OCEANS EDGE
NETWORKS, INC

Bringing you the future of wireless smart city networks and intelligent wireless infrastructure

October 1, 2012

timw@oceansedgenetworks.com

To: California Energy Commission
EPIC - Electricity Program Investment Charge

From: Timothy P. Washington
Oceans Edge Networks, Inc.
4199 Flat Rock Drive
Suite #128
Riverside, CA. 92505

Re: EPIC 12-EPIC-01 Comments to Triennial Investment Plan Strategic Objectives

Dear CEC/EPIC representative(s):

On behalf of Oceans Edge Networks, Inc., in my capacity as Founder and Managing Directory, I am both pleased and honored to provide our commentary on the following Strategic Objectives each being germane to our current and proposed research, development and demonstration plans.

Oceans Edge Networks, Inc. (OEN) through applied sciences and its compartmentalized engineering partnership teams is at the forefront of delivering the future of residential & commercial grade atmospheric clean energy electricity generation; residential & commercial grade atmospheric pure water generation; zero net buildings; zero carbon footprint electric vehicle charging infrastructure; smart grid transport infrastructure for automation, 2-way communication and power flow; grid sensing and monitoring; soft-grid data management and captive analytics for smart grid; intelligent wireless communications infrastructure networks for cities, municipalities and utilities. OEN relies on compartmentalized professional third party vetting of all technological advancements made by the company.

APPLIED RESEARCH AND DEVLOPMENT

CLEAN GENERATION

S1 Strategic Objective: ***Develop next-generation end-use energy efficiency technologies and strategies for the building, water, and wastewater sectors:***

S1.1 OEN over the last year has been developing, testing and demonstrating next generation energy efficient indoor and outdoor LED lighting for commercial building use with automation, timers and motion sensors. OEN's goal is to produce lighting that closely mirrors natural day light with maximum energy efficiency at a commercially viable price point that reduces customer costs over the life of the product.

S1.5 OEN is in R&D on a next generation commercial grade atmospheric water generation system that totally reduces the need for fresh water in buildings. This commercial grade atmospheric water generation technology is comparable to a commercial grade air conditioning unit and is positioned near the air-conditioning install point. Each unit can produce up to 3,500 gallons of fresh purified water per day that can be used for drinking and any other general use purpose in the building. The technology eliminates the need for an external fresh water source for commercial buildings as water is generated from the atmosphere. The units can be daisy chained and easily connected to the buildings water flow piping system.

S1.8 A natural by-product of the aforementioned atmospheric water generation system is natural cool purified air. The air emitted, as a by-product from the atmospheric water generator is of the highest qualify and classified as purified air. The air as it is processed can be circulated through the commercial building duct system generating highly purified cool air which can be used for cold storage, cooling zones on extremely hot days but most importantly everyday indoor purified air circulation and high air quality intake for commercial buildings.

S1.9 OEN is at the forefront of Zero Net Energy commercial and residential buildings utilizing cost-effective next-generation atmospheric electricity generation power plant technology which creates free energy from the earths atmosphere. The technology power plants can power a very small home at 5 kilowatts; a high-rise office tower at 1MW; an amusement park or casino at 2/3MW; an industrial complex or airport at 5MW; large factory at 10MW; a small town at 20MW or even an entire city at 100-1000MW.
OEN also utilizes its own advanced methods of more traditional alternative sources of energy in the areas of solar and wind turbine technology. The company has vast experience in solar and wind deployments and researching more cost-effective solar arrays and wind turbines that produce more at lesser total costs of ownership for the consumer.
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S3 Strategic Objective: Develop Innovative Technologies, Tools and Strategies to Improve the Affordability of Distributed Generation:

S3.1 OEN is working on the development of an electricity-producing technology which uses a scientific principle based method of multi-compression propulsion to generate electricity in commercial quantities. The technology does not use any fossil fuel or carbon-based compounds to produce electricity and it could be the worlds most advanced and most efficient green energy technology extremely reducing the costs associated with commercially viable highly distributed electricity power plant generation.

The technology will transfer kilowatts out of the kilowatts of the electricity it generates, back to the starter motor, in order to continue operating perpetually without any external power source. The extra kilowatts generated are distributed to other users. The system will be designed to work together in a group for the supply of electricity to large cities, towns and other communities or as individual units to supply electricity to residential, commercial or industrial buildings.

The technology will generate pure, clean and sustainable green energy, all-year-round, using only compressed air as its fuel. Ambient air from the atmosphere goes into the technology power plant and it is compressed at very high speeds, at many stages, to produce electricity. Only air is discharged from the exhaust, back into the atmosphere.

The technology can be applied to produce power plants for electricity and there is no daily operating cost. The technology is a self-sustaining green energy technology. The invention will need to be secured with worldwide patents.

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S4 Strategic Objective: Develop emerging utility-scale renewable energy generation technologies and strategies to increase power plant performance, reduce costs, and expand the resource base:

S4.2 OEN is working on the research and development of an electricity-producing technology which uses a scientific principle based method of multi-compression propulsion to generate electricity in commercial quantities. Free, clean and renewable energy generated by OEN technology can bring down the cost of generating power for electricity by about 90%. This technology has the potential to double the annual profits of any electric utility company in the US while reducing overhead.
The huge amount of money saved from importing oil, natural gas, coal, uranium and other expensive energy products, which range from millions to billions of dollars annually, can ideally be re-invested into the US to stimulate our local economies.

Existing fossil fuel-based power plants in the US can be replaced with clean energy engines within 5 to 7 years and could effectively bring an end to total oil dependence and eliminate the inevitable energy crisis.

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SMART GRID ENABLING CLEAN ENERGY

***S6 Strategic Objective*: Develop Smart Grid Technologies, Tools, and Strategies to Integrate Intermittent Renewables and Other Emerging Technologies:**

OEN through its Internet based programmable logic control technology has the ability to enhance distribution automation to integrate distributed energy resources and improve grid reliability. OEN Smart Grid deployment ties the electric grid into the Internet for real-time ability to monitor customer premise networks and micro-grid activity for sharing of resources across the grid. OEN intelligent network architecture enables power flow control and bi-directional power flow through the transmission and distribution system. OEN Smart-Grid and Soft-grid data management and captive analytics software increases efficiency and ease of management of automation and operations, including those for outage management, congestion mitigation to make use of smart grid equipment. OEN, working with a quantum physics based security suite backed by 40 patents, is researching and planning to develop smart grid security technology around this patent suite to protect assets from threats and sabotage. OEN soft-grid software management platform can also be used to integrate forecast data of renewables into automated grid operation.

OEN is researching a framework for classifying grid integration analysis that will be conducted over different energy penetrations of intermittent renewables with modeling considerations that are important for each class of analysis. The idea is to present a new analytical method for including the effects of intermittency in developing more realistic decarbonization strategies.
The potential of renewable energy sources to supply a large fraction of electric power demand has been a growing area of research for OEN, fueled by political climates that increasingly value energy independence, sustainability, and low-carbon and low-air pollution tech-renewable energy technologies. The necessity of reducing greenhouse gas emissions via the decarbonization of the electricity sector has been demonstrated by technologies like wind and solar power to make significant contributions to reducing the carbon footprint.

OEN is modeling a zero carbon footprint level 2 and level 3 Electric Vehicle Charging Station currently powered by wind and solar. OEN is researching the development of a shoe-box sized proprietary electrification dynamo self contained power plant for this Charging station infrastructure in addition to wind and solar.

OEN also offers wind and solar powered municipal LED street lighting for complete off-grid city lighting with automation, timers and motion sensors to increase efficiency and prevent all night burn through.

OEN also has designed a 3" X 3" PCB that combines a wireless broadband access point, programmable logic controllers and analog interfaces for retrofitting parking meters as EV charging stations with solar power as well.

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S9 Strategic Objective: Advance Plug-In Electric Vehicle Infrastructure and Use EVs to Improve the Operation and Performance of California's Power Grid:

OEN is developing smart charging technologies and zero carbon footprint Electric Vehicle Charging Station networks powered by a proprietary electrification dynamo in addition to wind and solar to integrate plug-in electric vehicles into the power grid. This research will inevitably increase the energy efficiency of the electric transportation system.

OEN EV Charging network uses two-way flows of electricity and information to create a widely distributed automated energy delivery network. EVs are the killer application that will propel the advancement of the Smart Grid adoption much in the same way email is responsible for the lateral expansiveness of the Internet.
OEN is focused on how to use EVs as mobile power reserves. The idea is to find out whether electric cars are capable of storing excess energy when the power grid becomes maxed out.

This research could significantly impact the role electric vehicles might play in the future. OEN is researching how an EV can act as a power reserve, but also how it can be an electric storehouse. The idea is to see if it is viable to have EVs returning power to the grid. OEN believes its charging stations that interface with EV batteries could be drawn upon by power suppliers to help supplement demand during peak use. This will reduce both plug-in electric vehicle costs and distributed storage costs through the development of second-use battery storage applications.

Finally OEN is developing grid communication software interfaces with geo-fencing, presence leveraging and social media API's I.e. Facebook integration for plug-in electric vehicle charging to support vehicle-to-grid-services.

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