

Renewable Energy –

# Seeing is Believing in the Town of Hempstead

Sometimes, you can find the future right in your backyard. That is what the members of the Environmental Law Committee discovered on October 22, 2012 when they went on an organized tour of the Town of Hempstead's renewable energy facilities in Lido Beach. Those who, in the past year, have driven to the south end of the Meadowbrook Parkway may have noticed the wind turbine rising from the back yard of the Department of Conservation and Waterways building.

This 100 kilowatt unit was erected by the Town in December, 2011 with financial assistance from the federal stimulus package included in the American Recovery and Reinvestment Act (ARRA) of 2009. Since then, it has produced over 200,000 kilowatt hours of energy, providing power for the on-site alternative fueling station and selling excess energy back to LIPA through its net metering program. According to Tara Schneider-Moran, a conservation biologist who spearheaded this and other energy projects for the Town, the turbine works whenever the wind is at or above 7 mph, which, across the street from the ocean, is not a problem. Sensors on top of the 120 foot structure take into account wind direction and adjust the direction of the 35 foot long blades for maximum efficiency. Asked about the frequently voiced concern over bird fatalities caused by wind

turbines, Ms. Schneider-Moran said that they have not experienced any to date and statistically, expect zero hits over the lifetime of the unit. A shaft inside the turbine contains the circuitry and a ladder used by staff to access the blades and fuses for maintenance. If you look inside, you get the giddy feeling of peeking into a space ship.

As mentioned above, the wind turbine provides the electricity needed to operate the alternative fueling station just a few feet away. The Town built the demonstration station by partnering with National Grid and NYSEERDA (New York State Energy Research & Development Authority). It is equipped to supply three types of alternative fuels, compressed natural gas (CNG), a hydrogen-natural gas blend (HCNG) and pure hydrogen. The hydrogen is produced on site through electrolysis, a process whereby purified water is separated into its components, hydrogen and oxygen. The latter is vented into the air, while the former is compressed at a pressure of 5,000 psi into gas which can be pumped directly into the specially adapted fuel tank. The station can produce about 12 kilograms of hydrogen fuel per day, which is equivalent to 12 gallons of gasoline. The various fuels at the site power a bus, running on a blend of HCNG, two pickup trucks, which run on CNG, and three hydrogen powered fuel cell cars. The pro-



Lilia Factor

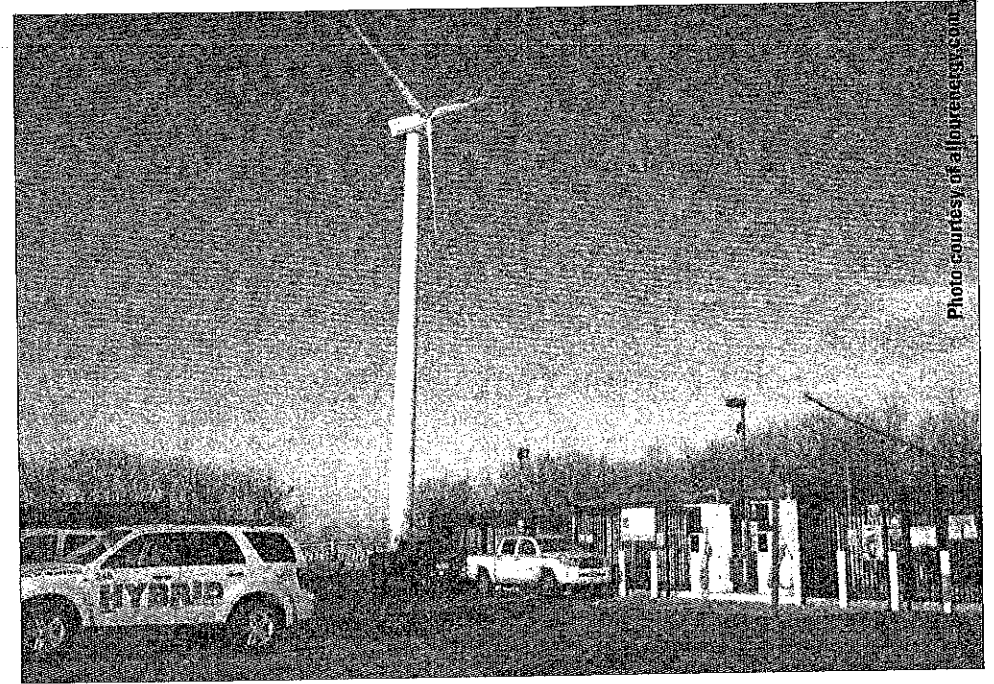


Photo courtesy of albuquerquejournal.com

Town of Hempstead's Point Lookout Clean Energy Park Wind Turbine.

TOTYPE car, supplied to the Town for free by Toyota, excited some lively interest among the visitors. Not only did they get to look under the hood, hear about the smooth acceleration, the quiet ride and the nearly invisible cloud of water vapor which is the only emission from the exhaust pipe, but those who were interested were offered a test drive. If, as we were told, Toyota starts to mass market these cars by 2015, we got a great preview of the new model.

The next stops on the tour involved

solar power. There were free standing solar panels, recommended for those individuals or businesses whose roofs might not be well adapted for solar, but who have the space on their property to accommodate a small solar array. Nearby stood a model solar house constructed by students from the New York Institute of Technology for the 2007 Solar Decathlon competition at the National Mall in Washington D.C. and acquired by the Town to use as a demon-

See HEMPSTEAD, Page 18

# ACCOMPLISHMENTS

**Nassau Lawyer**  
 The authority of Magistrate Judges to impose Rule 11 Sanctions after *Kiobel v. Royal Dutch Petroleum Co.*

**Farrell Fritz**  
 1000 Main St., Suite 200  
 Hempstead, NY 11547

**PDF REPRINTS**  
 Being featured on the pages of Nassau Lawyer is an accomplishment. Reprints allow you to take your editorial coverage and optimize it for marketing purposes. Communicating with reprints adds credibility to your message and helps brand your accomplishments for effective promotions. Reprints help extend the life and value of your press and leverage it for extended and targeted use. For more information or to place an order contact:

**Jennifer Travis (631) 913-4223**  
 jennifer.travis@libn.com

**Nassau Lawyer**  
 Bankruptcy law vs. employment discrimination

**Farrell Fritz**  
 1000 Main St., Suite 200  
 Hempstead, NY 11547

# HEMPSTEAD ...

Continued From Page 12

stration and public education facility. A solar car port attached to the house can charge up to two electric vehicles. Finally, a large outdoor parking lot sports bifacial solar panels on the roof and is waiting for the installation of reflective white concrete on the floor, which will capture more of the sun's rays and thus, increase efficiency. Since this installation was also built with money from the federal stimulus package, it complies with the condition that all components, including the panels themselves, be made in the U.S.

Pointing to the large building which houses the Town's Department of Conservation and Waterways, Ms. Schneider-Moran explained that it is now heated in the winter and cooled in the summer using geothermal energy. This system uses underground pipes to circulate water, which is kept at a constant temperature of 55 degrees. The result is not only energy savings for the Town, but a naturally regulated indoor environment for staff and visitors.

The final, and for many of us, most fascinating portion of the tour was the aquaculture facility located in the back of the property, right on the Bay. Tom Landi, the supervisor, showed us around and explained how the Town is growing clams and oysters to reseed and replenish the depleted stock of shellfish in Hempstead Bay. He noted that, cur-

rently, there is no commercial oyster fishing in the Bay and oysters served in local restaurants are largely farm grown. While the Town's program started in the 1970s, it was entirely revamped and literally re-energized last year with the installation of a retrofitted house for the containers holding the clams, solar powered pumps, a small wind turbine and a paddle wheel. **FLUPSY (Floating UPwelling System)** These innovations now allow the facility to handle up to 20 million clams using less energy than it did earlier to process only about 1.5 million shellfish. The next step, said Landi, is to apply for and, hopefully, receive a grant to build a hatchery, which would provide seed stock and spawn, making the facility self-sufficient.

Coming to the end of the tour, the committee members thanked the Town's staff for their time and willingness to show and explain these amazing pilot projects. Demonstrating renewable energy technologies at work is the best type of advocacy for this growing and exciting part of our lives.

**Lilia Factor, an attorney at the Law Office of Frederick Eisenbud, is Chair of the NCBA Environmental Committee.**

*Postscript - (Nov. 15, 2012) Checking in with the Town after Hurricane Sandy, it was gratifying to learn that the above facilities generally escaped the damage caused by the storm. The facilities were built to withstand a 100-year flood, and they passed the test.*

