

October 2nd, 2012

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 12-EPIC-01
1516 Ninth Street
Sacramento, CA 95814-5512

California Energy Commission
DOCKETED
12-EPIC-1
TN #67465
OCT. 02 2012



Re: Electric Program Investment Charge: Comments on the California Energy Commission’s First Triennial Investment Plan

BirdsVision appreciates the opportunity to provide comments on the Energy Commission’s First Triennial Electric Program Investment Charge (“EPIC”) Investment Plan (“Plan”). BirdsVision offers comments in response to some of the questions posed by the CEC staff in the workshop on September 27th, 2012.

About BirdsVision: BirdsVision provides a new and innovative technology to minimize the conflict between birds and bats and wind turbines, as well as the conflict between animals and electricity infrastructure including transmission lines and substations. BirdsVision’s systems are standalone Hi-tech devices that detect birds and bats around windfarms and electricity infrastructure and deter them, in all weather conditions, day and night, all year round. The systems consist of small and cost effective radars and cameras, as well as unique visual and acoustic deterrents, which are activated only upon detection of the animals for a limited time to prevent the animals’ habituation. The protection devices include components which substantially increase the visibility of wind turbines to approaching birds and bats and significantly diminish the probability of birds and bats collisions with the turbines’ blades. In addition, the systems can incorporate radio-telemetry scanning receivers and antennas, to enable detection and tracking of highly endangered birds (e.g. California Condors and Golden Eagles) equipped with radio transmitters.

BirdsVision strongly supports initiatives S4.4 and S5.2

BirdsVision strongly supports the following initiatives:

S4.4 Proposed Funding Initiative: Investigate the Economic, Environmental and Technical Barriers to Offshore Wind in California, and

S5.2 Proposed Funding Initiative: Research on Sensitive Species and Habitats to Inform Renewable Energy Planning and Deployment.

Both of the above initiatives are at the Applied R&D and Pilot-scale Testing stage. BirdsVision fundamentally believes that the technology to mitigate some of the environmental barriers to wind energy while protecting sensitive species and increasing reliability is available and needs to be proven. Therefore BirdsVision proposes this additional initiative:

Proposing a new initiative - S12.4 Proposed Funding Initiative: Demonstrate and deploy pre-commercial and commercial technologies and strategies for reducing the environmental impacts of wind energy.

Technology Pipeline Stage				Electricity System Value Chain			
Applied R&D and Pilot-scale Testing	Full scale Demo	Early Deployment	Market Facilitation	Grid Operations/ Market Design	Generation	Transmission/ Distribution	Demand – side Management
	X	X		X	X	X	

Issues: Bird and other animal deaths from collisions with power lines and wind turbines are an ongoing environmental issue, affecting wind energy and electricity development. Wind energy, in particular, is a major part of the Renewables Portfolio Standard (RPS), and wind developers in the US as elsewhere heavily rely on federal and state tax credits to help offset costs of new development.

However, high wind areas are also prime habitat for many protected avian species, mostly raptors, as well as bats which may be protected under strict acts. Thousands of birds are killed annually in major wind developments such as the Altamont Pass in California. Therefore, although wind power has become a promising renewable energy for electricity generation in the United States and elsewhere, some wind projects have been delayed or denied because of the potential for avian and bat fatalities.

The main environmental focus in the wind industry thus far has been at the permitting stage of new wind farms. At the same time emerging technologies to actually mitigate risks and reduce environmental impact of both existing and new wind developments exist and they need support to cross the demonstration valley of death.

Purpose: This initiative will advance pre-commercial and commercial technology demonstration and early-stage deployment of technologies mitigating bird and avian fatalities. The types of demonstration and deployment projects that the Energy Commission is asked to consider in this initiative include Radars, Algorithms to analyze data from different sources (cameras, radars, RF transmitters), deterrence technologies such as Sonic, Ultrasonic, Visual, etc. and risk management software that enables highly efficient operation of the deterrence components according to prioritization of their risk.

Background: Wind power has become a major renewable energy for electricity generation worldwide, but many wind projects have been delayed or denied because of the potential for avian and bat fatalities, including highly endangered or rare species such as the California Condor.

In the United States, up to 174 million annual bird fatalities may be caused by electrocutions and collisions with power lines and wind turbines (Carlton and Spiegel 2003, Dorin and Spiegel 2005). Among the birds being killed there are endangered raptors and nearly all are protected by the Migratory Bird Treaty Act (Harness and Wilson 2001). California alone accounts for 96% of the national raptor mortality from wind turbines, and hundreds of protected raptors and bats might be killed annually in a single wind farm and in some locations the numbers are estimated at several thousand annually (Carlton and Spiegel 2003, Dorin and Spiegel 2005, Erickson et al. 2001, 2005, Hunting 2002, Kunz et al. 2007, Langston and Pullan 2003, Lekuona 2001).

Currently there are companies that are developing technologies to detect and deter birds from Wind Turbines. Among the techniques used are radars, sonic, ultrasonic and visual repellents.

As an example, BirdsVision technology has already been successfully demonstrated on Transmission lines and substations with PEPCO HOLDINGS utility (DE, US) and the Israeli Electric Corporation. BirdsVision is ready to demonstrate its technology in Wind Turbines and shortly thereafter materialize plans to create a production line (in California) to deploy the technology at scale. BirdsVision technology can be used to both retrofit existing turbines as well as be integrated into new turbines.

Other comments

In order to fully encapsulate the initiative suggested above. BirdsVision respectfully suggests to enhance the language of S12 (below in bold).

*S12. Demonstrate and evaluate clean energy generation technologies, including strategies to enhance grid integration of intermittent renewable energy resources **and technologies that enable mitigation of environmental risks.***

BirdsVision believes that in the next ten years, technology developed in the market-place can play a major role in enabling renewable energy to overcome some of the environmental challenges in a sustainable way that will be a win for the environment, society, wind and other renewable developers.

BirdsVision will welcome the opportunity to elaborate on the technology or answer any further questions.

Sincerely,

Dr. Ofer Bahat,

President and Chief Technology Officer, BirdsVision Ltd.

Hermon Building, Shaar-Yokneam, PO Box 127, Yokneam Illit, 20692, ISRAEL (Tel. ++972-50-922-1616)

ofer@birdsvision-solutions.com, www.birdsvision-solutions.com