

Do We Really Need More

Power Plants on Long Island?



Gary Joel Schacker, SIOR
CIBS President

If you always used your right arm and hardly ever used your left, the right would be strong and the left would be weak. If you keep building power plants, instead of focusing on renewables, your new power plants will be strong and the renewables weak. That is what we are doing as scripted by LIPA and PSEG. Instead of providing better incentives and rebates to promulgate renewable energy, the utilities do more or less what they are mandated to do and ignore other possibilities. Moreover, our world is getting more and more efficient and demand for electricity is decreasing, not increasing. We finally woke up just in time to prevent Caithness II from coming online and burdening us with additional cost and debt. At some point, we have to cross the line and really go for it.

Nevertheless, there has been some progress.

Feed In Tariff

In July of 2012, LIPA/PSEG (PSEG) opened bidding on a “Feed in Tariff” (FIT) program. This is a program that essentially allows a “solar developer” of a photovoltaic system (PV) to enter into a 20-year power purchase agreement (PPA) with the utility, whereby the utility agrees to purchase back generated electricity at a fixed predetermined rate over a period of time. The FIT 1 program allocated 50 Megawatt (MW).

“As of July 16, 2012, the rate is \$0.22 per kWh of electricity delivered to PSEG’s grid. The amount of electricity will be measured using a dedicated meter for each approved project. The rate is subject to change, but once a PPA is signed,

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the rate for individual projects will remain in effect for the entire contract period of 20 years.” From www.psegliny.com

These solar developments can be located on rooftops, or on ground locations such as parcels of land, carports or other structures. Many of us have received inquiries from solar developers seeking such locations. In October 2013, the FIT 1 was successfully closed out, allocating the entire 50 MW available.

Shortly after closing FIT 1, FIT 2 was opened and fully subscribed in January of 2014, albeit at a lower price per kilowatt.

“After a four-month application period that ended on January 31, 2014, PSEG Long Island received 178 proposals from 55 separate entities, which reflected a variety of proposed bids. Following a comprehensive analysis, the final bid price of \$0.1688 per kilowatt hour (kWh) was selected to be paid to developers for solar photovoltaic systems of various sizes and types that are anticipated to be constructed across Long Island. In total, this 100 MW of solar energy is expected to be generated from 76 separate projects, which is enough to power about 13,000 homes. These solar photovoltaic systems will provide clean, renewable energy for at least the next 20 years, and will create hundreds of construction jobs.”

From www.psegliny.com

This is in addition to the myriad of private business and residential PV systems that have been and are being installed throughout Long Island. The key to accelerating the pace of private systems is “REEEbates” and “INNNNcentives.”

Of course, these projects have started to cause some consternation due to a perceived lack of transparency. “Shoreham solar project critics decry ‘information gap’ from LIPA, PSEG Long Island.” <http://www.newsday.com/long-island/shoreham-solar-project-critics-decry-information-gap-from-lipa-pseg-long-island-1.9495746>

“Remote Net Metering” (RNM)

Net metering occurs when your meter spins both ways, recording incoming electricity from the grid as well as outgoing electricity produced by solar or wind power into the grid.

A PSEG program that almost nobody has heard of is Remote Net Metering (*aka* “Solar Entrepreneur Program”). This program allows the construction of a PV system at one location with the ability to apply the credits to another location. For example, if an entity owned a parcel of land, or a very low consuming building, a PV system can be constructed at that location. Since the property consumes far less electricity than can be generated from the PV system, the excess generated electricity would go back into the grid. That power can be allocated to a remote site in the form of electricity credits. A company could power its office building from a low-consuming warehouse, or a wine producer could power production facilities from a PV system placed on a vineyard located miles away.

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*Hybrid System, 2400W, Windturbines , 4000W Solar Modules
Zirje Isalnd, Croatia*

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Commercial Capacitors

The primary use of capacitors is to store electricity and release it as needed. Electricity moves in waves, and consists of a series of spikes and surges. As it travels through wires in this way, much of its efficiency is lost through heat transfer and other factors. A capacitor has the ability to store this electricity and then release it in a smooth straight-line fashion, which is much more efficient and beneficial to the componentry to which it is supplied. A capacitor has the ability to reduce demand by being available for inductive load demands, thereby minimizing demand at the meter. So the capacitor simply captures the electricity and releases it when called upon. These devices, which can save an average of 10 to 20 percent of electricity costs by reducing kilowatt usage, are not currently entitled to rebates by PSEG. Why this simple device, which needs no maintenance and has a short payback (often just a couple of years), is not eligible for rebates, I have no idea.

Wind Energy

Wind turbines produce efficient power all over the world, and wind is the primary producer of renewable energy. PSEG has a wind energy program in place that provides a lot of good information. A number of Long Island towns have codes in place for the implementation of wind turbines. These codes address placement and decibel levels. So why haven't we seen more turbines locally? I have to question whether the codes are realistic for placement. Wind turbine technology is moving at a fast clip, and the near future of wind energy may look nothing like what one sees today. Silent micro wind turbines, or turbines in combination with solar panels and newer technologies, will be our path toward reducing our use of fossil fuels and our tenuous reliance on foreign oil. In my opinion, we don't need more power plants; rather, we need to focus our money and resources on development, implementation and promotion of renewable energy sources while providing incentives and rebates to stimulate investment in these new technologies. It can most certainly be done.



LEDs

Millions and millions of kilowatt-hours can be saved by implementing and installing LEDs. A 400-watt sodium vapor lamp converts to an 80-watt LED. An already efficient 54-watt T-5 fluorescent bulb can convert to a 12-watt LED. The goal should be for 100% of incandescent and fluorescent lamps to be replaced by LEDs. Although there are incentives, they are not sufficient. Provide a good reason to change, and it will occur.



Credit: AP PHOTO/FERDINAND OSTROP

Wind turbines and transmission lines in Nauen near, Berlin, Germany.

On Sunday (May 2014), Germany's impressive streak of renewable energy milestones continued, with renewable energy generation surging to a record portion — nearly 75 percent — of the country's overall electricity demand by midday. With wind and solar in particular filling such a huge portion of the country's power demand, electricity prices actually dipped into the negative for much of the afternoon, according to Renewables International. *From thinkprogress.org May 2014*

Check out this link to get a sense of the vast array of wind turbines: <http://tinyurl.com/orjz6p3>