

SARATOGA TECHNOLOGY + ENERGY PARK

NEXT STEP

A periodic update on the Saratoga Technology + Energy Park

September 2008 • Issue 6

STEP GAINS "SHOVEL READY" DESIGNATION

With a finalized land plan and transformative infrastructure updates presently underway, STEP has been awarded certification by New York State as "Shovel Ready," meaning that designated construction sites within the 280-acre campus are now prime property suitable for rapid development in the heart of New York's Tech Valley.



New York State Shovel Ready Certification means that sponsors have worked cooperatively with State and local officials to obtain the necessary permits and approvals for site development prior to businesses expressing specific interest in the location. Business leaders and site location consultants nationwide recognize New York's Shovel Ready designation as a mark of excellence. It is widely understood that these pre-permitted sites reduce development delays and construction costs, saving companies interested in relocating to New York State both time and money. STEP is one of only 30 sites statewide that have been certified as Shovel Ready. Energy technology companies seeking to locate in Tech Valley can now turn to STEP as their solution for an easy and expeditious development experience, providing dependable groundbreaking schedules, cost savings, and the benefit of joining the successful firms that already call STEP "home."

New York's Shovel Ready Site
Certification program is administered
jointly by Empire State Development
and the Governor's Office of Regulatory
Reform. Participating permitting agencies
include: New York State's Department
of Environmental Conservation and
Department of Transportation; the State
Office of Parks, Recreation, and Historic
Preservation; and the United States Army
Corps of Engineers. For more information, please visit step.nyserda.org, or
contact Tricia King at (518) 862-1090,
ext. 3479 or tek@nyserda.org.

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NEW YORK'S REVAMPED RENEWABLE ENERGY POLICY NETS NEW OPPORTUNITIES FOR BUSINESSES

CHANGE COMES AT THE RECOMMENDATION OF THE STATE'S RENEWABLE ENERGY TASK FORCE



"In addition to changing the State's dependency on traditional, fossil-fuelbased energy, this law will be a job creation vehicle, particularly in upstate New York."

Governor David A. Paterson
 State of New York

In a move aimed at strengthening New York's commitment to energy independence, Gov. David A. Paterson has reached an agreement with the State Legislature that will authorize increased development of renewable energy in the State. The effort comes as the latest evolution in New York's net metering policy, which was first adopted in 1997.

According to State officials, the bill will significantly expand net metering in three areas of renewable energy – solar, wind, and farm waste – with the hopes of spurring investment by homeowners, business owners, and farmers in facilities that generate energy from these clean renewable sources, as well as promoting job growth in the green sector.

"In addition to changing the State's dependency on traditional, fossil-fuel-based energy, this law will be a job creation vehicle, particularly in upstate New York," said Governor Paterson, adding that New York has an important role to play in the renewable energy industry. "If those kinds of resources are fully realized, it could relieve significant stress from our already overburdened utility grid and improve our energy independence."

This policy change comes at the recommendation of the State's Renewable Energy Task Force, that, in a report released earlier this year, characterized the old net metering law as a barrier to broader use of distributed renewable energy generation in the State. The new policy includes the following changes:

• Solar Power – The bill will expand the State's solar net metering program to apply to businesses and increase the size of eligible solar PV systems to 25 kilowatts for residential customers and up to two megawatts or the customer's peak load (whichever is less) for non-residential customers. The law will also increase the maximum amount of electricity the utility would be required to buy back through net metering. Additionally, the law will provide the Long Island Power Authority

(LIPA) with authorization to implement nonresidential solar electric net metering pursuant to Public Service Law requirements.

- Wind Power The bill authorizes net metering for wind technology for all utility customer classes, including non-residential classes. Previously, the law authorized such systems for residential and farm operations only. The new law will also allow non-residential wind electric generators to net meter up to two megawatts, or their peak load (whichever is less), and increase the maximum size of wind facilities for farm operations from 125 kilowatts to 500 kilowatts. Caps on netmetering enrollment in utility service territories will also be increased.
- Farm Waste The size of a farm waste electric generation system that can be net metered will increase from 400 kilowatts to 500 kilowatts.

WHAT'S NEW AT STEP

There is no denying that the Saratoga Technology + Energy Park (STEP) is undergoing an extensive and exciting transformation into a vibrant center for energy research and technology production. Such change is demonstrated by the execution of planned improvements, in the form of both programmatic and physical initiatives. The ultimate goal is to create a resilient environment that affords employees a safe, comfortable, and enriching work experience. This is accomplished by setting intellectual priorities and aligning physical development with STEP's ambitious mission.

The backbone of STEP's physical development is the newly finalized comprehensive land plan. In the weeks, months, and years ahead, improvements to STEP's existing infrastructure will occur, and new design elements will take shape.

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Below is a preview of several visual enhancements that you can expect to see in the near future at STEP:

- The installation of new lighting fixtures at existing roadway intersections and along the path that parallels Hermes Road between Dunning Street and the Stonebreak Road extension will provide nighttime illumination for drivers and pedestrians. The modern fixtures offer the latest and most efficient lighting technology, emit no light pollution or glare, and operate on an astronomical timer. They are LEED-compliant and in accordance with the Dark Skies Initiative. Installation will be completed by the end of September 2008.
- Branding STEP and its facilities is important, so a firm was contracted to install a unique "gateway" sign at the park's entrance, along with identification and directional signs throughout STEP. It is anticipated that all work on this project will be completed by late-September.
- Construction proposals were recently accepted for a contract to widen Hermes Road and a portion of Access Road, as well as to replace the exterior lighting poles and fixtures at the 10 Hermes Road facility.







CREATING IDENTITY - A firm has been contracted to install a unique "gateway" sign at the park's entrance, along with identification and directional signs throughout STEP. Its is anticipated that all work on this project will be completed by late-September.

NEW SOLAR POWER INVERTER TO BE PRODUCED AT STEP

TerraWatt Power™, LLC is now entering the solar photovoltaic (PV) energy market with its new, technologically advanced ecoJoule® 2500 inverter, which will be produced in New York State. The device is designed to be the heart of solar PV systems, serving as the interface between the PV array and the home or building's electrical system and converting the Direct Current (DC) electricity flowing from the solar panels to usable Alternating Current (AC).

With the ecoJoule inverter the homeowner will have a more reliable solar energy system that will produce an average of six-to-eight percent more electricity than other inverters. This will save homeowners hundreds of dollars a year on their electric bills. TerraWatt Power™ is now taking this product to market. The ecoJoule inverter was recently on display at the American Solar Energy Society's Solar 2008 Conference & Exhibition in San Diego, CA and at the Intersolar North America

Exhibition in San Francisco, CA.

"The ecoJoule inverter's unique set of features and benefits drew quite a crowd at these shows," said McDaniel. "There are many inverters on the market these days, but

none of them can provide homeowners with the multitude of functionalities of our inverter."

With financial assistance from the New York State Energy Research and Development Authority (NYSERDA), the electronic components will be manufactured in New York State. The inverters will then be assembled and tested by TerraWatt PowerTM personnel at the Saratoga Technology + Energy Park (STEP) prior to being shipped to the customer.

As sales grow, TerraWatt PowerTM plans to hire additional staff and expand its presence at STEP. "The availability of resources in the Tech Valley region and the support provided by both NYSERDA and the growing STEP community all play, and will continue to play, a vital role in the development of our technologies and their deployment into real world markets," McDaniel said. "In addition, we are really looking forward to the opening of the Hudson Valley Community College TEC-SMART facility here at STEP. It will provide us with the skilled technicians that we will need as our business continues to grow."

For more information visit the company's Website: www.TerraWattPower.com





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J. Gary McDaniel, President and General Manager of TerraWatt Power™



The ecoJoule® 2500 inverter (photo by Donna Vlahos Abbott)

TerraWatt Power'sTM ecoJoule inverter is a breakthrough in solar technology in that the inverter has been designed to maximize energy production when solar panels become shaded by objects such as trees, chimneys, or nearby buildings. This kind of shading, often referred to as partial or systemic shade, adversely affects the productivity of other solar power systems. The ecoJoule® 2500 inverter uses solar power to its maximum potential because of the inverter's unparalleled ability to produce more power under

"This is a significant development for solar power," said J. Gary McDaniel, President and General Manager of TerraWatt PowerTM. "We have essentially eliminated one of the major problems associated with solar energy systems. Shade happens, so we found an effective way to deal with it."

these circumstances.

Another significant feature of the ecoJoule inverter is its unique ability to function when the utility grid goes down. In the event of a power outage, other inverters simply shut down and cease producing power – even if the sun is shining. With the ecoJoule® 2500 inverter, if the sun is shining, you have power. "Our research and field experience prove that we provide the best experience for our customers," added Dr. David Torrey, Chief Technology Officer. "Our goal is to make solar power easy and accessible. Every detail is designed to make installation and usage as efficient and straightforward as possible."



TEC-SMART FACILITY CONSTRUCTION SLATED TO BEGIN IN MARCH OF 2009

A fter a year of intensive planning and preparation, Hudson Valley Community College (HVCC) announced that its goal of bringing a

state-of-the-art workforce training facility to the Saratoga Technology + Energy Park (STEP) is soon to be realized.

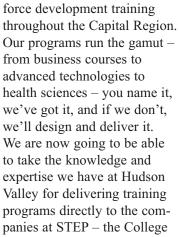
TEC-SMART, the Training and Education Center for Semiconductor Manufacturing and Alternative and Renewable Technologies, is expected to be fully operational by early 2010. Construction of its LEED-certified complex is scheduled to will ess begin in March 2009.

The \$13.5 million project is a collaborative venture between HVCC and the New York State Energy Research and Development Authority (NYSERDA) that will serve as an invaluable resource contributing to the success of STEP tenant companies and all of New York State's high-tech and renewable energy industry.

"We're looking forward to collaborating with the companies that currently exist at STEP, as well as the smaller and new incubator companies," said Joseph T. Sarubbi, executive director of TEC-SMART and HVCC professor of 29 years. "As each business grows, we will be able to design and deliver customized workforce training programs that meet their needs."

TEC-SMART will support workforce education programs in the areas of photovoltaic technologies, large and small wind technology, geothermal technology, alternative fuels, energy efficiency, and semiconductor manufacturing through a hands-on learning environment. The complex will include laboratory, office, and classroom space; meeting and presentation facilities; as well as a simulated clean room, all of which will afford trainees practical experience using the tools, techniques, and methodologies that are integral to success in the rapidly evolving clean-energy industry.

According to Sarubbi, HVCC is no stranger to workforce training and adult education. "The College has a rich history of providing work-



will essentially be right in their own backyard."

"Hudson Valley Community College is certainly thankful that former State Senate Majority Leader Joseph L. Bruno shared our vision for the need to have a renewable energy and semiconductor manufacturing training facility in New York's Tech Valley," added Sarubbi, "and we are extremely excited to be partnering with NYSERDA on such a great and necessary venture."

Sarubbi went on to say that TEC-SMART will be the first training facility of its kind on the East Coast, delivering the skilled technicians needed for today's emerging technologies. "With NYSERDA as our partner at TEC-SMART, Hudson Valley Community College will be able to continue to forge strong industry, education, and government collaborations," he said.



"We are extremely excited to be partnering with NYSERDA on such a great and necessary venture."

- Joseph T. Sarubbi, Executive Director of TEC-SMART

NYSERDA FUNDING OPPORTUNITIES

Clean Energy Technology
Manufacturing Incentive
Program – PON 1176
NYSERDA invites proposals to
expand the level of manufacturing of clean energy technology
products in New York.

Development at the Saratoga Technology + Energy Park (STEP) – PON 1116 NYSERDA invites proposals from business entities or developers (Company, Developer, or collectively, Applicant) seeking to construct a building and related improvement at STEP in the Town of Malta, Saratoga County, New York.

Industrial Process & Product Innovation (IPPI) – PON 1190

The program will support research, development, demonstration, commercialization and deployment of energy-efficient products targeted at industrial applications and innovative and underused manufacturing process improvements.

Environmentally Preferred Power Systems and Energy Storage Technologies - PON 1200 This program supports the development, demonstration, and commercialization of environmentally preferred power systems and energy storage technologies.

Green and Energy Efficient
Building Products and
Systems - PON 1266
NYSERDA seeks proposals to
support the development of innovative products and systems for
residential, commercial, and institutional buildings in New York
State. These products and systems will improve the safety,
energy, and environmental performance of buildings.

For more information, visit www.nyserda.org/funding

HISTORIC ENERGY EFFICIENCY PROGRAM UNDERWAY

The New York State Public Service
Commission (PSC), recently commenced
its Energy Efficiency Portfolio Standard (EEPS),
a historic and far-reaching energy efficiency
initiative that seeks to reverse the pattern of
ever-increasing energy use in New York by
reducing electricity usage by 15 percent of
projected levels by 2015; one of the most
aggressive efficiency programs in the nation.

EEPS is designed to meet targets and goals for energy efficiency to contribute to the reduction of the State's dependence upon imported and fossil fuel-based generation, reduce its greenhouse gas emissions, reduce participating customer bills, stimulate economic development, and create jobs in the clean energy sector for New Yorkers.

"Never before have we faced such significant energy challenges," said PSC Chairman Garry Brown. "The unprecedented rise in energy prices we are experiencing puts to rest any doubts the market is changing. To confront this new and unpleasant reality, we must immediately take bold steps to improve energy efficiency and reduce consumption of ever more costly fossil fuels that we have come to depend on. Doing nothing should not be considered as an option."

The energy efficiency undertaking – also called the "15 by 15" initiative – is designed to forestall an expected rise in energy consumption. At current trends, by 2015, electric energy usage in New York is estimated to be 11 percent higher than current levels. These factors, combined with expected fuel price increases and supply uncertainty, as well as the need to reduce greenhouse gas emissions, make it necessary to create energy efficiency programs and quickly find ways to reduce energy use.

When fully funded, the program is expected to provide more than \$4 billion in benefits to customers through 2015. In addition, it is anticipated that thousands of jobs will be created to support the new energy efficiency programs – retrofitting outdated, inefficient residential, commercial, and industrial properties; installing new energy efficient equipment; and informing the public about the new opportunities for savings on energy bills – by 2015.

One of New York State's highest energy priorities is to develop and encourage cost-effective energy efficiency over the long-term and to commence or augment near-term efficiency measures immediately. This initiative is in the context of the broader State policies for the development of the clean energy industry and economy in the State:

- Policies including Executive Order No. 2 of Gov. David Paterson;
- The Renewable Portfolio Standard;
- The Regional Greenhouse Gas Initiative;
- Improvements in State energy building codes and appliance efficiency standards; and
- The Renewable Energy Task Force Report of then-Lt. Gov. Paterson.

EEPS and the 15 by 15 initiative will be a joint effort by NYSERDA, utility companies, and other entities that are capable of administering and delivering programs and are willing and able to be accountable for results.

How Does an Extra \$1.5 Million Sound?

If your business is looking to start or expand manufacturing operations in New York State, then it is time to turn to NYSERDA.

NYSERDA has pledged a total of \$10 million to the Renewable, Clean Energy, and Energy Efficiency Product Manufacturing Incentive Program (PON 1176) that offers firms up to \$1.5 million per project to support the development or expansion of energy technology-related manufacturing facilities.

This program is designed to provide New York electricity consumers with greater access to renewable, clean-energy, and energy-efficient products by providing financial assistance for developing manufacturing facilities to produce eligible products in New York State.

For more information on this funding opportunity, please visit www.nyserda.org, or contact Tricia King at (518) 862-1090, ext. 3479 or tek@nyserda.org.

NYSERDA HIRES NEW STEP TENANT LIAISON

The New York State Energy Research and Development Authority (NYSERDA) welcomes Tricia King as the newest member of the STEP Team. In her new role as Tenant Liaison, Ms. King will assist with STEP marketing and tenant attraction activities as well as interacting with current tenants to maintain on-going relationships to ensure customer satisfaction.

In addition, Ms. King will work to build new and support existing STEP tenant amenities, as well as work with the STEP team to attract new clean energy and environmental technology companies to the STEP campus. Ms. King most recently worked at Hudson Valley Community College as a Program Assistant for TEC-SMART (Training and Education Center for Semi-Conductor Manufacturing and Alternative and Renewable Technologies). Tricia holds an Associates Degree in Business from Hudson Valley Community College.

Tricia is excited to be part of NYSERDA and the STEP Team. She can be reached at (518) 862-1090, ext. 3479, or tek@nyserda.org.



Tricia King, STEP Tenant Liaison

STEP Networking BBQ: A Rainy Success

A rainy, but pleasant, Wednesday afternoon greeted a crowd of more than 100 current and prospective STEP tenant company employees, contractors, backers, and friends at the Annual STEP Networking BBQ on July 23, 2008. The event was held in front of the new United STEP One facility at 107 Hermes Road.

"We were delighted to have such a great turnout at this year's networking BBQ," said Kelly Tyler, NYSERDA Senior Project Manager of Economic Development. "It once again proved to be a great opportunity for everyone at STEP to meet and relax in an informal setting."

Those in attendance enjoyed a BBQ chicken and pulled pork lunch catered by Giffy's Bar-B-Q and indulged in dessert provided by Ben and Jerry's, complements of the United Group of Companies. Guests at the event were eager to experience the evolution that STEP has undergone since opening more than seven years ago. Many of those guests joined principals from the United Group of Companies as they toured United's 107 Hermes Road complex, which is nearly leased to capacity.

Tyler says the Networking BBQ, along with other NYSERDA-sponsored programs offered at STEP, underpins the park's success.

"One of NYSERDA's most important roles at STEP is to support creative development and professional networking among our tenant companies," she said, "and this activity is just one of many we offer that are intended to facilitate a favorable and advantageous business environment."



NETWORKING BBQ -

STEP tenant company employees enjoyed a catered lunch and an opportunity to build working relationships with energy technology industry professionals from throughout the STEP community

NEXT STEP

Next STEP is a publication of the New York State Energy Research and Development Authority (NYSERDA) intended to inform the Saratoga Technology + Energy Park (STEP) community of the rapidly changing environment of New York's energy technology industry and provide information on resources available to STEP tenant companies and their employees. Please submit comments, suggestions, and story ideas (such as company and employee profiles, recent developments, etc.) to step@nyserda.org.



State of New York

David A. Paterson, Governor

New York State Energy Research and Development Authority Vincent A. DeIorio, Esq., Chairman

STEP is owned and operated by NYSERDA on behalf of the State of New York.



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NYSERDA TO MARKET STEP AT SOLAR POWER INTERNATIONAL

In October the NYSERDA STEP Team will travel to San Diego, CA, to promote STEP and New York State as a prime place for businesses in the solar industry to grow and succeed.

Scheduled for October 13th through 16th, Solar Power International, previously called Solar Power Conference and Expo, was created in 2004 when the Solar Electric Power Association (SEPA) and the Solar Energy Industries Association (SEIA) joined together in partnership to fill an obvious void: the U.S. was missing a business-to-business solar conference and expo. With an industry

growth rate of more than 40% per year, there was a need for a single event where industry could come together with potential customers, policymakers, investors, and other parties necessary for continued rapid growth.

With over 12,500 attendees expected, the STEP team will enthusiastically promote STEP and its tenant companies at the premiere solar event in the United States. For more information, please contact STEP Tenant Liaison, Tricia King, at (518) 862-1090, ext. 3479.

CARPOOL PROGRAM FOR STEP TENANTS

In light of rising fuel costs and environmental concerns, STEP tenant company employees are encouraged to take advantage of iPool2, a free Web-based program hosted by the Capital District Transportation

Committee (CDTC). Users of iPool2 can easily identify transportation alternatives available to them throughout the Capital

Region and surrounding areas including Albany, Rensselaer, Saratoga, Schenectady, Fulton/Montgomery, Schoharie, and Columbia counties, including carpools, transit, and other commuter services.

One of iPool2's most powerful applications is its carpool partner matching tool. As a potential carpooler, iPool2 can help you discretely identify other interested participants who live near you and have similar sched-

ules and preferences.

NYSERDA encourages STEP tenant company employees to take advantage of this new

business amenity by logging on to www.ipool2.org today to locate a carpool partner or simply discover the most economical and environmentally-friendly way to get to work.

STEP SPEAKER SERIES

The STEP Speaker Series is a free program hosted by NYSERDA and open to all STEP tenant company employees. Topics range from best practice strategies to personal finance and offer valuable information commensurate with the dynamics of the modern business world. Four expert speakers will be featured in the 2008-2009 series, which is scheduled to begin this winter.

Our first speaker, Joan Oliver, MLS, will discuss grants. Ms. Oliver's career as a grant writer grew from her experience at the New York State Department of Education, where she worked as an Associate in Education Planning and Evaluation and she administered \$8.9 million in federal K – 12 educational programs. That experience as a grant

manager, in combination with graduate education in research, is the foundation of her grant writing experience. She crafted an award winning, nationally acknowledged service-learning program; served as a New York representative to the U.S. Department of Education; and authored over \$12 million in grant funds. She holds a master's degree in library and information science and trained with the Grantsmanship Center and the Foundation Center in advanced proposal development.

Please join us for this informative event on Wednesday, October 29, 2008 at 12:00 pm at STEP. If interested in attending, please RSVP by October 20 to step@nyserda.org.