



CIREnews

News from the Cape & Islands Renewable Energy Collaborative

Education & Training

Clean Energy Curriculum Development Project Gathers Momentum

Classes are under way again at local schools, providing renewed opportunities for students of all ages to jumpstart careers in the clean energy sector and for communities to build human capital in an industry that could yield hundreds of new jobs in southeastern Massachusetts within the next 5 years.

[Under a grant from the National Science Foundation, Cape Cod Community College \(CCCC\) is leading the regional effort to create a highly skilled workforce in clean energy technologies.](#) CCCC's partners include Cape Cod Tech, Upper Cape Cod Tech, Massachusetts Maritime Academy, Cape & Island Self-Reliance, Waquoit Bay National Estuarine Research Reserve (WBNERR), and UMass Dartmouth.

At CCCC this fall, Richard Lawrence of Self-Reliance is giving instruction on renewable technologies, and Kevin Galligan of Cape Light Compact (CLC) is teaching about energy efficiency and conservation. At the two tech schools, hands-on learning opportunities are being created by on-site energy management, lighting, solar photovoltaic (PV), solar thermal, and wind monitoring systems.

By spring 2005, an innovative, web-based teaching tool—developed based on technology from [HighStreet Networks](#)—will be providing all students with real-time access to operational, meteorological, and other data from clean energy technologies sited in the region.

► **Mary Jane Curran**, CCCC, mjcurran@capecod.edu, 508.362.2131 x 4392

Market Building

Investments Planned to Transform Renewables Market and Build Human Capital

The [Cape Cod Economic Development Council](#) (EDC) is collaborating with local organizations to develop an event series on green buildings in 2005. This series, one of three new areas where the EDC plans to invest Cape & Islands license plate funds, will help

accelerate market transformation for renewable and energy-efficient technologies.

In many building applications, present market conditions favor less efficient energy uses and supply options that have adverse impacts on local environments and communities. Incentive programs encourage site-specific installations of cleaner and green technologies. Broader market penetration may be achieved by promoting life-cycle advantages, turning market actors into allies, and designing policy interventions.

The EDC-cosponsored event series will involve builders, architects, engineers, the construction trades, building and equipment suppliers, advocacy groups, government officials, and other stakeholders in identifying and breaking down barriers to sustainable design and green construction. These events will leverage existing outreach, education, and incentive programs offered in local communities.

Already a major funder of CCCC's energy education programs, EDC also plans to support curriculum development at Cape Cod Tech and Upper Cape Cod Tech and a conference on the connections between renewables and economic growth in Barnstable County.

► **Dan Dray**, EDC, ddray@cape.com, 508.362.8051



Once CCCC's Applied Technology Center is complete, students will learn in a building created by cleaner and green technologies and sustainable design practices.

Strategic Planning

Technology Roadmap Defines R&D Priorities for a Sustainable Energy Future

A new report introduces collaborative visions of a global energy economy that serves and sustains human society, and it outlines strategies for accelerating the development and adoption of renewable technologies and other advances in energy supply, delivery, and use.

[*Electricity Technology Roadmap: Meeting the Critical Challenges of the 21st Century*](#) was published by EPRI, a nonprofit research center funded by more than 1,000 organizations in 40 countries. Its conclusions are based on 14 “limiting challenge” studies through which the industry, government, nonprofit, and R&D sectors explored issues expected to pace technological progress and influence the human condition through 2050.

The “Eco-Asset Management” study, directed by Water Energy & Ecology Information Services (WEEinfo), focused on institutional and technical barriers to the valuation of ecological services and to the cost-efficient resolution of resource management issues such as transboundary pollution, climate change, and biodiversity. It defined an R&D strategy to support adoption of ecologically sound, market-based policies that stimulate investment in renewables, energy efficiency, environmental protection, and other key areas.

To accelerate progress toward a sustainable energy future, EPRI is coordinating with government and industry stakeholders to mobilize public-private action around the Roadmap’s recommendations.

► **Chris Powicki**, WEEinfo, chrisp@weeinfo.com, 508.362.9599

Public Education

CIREC Participants Receive Grant Award for Public Awareness Initiative

Self-Reliance and WBNERR have received a grant award from Massachusetts Technology Collaborative (MTC) to support the next phase of CIREC’s “Transitioning from the Energy Present to the Energy Future in the Cape & Islands Region” project. Phase II work will build on Phase I activities, which led to the creation of the [Cape & Islands Energy Information Clearinghouse](#).

Under the new grant award, CIREC participants will conduct public awareness activities within the context set by the [Massachusetts Climate Protection Plan](#) and the 2004-05 Cape Cod Sustainability Indicators Project. The state’s plan supports “no regrets” actions for reducing greenhouse gas emissions while pursuing economic growth and other state policies and objectives. The indicators project encourages planning and action toward regional and local sustainability.

CIREC participants will design communications materials and offer events and other educational opportunities (1) to build awareness of the “true costs” of energy supply and use options and of local climate change mitigation activities (see next article); (2) to promote green power purchasing and community- and residential-scale installations of wind and solar technologies; and (3) to encourage sustainable thinking and action at the individual and community levels.

► **Megan Amsler**, Self-Reliance, meganams@reliance.org, 508.457.7679; **Joan Muller**, WBNERR, joan.muller@state.ma.us, 508.457.0495 x107

Wind Energy Development Update

► **On Land:** A couple private sector initiatives to develop local wind resources have been cancelled or put on hold, but the MTC-sponsored installation of a 1.5-MW wind turbine at CCCC is on the fast track following a [favorable public review meeting](#). In addition, under MTC’s [Community Wind Collaborative](#), 13 Cape and Vineyard towns have expressed interest in municipal wind projects. Screening studies are complete for six towns, and wind resources are being monitored at three specific sites. Orleans is slightly ahead of the pack: By the end of 2004, a technical and economic feasibility study will be complete for a wind installation to power water facilities and other municipal loads. These findings will inform community decisions going forward.

► **Over the Horizon:** To lay the foundation for future wind projects in deepwater environments, MTC is funding research at MIT, WHOI, and UMASS and working with the U.S. Department of Energy and GE Global Research to catalyze creation of a national Offshore Wind Energy Collaborative. **Contact:** Greg Watson, watson@masstech.org, 508.775.9201

Community Action

Barnstable and Falmouth Share “No Regrets” Climate Action Strategies

Barnstable and Falmouth officials met recently to discuss local initiatives geared toward reducing greenhouse gas (GHG) emissions and meeting other town policy objectives. The meeting, “No Regrets Measures for Climate Change Mitigation: Implementing Municipal Energy Efficiency & Renewable Energy Projects to Reduce Costs and Greenhouse Gas Emissions,” was held September 27 at WBNERR.

Falmouth and Barnstable are the only two Cape & Islands communities with explicit policy commitments to address threats posed by climate change. In 2002, they joined the [Cities for Climate Protection™ campaign](#) administered by the International Council for Local Environmental Initiatives (ICLEI). Since then, the towns have inventoried GHG emissions, established emissions reduction targets and timelines, and begun to implement the systematic efforts required to achieve policy goals.

At the recent meeting, Barnstable officials highlighted the town’s Green Team, which engages all municipal departments and employees in conceptualizing and implementing emissions reduction activities that make economic and environmental sense. Members of the Falmouth Energy Committee reported on the town’s Climate Action Plan. This document, currently undergoing final review, will guide future municipal and community decision-making on the full spectrum of energy-related issues.

During roundtable discussion, attendees focused on the complementary nature of the different approaches taken by the two towns, as well as on opportunities to share experiences and lessons learned with each other and additional local communities. Attendees also explored ways to educate local and regional officials and the public about the benefits of joining the ICLEI

program and of looking at energy supply and use from a sustainability perspective. Future collaborations are planned to promote emissions reduction as a means for stretching municipal budgets, protecting the environment, promoting economic development, and preserving community character.

► **David Anthony**, Town of Barnstable, david.anthony@town.barnstable.ma.us, 508.862.4652;
Heather Harper, Town of Falmouth, hharper@town.falmouth.ma.us, 508.548.7611

Strategic Planning

Vineyard Energy Project Envisions a Renewable Energy Island

Planning for a sustainable energy future is under way on Martha’s Vineyard, guided by a vision of “energy independence within a generation.”

The [Vineyard Energy Project](#) (VEP) is directing strategic planning activities under funding provided by the MTC. Ongoing emphases are to collect and analyze data on the consumption of electricity and fuels and on the use of cleaner and green energy technologies. More than 70 operating or scheduled PV installations have been documented, as have about 50 solar heating systems. Data will provide a basis for collaborative efforts to develop creative, integrated strategies for meeting future energy needs in Vineyard communities.

The VEP’s goal is to develop an energy planning roadmap that identifies priorities and projects in three primary areas: energy efficiency, renewable energy generation, and energy education. The document is intended to be both visionary and practical. It will be designed to compel residents to work together in becoming a “renewable energy island” and in inspiring other communities to make—and implement—sustainable energy choices.

► **Kate Warner**, VEP, kate@vineyard.net, 508.693.3002



This 1.6-kW PV array, which supplies green electrons to a public restroom in Aquinnah, is one of many systems that are helping reduce the Vineyard’s dependence on energy from the mainland.

Public Education

Website Offers Guidance for Buying Cleaner and Green Power

New content on the [Cape & Islands Energy Information Clearinghouse](#) provides local consumers with practical information and tips for comparing the “true costs” of power supply options and for purchasing cleaner and green power products.

Under the provisions of the Massachusetts Electric Restructuring Act of 1997, local consumers can already elect to purchase power from a competitive supplier. By March 1, 2005, all Massachusetts consumers must choose a supplier. Picking a supplier can be a complex decision.

Suppliers compete primarily on the price or the environmental attributes of their power. In choosing a supplier, consumers have the opportunity to send market signals that may accelerate the transition to cleaner sources of electricity and encourage investment in renewable energy development.

The website’s new “[Tips for Choosing a Power Supplier](#)” page is presented in “Frequently Asked Questions” format. It includes three sections.

First, it offers step-by-step guidance to help consumers evaluate the power they are buying based on the information contained in their current supplier’s energy disclosure label. Next, it characterizes supply options, including “system power” products, cleaner alternatives, and green products. Issues to consider when “going green” are treated in detail.

Finally, it identifies the supply options currently available to Cape & Islands consumers, including a variety of green power products. It also presents a framework for comparing products based on price, power source, and emissions characteristics, and it offers a sample “true cost” evaluation of hypothetical options.

► **Chris Powicki**, WEEinfo, chrisp@weeinfo.com, 508.362.9599

Upcoming Events

► Cape Cod 2020: Kickoff Event for the 2004-05 Sustainability Indicators Project

October 22, 8:30-10:00 am, Barnstable Superior Courthouse

This public event will review plans to engage the general public and community leaders in envisioning “Cape Cod 2020” and in laying out practical objectives, milestones, and recommendations for sustaining Cape Cod. **Contact:** Tana Watt, Cape Cod Commission, 508.362.3828; RSVP to sustain@cape.com

► Initiatives for Land-Based Wind Turbines on Cape Cod

October 27, 2:30-4:30 pm, Eastham Town Hall; **October 28**, 2:30-4:30 pm, First District Courthouse, Barnstable

Each public forum will provide an update on MTC’s Community Wind Initiative and an opportunity to comment on the suitability map and model bylaw being developed to provide towns with guidance for the siting and review of land-based projects. **Contact:** Martha Twombly, Cape Cod Commission, mtwombly@capecodcommission.org, 508.362.3828

► Community Wind Forums: Wind 101—Learning the Basics

November 16, 2 pm, Eastham Town Hall; **November 16**, 7 pm, Cape Cod Community College, Science Bldg., Lecture Hall A; **November 17**, 7 pm, Upper Cape Cod Technical High School

Each public forum will answer questions and dispel myths about land-based wind energy projects. They feature **Sally Wright**, an expert from the UMass Renewable Energy Research Laboratory. **Contacts:** Megan Amsler, Self-Reliance, meganams@reliance.org, 508.457.7679; Joan Muller, WBNERR, joan.muller@state.ma.us, 508.457.0495 x107

► Municipal Wind Workshop: Financing Options for Land-Based Projects

November 19, 8:30 am-12:45 pm, Cape & Islands Association of Realtors Conference Center

This event will provide municipal officials and other attendees with national, state, and local perspectives. **Charles Kubert** of the Environmental Law and Policy Center will review project ownership models. The MTC’s **Jason Gifford** will present results from a comparative analysis of the options. The CLC’s **Margaret Downey** will introduce an approach to improve financing conditions for municipal projects while supplying some green power to local consumers. **Contacts:** Megan Amsler, Self-Reliance, meganams@reliance.org, 508.457.7679; Joan Muller, WBNERR, joan.muller@state.ma.us, 508.457.0495 x107