

New Jersey Legislature Seeks to Encourage Green Technology

by James Laskey and Christopher Stevenson

Beginning with the adoption in 2007 of the New Jersey Global Warming Response Act (GWRA),¹ the New Jersey Legislature has enacted numerous laws intended to reduce energy consumption, increase the use of renewable energy, and reduce greenhouse gas (GHG) emissions. This article reviews some of those laws as well as a number of pending bills intended to keep New Jersey in the forefront of the 'green' revolution.

The GWRA requires a reduction in GHG emissions to 1990 levels by 2020, and a further reduction to 80 percent below 2006 levels by 2050. Achieving the GHG reduction goals of the GWRA will require a statewide transformation in energy generation and in the consumption of energy by the electric power, building (commercial and residential), industrial, and transportation sectors.

Statewide, New Jersey is now second behind California in the total number of solar installations. Since 2001, more than 200 megawatts (MW) of solar capacity have been installed as the number of systems within the state has soared from a handful to well over 6,800 as a result of incentives and development facilitators for renewable energy such as rebates, net metering improvements, standardized interconnections, renewable portfolio standards (RPS)² for renewable energy in general and solar energy in particular, and a solar renewable energy certificate (SREC)³ trading system.

One of the most significant of the recent enactments is the

Solar Energy Advancement and Fair Competition Act,⁴ which was sponsored in the Assembly by Assemblyman Upendra Chivukula and in the Senate by Senator Bob Smith, and signed into law by Governor Jon Corzine at the end of his term. The solar act is summarized below in an overview of key renewable energy and related legislation that was either adopted within the past several years or is presently under consideration in Trenton.

The legislation highlighted below has been grouped under the headings of adopted and proposed, and further under the general categories of renewable energy, energy efficiency and conservation, and green building.⁵ A host of green bills introduced at the beginning of the 2010-2011 legislative session in January 2010 have not yet advanced, and thus are mentioned here only by number.⁶

Legislation Adopted (2007–2010)

Renewable Energy

- P.L. 2007, c.156, requires in state-owned buildings the replacement of incandescent light bulbs with compact fluorescent bulbs, and further requires the Board of Public Utilities (BPU) to educate and inform the public on the benefits of compact fluorescent bulbs.
- P.L. 2007, c.300, provides for establishing certain standards for net metering⁷ of electricity.
- P.L. 2007, c.340, authorizes New Jersey to participate in the Regional Greenhouse Gas Initiative (RGGI) through the auctioning of GHG allowances and establishment of the Global Warming Solutions Fund.
- P.L. 2008, c.90, exempts from property tax and municipal construction permit fees certain "renewable energy systems."
- P.L. 2009, c.33, requires developers of residential developments of 25 or more units to offer solar energy systems to prospective purchasers of dwellings.

- P.L. 2009, c.34, amends the Electric Discount and Energy Competition Act (EDECA, N.J.S.A. 48:3-49 *et seq.*) to facilitate and promote combined heat and power production, energy conservation and efficiency, and renewable energy.
- P.L. 2009, c.35, provides that solar and wind energy facilities on parcels of land greater than or equal to 20 contiguous acres (under the same ownership) are a permitted use within every industrial district of a municipality.
- P.L. 2009, c.146, provides that under the Municipal Land Use Law (MLUL, N.J.S.A. 40:55D-1 *et seq.*) a solar and wind energy facility or structure is an “inherently beneficial use,” which lessens the burden of proof required to obtain a use variance.
- P.L. 2009, c.213, permits solar, wind, or biomass energy generation on preserved farms in an amount equal to, as per the landowner’s choice, the farm’s electricity use plus 10 percent, or on an area occupying one percent of the farm. Further, it permits on non-preserved farms a renewable energy generation facility of up to 10 acres and two MW (and the ratio of renewable energy facility acreage to agricultural acreage cannot exceed one to five).
- P.L. 2009, c.240, provides that under the EDECA an “on-site generation facility” need not be located on the same or contiguous property in certain circumstances.
- P.L. 2009, c.244, provides for and limits the regulation of small wind energy systems by municipalities.
- P.L. 2009, c.289, provides, most notably, for increasing the BPU’s proposed solar RPS requirements and extending them past 2021 to 2026 and beyond. The presently targeted solar RPS requirement for 2021 will increase by almost 20 percent, and from 2021 to 2026 the solar RPS

requirements will more than double from 2,300 to 4,855 MW.

- P.L. 2010, c.4, exempts solar panels from being considered and calculated as impervious surface or coverage.
- P.L. 2010, c.57, the Offshore Wind Economic Development Act (OWEDA) establishes an offshore wind renewable energy certificate program (OREC) and makes available financial assistance and tax credits from existing programs for businesses that construct manufacturing, assemblage, and water access facilities to support the development of qualified offshore wind projects.
- P.L. 2010, c.101, promotes increased use of biofuels.
- P.L. 2011, c.20, allows construction of wind-dependent energy facilities on piers within 500 feet of mean high-water line of tidal waters.

Energy Efficiency and Conservation

- P.L. 2009, c.4, authorizes a public entity to contract with an energy services company for energy conservation measures by way of a lease-purchase agreement of up to 15 years (20 years in certain cases).
- P.L. 2009, c.106, authorizes the amendment of the energy subcode in the Uniform Construction Code to enhance energy-saving construction requirements.

Green Buildings

- P.L. 2008, c.54, amends the MLUL to permit a municipality to include in its master plan a green buildings and environmental sustainability element.

Legislation Proposed (2010–2011 Session)

Renewable Energy

- A-915/S-463, provides for electric public utilities to offer non-discriminatory rates to customers belonging to a local renewable energy collaborative (LREC)⁸ and authorizes the BPU

to implement pilot programs to evaluate the feasibility of adopting standards for advanced metering infrastructure.

- A-1084/S-2357, requires that solar panels be incorporated in the design and construction of new public schools.
- A-2147/S-461, establishes the Solar Roof Installation Warranty Program in connection with solar photovoltaic installations on commercial, industrial, and institutional buildings.
- A-2502/S-1406, establishes the New Jersey Property Assessment Clean Energy (NJ PACE) Municipal Financing Program within the New Jersey Economic Development Authority (NJEDA) and the BPU, to provide financing for municipalities seeking to facilitate the purchase of renewable energy systems or energy efficiency improvements by individual property owners or groups of property owners.
- A-2529, revises the definitions of Class I and Class II “renewable” energy⁹ (in EDECA) to Class I and Class II “alternate” energy, and expands the definition of Class I to include solar thermal technologies, certain energy production technologies approved by the New Jersey Department of Environmental Protection (NJDEP), and certain small-scale hydropower. (*As of early March 2011, this bill had passed both chambers in the Legislature but was the subject of a conditional veto.*)
- A2-574/S-2321, revises the definition of Class I renewable energy (in EDECA) to include geothermal heat pump systems and technologies that either produce or save energy, and to provide that a renewable energy certificate (REC) corresponds to one MWH of energy produced or saved by Class I or II renewables.
- A-3277, amends the OWEDA to include property in certain areas des-

ignated by the Port Authority of New York and New Jersey and the NJEDA as “portfield” sites.

- A-3281/S-2231, amends the OWEDA to tax credits for development of wind energy facilities in the port district of the port authority.
- A-3455, permits an electric public utility and other suppliers of electricity to enter into agreements with building owners for onsite solar energy systems.
- A-3521, excludes the proceeds derived from sales or exchanges of solar renewable energy certificates from taxation under the corporation business tax and the gross income tax.
- ACR-63, proposes a constitutional amendment requiring that land of five or more acres dedicated to solar energy production shall be entitled to farmland assessment treatment.
- S-2006/A-3125, supplements the MLUL to curtail the ability of a municipality to adopt ordinances that limit the installation of solar panels under certain circumstances.
- S-2126, provides for the installation of solar and wind facilities on landfills and resource extraction facilities in certain cases. (*As of early March 2011, this bill had passed both chambers in the Legislature but was the subject of a conditional veto.*)
- S-2196/A-3142, directs the BPU to undertake a local government renewable energy-generation demonstration project.
- S-2332, establishes an NJEDA program to provide financial assistance to qualified commercial building owners to purchase and install solar electric systems greater than 100 kW.
- S-2371/A-3731, directs the BPU to adopt regulations that require contracts by non-utility load-serving entities for the purchase of SRECs to extend for a term of 15 years or longer.

- S-3806, includes as Class I renewable energy the energy produced by certain geothermal heat pumps.
- S-3893, establishes uniform real property taxation for commercial renewable energy systems and eliminates municipal construction permit fees for non-commercial renewable energy systems.

Energy Efficiency and Conservation

- A-907/S-1262, directs the BPU to establish programs to assist large commercial and industrial electric power customers in reducing their energy usage.
- A-917/S-1780, requires the state to utilize energy-efficient outdoor lighting.
- A-3771, provides gross income taxpayers with a credit for two years for the cost of an energy audit and installation of energy conservation and efficiency improvements.
- A-3647/A-3648-S-2603/A-3649, requires electric vehicle charging stations at certain facilities.

Green Buildings

- S-1765/A-918, requires the NJEDA (in consultation with other agencies) to carry out a “High Performance Green Building Demonstration Project.”
- A-2215/S-2558, provides for low-interest NJEDA loans for construction of a high-performance green building. (*As of early March 2011, this bill had passed both chambers in the Legislature but was vetoed by Governor Chris Christie.*)
- A-3678/A-3679/A-3680/A-3681/A-3682, incentivizes and/or requires green or blue roofs under certain circumstances.

Moving From Legislation to Implementation

As mentioned, the solar act is the most noteworthy of the renewable energy and related legislation recently

adopted in Trenton. It increases the solar RPS requirement considerably beyond the BPU’s targets, and changes its measurement from a percentage of energy produced to a set requirement in gigawatt hours (GWH). The present solar RPS requirement is 0.3 percent, and prior to the solar act the targeted requirement by 2021 was 2.12 percent. Under the act, the requirement will be approximately three percent by 2021 and seven percent by 2026, which from the present represents a 10-fold increase in the coming decade and a more than 20-fold increase by the middle of the following decade.

The total Class I and Class II RPS requirement, of which solar-generated electricity is a component, is 8.3 percent for 2011 and 22.5 percent by 2020-2021. However, the RPS goal for 2020 that is expressed in New Jersey’s current energy master plan (EMP), released in October 2008,¹⁰ is actually 30 percent.

Wind-generated energy is likely to be an essential component of the increasing total RPS requirement. In New Jersey, the installation of electricity-generating windmills offshore (which the current EMP has targeted to generate 3,000 MW by 2020), moved closer to fruition as a result of two significant developments.

The first was the NJDEP’s June 18, 2010, release of the results of a lengthy study concluding that there would be “negligible impacts to bird, fish and marine mammal life” from proposed offshore windmills.¹¹

The second was the approval on Aug. 19, 2010, of S-2036 (OWEDA), which occurred less than three months after the bill was introduced by Senators Stephen Sweeney and Thomas Kean. That legislation, as mentioned in the highlights above, establishes an OREC program similar to the SREC program, as a means of providing for the financial viability of offshore wind installations, which are estimated to have a total price

tag as high as \$7 billion. In addition, the bill amends other legislation to provide financial assistance and tax credits to promote wind energy development in the state. The cost of offshore wind farms, and whether that would result in utility rate hikes, was a concern that nearly prevented the vote to release the bill from committee.

It should be noted that OWEDA does not increase RPS requirements or renewable energy goals; rather, it provides that wind-generated electricity will reduce (offset) the amount of electricity to be provided by other Class I renewable energy sources. The sufficiency of the act's goal of supporting *at least* 1,100 MW of generation from offshore wind projects is being called into question by some, who contend that much higher targets are required to spawn a wind-energy development industry in New Jersey, as the act intends.

Adhering to the act's requirement to establish an offshore wind renewable energy certificate program within 180 days of enactment, the BPU, on Feb. 10, 2011, adopted new rules pertaining to the development of offshore wind projects and establishing the OREC program.

The proposal of S-2006 sponsored by Senators Bob Smith and Christopher Bateman, which curtails a municipality's ability to limit the installation of solar panels, is an attempt to build on the Legislature's important accomplishments with regard to the siting and installation of renewable energy facilities. That bill provides that solar panels and related equipment may be limited by municipal ordinance only if they extend more than 12 inches beyond the edge of the roofline or 12 inches above the highest point of the roof surface or structure. It does permit a municipality to regulate the placement of solar panels if the number of panels exceeds 10 and the proposed location is less than 50 feet from the nearest property boundary line.

Previously adopted legislation facili-

tating the siting and installation of renewable energy facilities include, as mentioned above, laws that: 1) prevent solar panels from being calculated as impervious coverage;¹² 2) provide that solar and wind energy facilities are permissible uses on parcels 20 acres and larger in all districts zoned industrial; and 3) establish that a solar and wind energy facility is an "inherently beneficial use" (and thereby presumptively satisfies zoning variance criteria).

Finally, the past year saw traditional farms and solar farms (as well as wind and biomass energy generation) intersect as a result of the passage of P.L. 2009, c.213, in January 2010. In addition to that legislation's highlights listed above, the law is noteworthy for making solar, wind, and biomass energy facilities protected activities under the Right to Farm Act.¹³

The adoption of that legislation was not without controversy, however, as it raised concerns with regard to jeopardizing the meaning and status of farmland preservation and facilitating non-traditional agricultural development on farms. On the other hand, such development will further the state's ability to meet its renewable energy and GHG reduction goals while potentially enhancing the economic viability of farming.

Promoting renewable energy on farms continued this session with the introduction of a proposed constitutional amendment to extend farmland assessment treatment to land of five or more acres that is devoted to solar energy generation.

The Legislature has put New Jersey earnestly on a path toward meeting the goals of the GWRA, and it continues its efforts to forge a sustainable energy future that is envisioned to ensure energy security, create clean/green energy jobs, maintain economic competitiveness, and help to preserve the quality of life and the environment in the state. Its

accomplishments have made New Jersey a national leader in renewable energy, and its future efforts could potentially continue to be ambitious given the stringent 2050 GHG reduction goals of the GWRA. ♪

Endnotes

1. P.L. 2007, c. 112.
2. A renewable portfolio standard (RPS) requires electric power suppliers to obtain a percentage of their electricity from renewable energy sources. The existing standards are set forth at N.J.A.C. 14:8-2.3.
3. SRECs, which are issued at the rate of one SREC for each megawatt-hour (MWH) of solar-generated electricity, are purchased by electric power suppliers to meet solar RPS mandates. SRECs can be sold either on a spot market or pursuant to long-term contracts. Their value is capped by a solar alternative compliance payment (SACP) established by the Board of Public Utilities. SRECs contribute to the economic valuation of and return on investment of solar energy systems.
4. P.L. 2009, c. 289. This legislation is often referred to as A-3520, which is the pre-adoption Assembly bill number.
5. Proposed legislation is presented in ascending number order beginning with the Assembly and followed by the Senate.
6. The bills include: 1) Renewable energy – A-206, A-1167/A-1399/A-1483, A-1483/S-855, A-1553/S-460, A-2056, A-2500, A-2527/S-459, S-585, S-886, S-1414/A-1054; 2) Energy efficiency and conservation – A-1095, A-1161, A-2231/S-499; and 3) Green buildings – A-950, A-1540, S-452/A-2222, S-995/A-1166, S-1765/A-918.
7. Net metering enables generators of electricity from renewable energy sources that are interconnected with

the power grid to receive a credit for the energy they generate against the energy they take from the grid.

8. An LREC is a legal entity licensed by the BPU and comprised of a customer group that shares the benefits of a central renewable energy generation.
9. "Class I renewable energy" means electric energy produced from solar technologies, photovoltaic technologies, wind energy, fuel cells, geothermal technologies, wave or tidal action, and methane from landfills or a biomass facility, provided that the biomass is cultivated and harvested in a sustainable manner. "Class II renewable energy" means electric energy produced at a resource recovery facility or hydropower facility, provided the facility is located where retail consumption is permitted, and provided further that the commissioner of environmental protection has determined the facility meets the highest standards and minimizes any impacts to the environment and local communities. N.J.S.A. 48:3-51. See also N.J.A.C. 14:8-2 for Class I and Class II requirements pertaining to the renewable portfolio standard.
10. Public hearings on the draft revisions to the current EMP were scheduled for March 29 and April 7 and April 13, 2011.
11. www.state.nj.us/dep/news-rel/2010/10_0058.htm.
12. Impervious surface/coverage can be an important and restrictive issue in the context of municipal land use regulation and stormwater management rules affecting development throughout the state, as well as in the context of specific rules affecting development in coastal areas, the Pinelands, and the Highlands.
13. N.J.S.A. 4:1C-1 *et seq.*

James Laskey and Christopher Stevenson are members of Norris, McLaughlin & Marcus, P.A. and practice in the firm's green buildings and energy group. Mr. Laskey's practice focuses on BPU regulatory and project finance matters. Mr. Stevenson concentrates on environmental and land use law matters. The views expressed herein are those of the authors and not necessarily those of their firm or any of the firm's clients.

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