more accurately reflect economies of scale. For individual turbines, producing a larger turbine can lower per-unit costs, however, combining small wind turbines cannot reduce per-unit costs. Thus, the size of a project does not help one achieve economies of scale. A per-turbine rebate structure would better reflect this and accommodate modular systems. As an example, under such a structure with our proposed rates, a 20kW project composed of 20 1kW turbines would receive a $70,000 rebate (20kW x $3.50/watt), whereas, under the current structure the same project would receive $55,000 (10kW x $3.50/watt plus 10kW x $2.00 watt).

3. **Base future rebate reductions on total statewide installed capacity benchmarks**

Using total statewide installed capacity benchmarks - similar to the way the California Solar Initiative is structured – will provide a more accurate indicator of the ERP program's ability to meet its stated goal *"…to reduce the net cost of generating equipment using emerging renewable technologies and thereby stimulate substantial sales of such systems."* Total installed capacity will grow as systems become more affordable, thus, providing an accurate barometer for when it is acceptable to scale

rebates back.

4. **Correct the method for evaluating inverter efficiencies**

   Eliminate double-counting of inverter efficiency and accept inverters "listed" or "recognized" by UL The current ERP Guidelines have rebates calculated according to the solar industry practice of rating solar module output before power conditioning with an inverter. In solar, net power delivered to the grid is the product of module output and inverter efficiency. However, in the small wind industry ratings are made inclusive of power conditioning losses. Therefore, the current procedure double counts losses from the inverter, resulting in a 6 – 10% lower rebate. Now that solar is no longer in the program we believe this methodology should be corrected.

   Inverters that are closely integrated into a small wind system and, therefore, are not separate electrical devices will be "recognized" by UL (or other certification entity) and not "listed". The small wind industry asks the CEC to acknowledge that "recognized" confers the same verification of safety and performance that is intended in requiring that inverters be "listed".

5. **Eliminate the 15% penalty for self installation**

   Small wind system costs can benefit from the elimination of the penalty imposed on self-installers. Currently rebates are reduced by 15% for those who elect to self-install a system. We deem this to be an onerous and unnecessary penalty. In 2007, this penalty was removed for solar installations within the New Solar Homes Program and we believe it should also be removed from small wind systems in the ERP.

6. **Begin the transition to the AWEA Small Wind certification standard**

   We recommend the CEC highlight the current transition to certification from the Small Wind Certification Council (SWCC) to the new AWEA Small Wind standard, and allow systems certified under this new regime to qualify for CEC's eligibility list. The new AWEA standard provides a significant improvement in value to the consumer over the IEC standard or manufacturer durability test now embodied in the ERP Guidelines. Consumers will get better product ratings, the CEC will get assurance of proper product engineering, and the industry will get streamlined approvals through CEC migration to the new standard. The value of the new AWEA standard is substantiated by the fact that it has been adopted in the UK and Canada and is in the process of being adopted by the EU.

As noted, our intent is for the ERP to help grow small wind at a rate similar to what the ERP did for solar. Once you have had an opportunity to consider these recommendations we would like to continue the dialogue to get your feedback. Afterwards, we will begin the process of submitting a formal request for changes to the Guidebook.

Again, many thanks for the opportunity to discuss the status of small wind and the ERP, and we look forward to being a resource for staff as you consider ways to improve the program.

FOR IMMEDIATE RELEASE Contact: Emily Smith,
Managing Director, External Relations
Connecticut Innovations
Phone: (860) 257-2337
Website: www.ctcleanenergy.com

Hartford Unveils Solar Electric System Earned through Connecticut Clean Energy Communities Program

City is First in State to Meet Clean Energy Goal Ahead of Schedule

Rocky Hill, Conn., April 28, 2009 — A ribbon-cutting ceremony was held today at the Goodwin Memorial Branch of the Hartford Public Library in Hartford, Conn., to unveil an 8-kilowatt (kW) solar photovoltaic (PV) system earned by the city of Hartford and installed at this library branch. The solar array was provided by the Connecticut Clean Energy Fund (CCEF) through its Connecticut Clean Energy Communities Program and installed by Alteris Renewables (FKA: Solar Works Inc.) of Stonington, Conn.

Hartford Mayor Eddie A. Perez says, “The Capital City is committed to ‘going green’ and what better place to learn about clean energy than in a place of learning – the library. These solar panels at the Goodwin Memorial Branch are a testament to our future both environmentally and economically.”

The city of Hartford is home to numerous supporters of clean energy – residential, corporate and governmental. As a result of their collective efforts and support, the city has earned a total of 10 kW of solar PV from CCEF through the Connecticut Clean Energy Communities Program. The 8-kW solar PV system unveiled today at the Goodwin Memorial Branch represents the first installation of the city’s earned 10 kW. The installation is valued at approximately $80,000.

Two clean energy supporters, in particular, helped to boost the kilowatts that Hartford has earned: financial services leader ING and the Connecticut Department of Environmental Protection (DEP). As part of its worldwide sustainability commitment, ING purchased clean, emission-free wind energy credits for its U.S. operations through the CTCleanEnergyOptions program beginning in 2007. The 70 million kilowatt-hours (kWh) of clean energy purchased is equal to 100 percent of ING’s electricity usage at the company’s U.S. locations. By making this purchase, ING helped the city of Hartford earn 1 kW of solar PV. In 2008, CCEF recognized ING’s significant clean energy purchase by presenting it with a Connecticut Clean Energy Communities Award. The company also received the 2008 Green Power Leadership Award from the U.S. Environmental Protection Agency and a 2008 Connecticut Climate Change Leadership Award from the Governor’s Steering Committee on Climate Change.

Another major clean energy supporter in Hartford has been the Connecticut DEP, which purchased 7.3 GWh of clean energy through the CTCleanEnergyOptions program and, in the process, earned Hartford 7 kW of solar PV.

Numerous other residential and business customers enrolled in the CTCleanEnergyOptions program helped the city earn an additional 2 kW of solar PV.

Mark Mitchell, M.D., M.P.H., chair of the City of Hartford Advisory Commission on the Environment and president of the Connecticut Coalition for Environmental Justice, said, "This solar installation will be a catalyst that will put Hartford on the right path to developing a green strategy for the city. Renewable energy is important for healthy communities and this represents a technology that will help achieve cleaner air."

Hartford has actively encouraged its residents to sign up for clean energy. In 2008, the city used a Community Innovations Grant from CCEF to provide a local church with "how to" kits to help low-income residents save energy and purchase clean energy. This year a grant was used to implement an elementary school campaign to raise awareness about the benefits of clean energy.

"Hartford is truly a leader when it comes to supporting clean energy," said Bob Wall, director, energy market initiatives for CCEF. "From its solar-powered parking meters to its green schools and its ongoing efforts to promote clean energy in classrooms and among residents, the city is making a powerful statement about the importance of clean energy and is doing whatever it can to help lead our state to a cleaner, healthier, more energy independent future." Wall added, "What's particularly impressive is that the city is the first municipality in the state to meet its goal of purchasing 20 percent clean energy for its municipal facilities by 2010 – a full year ahead of schedule."

Hartford presently has 231 customers enrolled in the CTCleanEnergyOptions program. The city can earn points towards additional clean energy systems by garnering more clean energy signups or having more local business and households install clean energy systems, such as solar PV.

The city is one of 39 Connecticut Clean Energy Communities statewide, which, collectively, have earned 220 kilowatts of solar PV systems.

About the Connecticut Clean Energy Fund (CCEF)
CCEF was created by the Connecticut General Assembly and is funded by the electric ratepayers. CCEF's mission is to promote, develop and invest in clean energy sources for the benefit of Connecticut's ratepayers in order to strengthen Connecticut's economy, protect community health, improve the environment, and promote a secure energy supply for the state. CCEF is administered by Connecticut Innovations, a quasi-public authority. For more information on CCEF, please visit www.ctcleanenergy.com.