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## Message from the President



Over the past few months, the Connecticut Clean Energy Fund (CCEF) has seen a tremendous increase in applications and approvals for on-site renewable distributed generation.

The CCEF On-Site Renewable DG Program provides financial support to stimulate demand for behind-the-meter installations of renewable energy at Connecticut commercial, industrial and institutional (CI&I) buildings. Project development work by the applicants and the staff over the past year has resulted in an unprecedented increase in the number of projects, funding amounts, and energy production. In comparison to fiscal year 2006, during fiscal year 2007, we have experienced a 200% increase in the number of projects, a 464% increase in the total funding approved under the On-

## 160 MW of Renewable Energy Projects Selected Under Round 2 of Project 100

The Connecticut Clean Energy Fund (CCEF) screened, selected and forwarded **11 renewable energy projects totaling 160 MW** to the state's two electric distribution companies, the Connecticut Light and Power Company (CL&P) and the United Illuminating Company (UI), under Round 2 of Project 100. These electric distribution companies will review CCEF's recommendations and perform additional analyses leading to their selection of projects to receive long-term power purchase agreements.

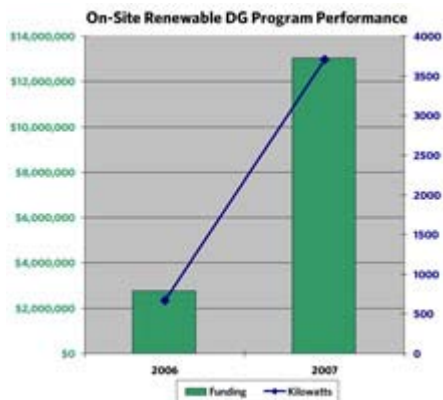
This was the second round of projects selected through Project 100, an innovative program created by the Connecticut General Assembly to develop not less than 100 megawatts (MW) of renewable energy generation for the benefit of all Connecticut consumers. Round 1 of Project 100 resulted in the electric distribution companies negotiating a long-term power purchase contract representing approximately 15 MW of new renewable generation. The groundbreaking legislation that launched Project 100 was created because large renewable energy projects are difficult to finance without long-term contracts. Under the 2003 state energy act, Connecticut's two major utilities are required to enter into long-term power purchase agreements with developers to purchase not less than 100 MW of Class I renewable energy. In the implementation process, the Connecticut Clean Energy Fund is charged with issuing requests for proposals (RFPs) from developers and the initial screening and analysis to select projects that will benefit all Connecticut consumers. After the selection process, the best projects are forwarded to CL&P and UI for further review and contract negotiation. Those given the "green light" through long-term contracts also receive funding from CCEF.

CCEF implemented a thorough, 4-step review process to vet the projects submitted. Projects were first assessed and scored by the Evaluation Working Group, consisting of three independent renewable-energy experts and one CCEF staff member. Working Group members scored projects based on cost to ratepayers, benefit to ratepayers, feasibility and financial viability. Projects, along with their assessments and scores, were then reviewed by the 6-member Steering Committee, consisting of representatives from the Connecticut Department of Environmental Protection, Connecticut Development Authority, Energy & Environmental Ventures and Clean Energy Advisory Committee members. Projects on a "short list" identified by this committee were then evaluated by the Clean Energy Advisory Committee, with a final review and authorization of funding rendered by the Clean Energy Investment Committee of Connecticut Innovations.

The following projects representing a diversity of fuel sources and technologies were selected to be recommended to the electric distribution



Site DG Program and a 554% increase in the amount of kilowatts being generated. Click the chart below for some additional information depicting the increase in funding and energy production for these projects.



In addition to our own efforts to promote the On-Site Renewable DG Program, there are several factors that have contributed to the growing success of the program. As part of our monitoring and evaluation of clean energy awareness, we saw a 400% growth in local climate change media coverage from 2006 to 2007. Businesses throughout the state are increasingly aware of rising energy costs and the benefit of on-site production to help stabilize those costs. For many companies, generating power from renewable sources is only a part of their larger efforts to reduce their corporate environmental carbon footprint.

CCEF's vision that Connecticut will be a leader in attaining a sustainable balance of energy production, economic growth, and environmental impact has become the vision of an increasing number of Connecticut businesses. The dramatic growth in popularity of our On-Site Renewable DG Program is a true indication that CCEF's activities are making a difference. We are working with the citizens of Connecticut toward energy independence, climate change solutions, better health and economic growth.

Lise Dondy  
President  
Connecticut Clean Energy Fund

## On-Site Renewable DG Program Update

## Connecticut Clean Energy Fund Grant to Support Solar PV Installation at New Canaan Country School

The Connecticut Clean Energy Fund

companies under the Round 2 competition:

- A 7.9 megawatt fuel cell/turbo expander project by FuelCell Energy and Enbridge Inc. in Milford, Conn.
- A 29.9 megawatt landfill gas project by EMCOR Energy Services in South Norwalk, Conn.
- A 30 megawatt biomass project by NuPower, LLC, and Decker Energy International Inc. in Plainfield, Conn.
- A 19.6 megawatt fuel cell project by Elemental Power Group in Danbury, Conn.
- A 4.6 megawatt fuel cell project by EMCOR Energy Services in Stamford, Conn.
- A 3 megawatt biomass project by Clearview Power, LLC, in East Canaan, Conn.
- A 2.3 megawatt fuel cell project by EMCOR Energy Services in Waterbury, Conn.
- A 19.6 megawatt fuel cell project by Elemental Power Group in Bridgeport, Conn.
- A 13.7 megawatt fuel cell project by FuelCell Energy, Pure Power, LLC, and Pinpoint Power, LLC, in Bridgeport, Conn.
- A 1 megawatt fuel cell project by UTC Power, LLC, in Wallingford, Conn.
- A 27.8 megawatt biomass project by Clearview Power, LLC, in Bozrah, Conn.

"We were extremely pleased with the quality of the projects that were submitted to CCEF for consideration under the Round 2 competition," said **Timothy Bowles, chair of the Connecticut Clean Energy Advisory Committee**. "It was a challenge to narrow down the field to the eleven that we selected, and it is our hope that the utilities will move forward with long-term contracts with all of these projects." Bowles added, "If all eleven projects are indeed launched, Connecticut's citizens will benefit from the implementation of clean electricity generation on a significant scale."

**Jerome Peters, chair of the Project 100 Steering Committee** said, "It is encouraging to see the high level of innovation and excitement within the growing clean energy community in the state. I am confident that our thorough and objective vetting process allowed us to identify those projects that have the potential to provide the greatest level of fuel and technological diversity while minimizing the cost to Connecticut's ratepayers." Peters continued, "The companies that proposed these projects are a great asset to the state, advancing an industry vital to our economy, our environment and our quality of life in Connecticut."

## Recent Projects

### Derby and Willimantic BJ's Wholesale Clubs Unveil "Twin" Solar PV Arrays – Largest Retail-based Installations in Connecticut

On April 11, the Connecticut Clean Energy Fund (CCEF), BJ's Wholesale Club and Conservation Services Group (CSG) hosted a dedication ceremony to celebrate the unveiling of **two 82.8-kilowatt DC** commercial solar photovoltaic (PV) systems that have been installed on the rooftops of two **Connecticut BJ's Wholesale Clubs** – the 80,160 square foot retail store in **Derby** and the 68,160 square foot retail store in **Willimantic**. The installations were made possible, in part, by a combined grant of \$742,000 from CCEF through its On-Site Renewable Distributed Generation Program. The balance of the system cost is being financed by the system developer and owner, **Conservation Services Group (CSG)**.



Among the officials on hand for the BJ's

(CCEF) recently announced that the Clean Energy Investment Committee has approved a **grant of \$126,000 to New Canaan Country School (NCCS)** to help defray approximately half the cost of installing a **27.6-kilowatt solar photovoltaic (PV) system** on the rooftop of the school's Stevens Upper School Building. When installed, the solar PV system is expected to generate about 5.6% of the school's total electrical needs.

The Stevens Upper School Building, which houses academic classrooms for grades seven through nine, is undergoing a major renovation and expansion that will be completed in September of 2007. Through the use of designs and systems that emphasize energy and water efficiency as well as materials conservation, this LEED-registered project will both support and teach the principles of sustainability.

**Lise Dondy**, president of CCEF, stated, "This installation is an excellent example of incorporating solar PV into a high performance school building. In addition to providing power during the peak demand periods in our congested Southwest Connecticut zone, the facility will help teach hundreds of young people about renewable energy technology and sustainability."

"NCCS is gratified that our efforts in sustainable building practices have been recognized by this grant," said **Tim Bazemore, New Canaan Country School headmaster**. "Creating a learning environment that supports both teaching and the practical application of sustainability is at the core of the school's mission."

## **Grant Approved for Solar PV Installation at R.C. Bigelow**

The Connecticut Clean Energy Fund's Clean Energy Investment Committee has approved a grant of **\$777,000 to the R.C. Bigelow Company**, also known as the **Bigelow Tea Company**, to defray approximately 55% of the cost of installing a **171-kilowatt solar photovoltaic (PV) system** at the company's Fairfield, Connecticut, headquarters facility. The solar PV system will be mounted on the rooftops of four different building levels and will supply approximately 195,600 kilowatt hours annually, or 6.7% of the total electrical needs of the headquarters complex.

**Cindi Bigelow, co-president of R.C. Bigelow**, commented, "We are extremely delighted to be part of this renewable energy program. Doing our part to make the planet a better place is very important to all of us at Bigelow. This solar project is

Wholesale Club dedication ceremony in Derby were (from right to left), **State Senator Joseph Crisco, Derby Mayor Anthony Staffieri, and State Representative Linda Gentile**.

The solar arrays in Derby and Willimantic, together covering nearly 16,000 square feet of roof space or one third the size of a football field, are the largest solar PV installations at retail sites in Connecticut and will have a measurable positive impact on the local environment. It is estimated that the environment will benefit from a combined reduction in CO<sub>2</sub> emissions to the tune of about 86 tons per year, the equivalent of about 250 trees planted. The two systems will generate a total of approximately 180,000 kWh of electricity annually.

At the event, representatives from CCEF, BJ's Wholesale Club and CSG were on hand to make remarks, as were **State Senator Joseph Crisco, State Representative Linda Gentile and Derby Mayor Anthony Staffieri**. Fifth graders from Bradley Elementary School in Derby also participated in the dedication ceremony.

**Lise Dondy**, president of CCEF, stated, "The partnership of BJ's Wholesale Club and Conservation Services Group is an excellent example of a growing trend, linking environmental stewardship with sound business practices. BJ's will enjoy the benefits of energy cost control while CSG manages the operations and sells the clean power back to BJ's. Connecticut as a whole benefits from the reduced peak load on the grid and greenhouse gas reduction. We expect to see many more installations taking place under this business model."

"At BJ's Wholesale Club, we believe that a comprehensive energy management plan must support energy efficiency, commodity purchasing strategies and the application of innovative and environmentally beneficial technologies such as renewable energy," says **Michael Pace, BJ's Wholesale Club energy engineer**. "Solar power partnerships like this one are an important component of BJ's overall commitment to reducing energy consumption and preserving the environment for future generations."

**Wanda Reindorf, CSG's chief financial officer and executive vice president**, said, "For the past eight years, CSG and BJ's have developed a successful partnership that has resulted in 14 PV installations throughout the Northeast. We hope to encourage the development of clean solar electric power, which benefits the environment, the demand on the grid and energy costs, everywhere. We applaud BJ's for taking a prominent role in this important effort and hope other businesses take their lead." In developing these two Connecticut-based solar PV projects for BJ's, CSG also partnered with Energy Federation Incorporated, a distributor of energy efficiency and renewable energy products and an investor in the Derby and Willimantic BJ's solar plants.

Live production data from the Derby solar PV installation can be viewed online at <http://www.vaeis.com/site/info.php?site=F55E7003B41D0189>

## **Pine Point School of Stonington Unveils 72.6-kilowatt Solar Electric System**

A dedication event was held April 2 at **Pine Point School of Stonington, Connecticut**, to celebrate the installation of a **72.6-kilowatt solar photovoltaic (PV) system** on the rooftop of this independent day school serving students from pre-school through grade 9. The installation of the 330-



just one more example of how we are trying to be more environmentally friendly. We could not be more pleased to have partnered with the town of Fairfield and their 'Green Tea Talks' to help spread the word of what each person can do to make environmentally-responsible choices. We are continually examining different ways that Bigelow can preserve, protect and promote a sustainable future in every part of our business operation."

## The Cool It! Climate Change Challenge

The Connecticut Clean Energy Fund (CCEF) was proud to be a sponsor to the inaugural **Cool It Climate Change Challenge**, a competition in which students learned about the science of climate change and then created real local solutions to this global problem. Cool It is a program of **Clean Air Cool Planet** and the **Connecticut Science Center Collaborative**.

Following a public exhibition at the state's Legislative Office Building in late March, the work of more than 150 middle and high school students were judged by a panel of state environmental leaders from major Connecticut universities, corporations and environmental organizations. The **Cool Solutions to Climate Change Awards** were given to teams from seven schools across Connecticut who won cash awards for their innovative projects.

Winning the \$4,000 first place award in the high school division was the student team from **E.O. Smith High School in Mansfield**, with a comprehensive plan to educate and encourage their school and town to reduce greenhouse gas emissions. One of their strategies was to get residents to sign up for CTCleanEnergyOptions on their electric bill. The team has already received a grant from the town's Clean Energy Task Force to help implement the project. Mansfield was one of nearly 30 towns that have received **Community Innovations Grants** from the Connecticut Clean Energy Fund.

"The Connecticut Clean Energy Fund is proud to have been a sponsor of the inaugural Cool It Climate Change Challenge," said **Bob Wall, CCEF's director of energy market initiatives**. "One of our objectives is to prepare the next generation to address the challenges that society faces in creating a sustainable energy future. This competition has demonstrated that Connecticut has an abundance of outstanding young leaders who recognize that clean energy can play an important part in the local solutions to

panel solar PV system was **made possible through a grant of \$285,000** from the Connecticut Clean Energy Fund's On-Site Renewable Distributed Generation Program. The grant covered approximately 62% of the cost of the solar PV installation. The balance of the system cost is being financed by solar developer and installer SolarWrights Inc.

School administrators and students, town officials and others gathered at noon to hear about the school's support of solar energy and energy conservation. Pine Point School's installation of solar panels is just one of many steps the school has taken in the past two years to lessen its carbon footprint. The solar panels, which will partially power the school's four buildings, will ultimately provide over one third of the school's electricity.



School student government; Bob Chew, president and founder of SolarWrights; and Bill Brown, first selectman of Stonington.

At the dedication event, remarks were made by Paul Geise, head of school; Timothy Bowles, chair of the Connecticut Clean Energy Advisory Committee; U.S. Senator Joseph Lieberman (shown in the photo on the left with Tim Bowles seated to his left); U.S. Representative Joseph Courtney; State Senator Andrew Maynard; Omay Elphick, deputy director, MassEnergy and Rhode Island People's Power & Light; Tom Owen '08, president of Pine Point

"This installation is an excellent example of incorporating solar PV into a high performance school building. In addition to providing a significant portion of the school's electricity, Pine Point's solar installation will help teach hundreds of young people about renewable energy technology and sustainability," said Lise Dondy, president of the Connecticut Clean Energy Fund. Dondy continued, "What's more, this is the **first small-scale project in Connecticut to incorporate a creative power purchase agreement** between the system developer and the host site." Under this type of agreement, which is more commonly associated with larger projects, the system developer will retain ownership of the solar PV system and sell 'clean' power to the host site at a fixed price. With such an arrangement, Pine Point School did not have to incur the cost of purchasing the system, and it will benefit from fixing its price of electricity, as electric prices may increase in the future.

**Pine Point School's head of school, Paul Geise**, commented, "Pine Point is delighted to serve as a model for both solid stewardship of this precious planet we all share as well as an educational leader on how we might best prepare our children for the complexities of the 21st century." He added, "Exploring renewable energy sources is only one component of our comprehensive approach to environmental sustainability. With the installation of a special software program, I'm also excited that our students will be able to monitor our energy generation. There is a wealth of opportunities for learning. On so many different levels, this just makes sense for us to be involved in this area."

"With our Eastern Connecticut office in Stonington, this project was a great way to promote solar energy right in our back yard," said **Robert Chew, president and founder of SolarWrights Inc.** "Pine Point School's enthusiasm for this project has been unrivaled and the school's commitment to educating future generations about the importance of renewable energy is an inspiration."

Live production data from this solar PV installation can be viewed online at <http://www.vaeis.com/site/info.php?site=F55E7003B41D0189>

## Event Calendar

Date	Event	Location
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climate change."

"It is inspiring to see students from across the state becoming effective climate leaders in their schools and communities," said **Robert Sibley, Cool It! Program Manager**. "They've combined science learning and civic responsibility, and that's a winning combination for all of us."

A full list of the winning teams, schools and communities is at [www.coolitchallenge.org](http://www.coolitchallenge.org).

May 30	Westport Fire Station PV Dedication	Westport
June 9	Flamig Farm PV Dedication at <i>Eggstock</i>	West Simsbury
June 12	Clear the Air Forum	Fairfield
June 14-16	Fuel Cell 2007	Hyatt Regency, Rochester, NY
June 18-20	ASME's 5th International Fuel Cell Science, Engineering & Technology Conference	New York Marriott, NY

For complete details of these and other events, please visit the [Events page at www.ctinnovations.com](http://www.ctinnovations.com)

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