



# CIREnews

Cape & Islands Renewable Energy Collaborative

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## CIREnews Launched

Welcome to the first issue of **CIREnews**, an e-newsletter highlighting initiatives involving participants in the [Cape & Islands Renewable Energy Collaborative](#) (CIREC).

A community-based group, CIREC brings together individuals and organizations with common interest in achieving a sustainable energy future—locally, regionally, nationally, and globally.



PV panels power a new system that lights up the trails at WBNERR's visitor center

Participants include citizens, advocacy groups, research centers, businesses, and educational institutions, as well as representatives from local, regional, state, and federal agencies. Anyone can participate in CIREC; all meetings are open to the public. **CIREnews** will be sent out via e-mail on a monthly

basis. Upcoming issues will feature topics such as

- ◆ The renewable energy curriculum development project headed by Cape Cod Community College (CCCC),
- ◆ The biodiesel program directed by Cape & Islands Self-Reliance,

- ◆ The high-performance green building inhabited by Woods Hole Research Center (WHRC), and
- ◆ The solar photovoltaic (PV) outdoor lighting system installed by Waquoit Bay National Estuarine Research Reserve (WBNERR).

Please forward this note to others who may be interested in improving local economic, environmental, and social conditions by transforming the energy basis of Cape Cod, Martha's Vineyard, and Nantucket. If you are not interested in receiving future issues, please send a note to [CIREnews@cirenw.info](mailto:CIREnews@cirenw.info).

## Energy Information Clearinghouse Released

The "beta version" of the Cape & Islands Energy Information Clearinghouse (EIC) is available for review at [www.cirenw.info](http://www.cirenw.info). It introduces a framework for collecting, organizing, and delivering data, information, and tools that address energy supply and use on Cape Cod, Martha's Vineyard, and Nantucket, both now and into the future.

The EIC covers electricity as well as the fuels consumed for transportation, heating, and other uses. It is designed to inform decision-making by the public, town and county officials, students and educators, and businesses and other organizations.

The EIC's "beta version," which incorporates contributions from numerous individuals, outlines the full range of planned content. It is being released now to engage individuals, communities, regional agencies, and other stakeholders in reviewing and creating a credible and useful resource. Future issues of **CIREnews** will highlight specific needs for data and information.

The EIC offers "[Facts](#)" about "[The Energy Present](#)," including its adverse impacts on local communities. It also details "[Visions](#)" of "[The Energy Future](#)," including positive developments that foreshadow the transition to cleaner and green energy economy. In addition, "[Tools for Managing the Transition](#)" are available, including the following:

- ◆ "[Community Snapshots](#)" characterize the energy situation in individual communities and provide contact information for local decision-makers.
- ◆ "[Green Energy Options & Activities](#)" profile renewable technologies and other energy alternatives, as well as existing and planned applications in local communities.
- ◆ "[Practical Tips for Reducing Energy Costs](#)" detail measures for saving money and for reducing emissions and other adverse impacts.
- ◆ "[Calendar](#)" lists public meetings addressing energy-related topics.

The EIC is being created with seed funding from the Massachusetts Technology Collaborative (MTC). Water Energy & Ecology Information Services (WEEinfo) is directing site development, and Self-Reliance is administering the MTC grant.

### Contact

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## Community Wind Meeting Held

Representatives from numerous Cape & Islands communities and institutions attended a workshop in late March focused on how land-based wind energy projects can "plug in" to the power grid.

The forum provided more than 50 municipal officials and other attendees with opportunities to discuss common issues, share information, and learn about the expertise and resources available from local, regional, and state organizations. It was the second in the Community Wind Workshop Series organized and sponsored by WBNERR and Self-Reliance.

The workshop began with an "around the region" update on wind siting studies, resource assessments, economic analyses, educational campaigns, and permitting and other activities initiated within individual communities. Land-based projects are being explored by almost every Cape Cod municipality, a couple towns on Martha's Vineyard, the Highlands Center in Truro, CCCC, WHRC, Upper Cape Cod Regional Technical High School, and several private developers.

Representatives from NStar and state agencies led a lively discussion of grid interconnection issues. Attendees also learned about the ownership and financing structures of community-scale wind projects in Hull, Massachusetts, and Toronto, Ontario. The workshop concluded with an update from the Massachusetts Technology Collaborative, which is providing project development assistance to several local municipalities.

### Contacts

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A community-owned wind turbine provides Toronto residents with both green electrons and inspiration. (Source: Ontario Clean Air Alliance/John Wellner)

## Land-Based Wind Technology Assessed

A new report, soon to be released by the Cape Cod Commission (CCC) and the Cape Light Compact (CLC), assesses the state of the art in wind turbine technology for distributed generation (DG) applications in Cape & Islands communities.

The report, prepared by Boreal Renewable Energy Development with assistance from Serchuk Associates, focuses on DG uses like those being explored in many towns: Individual turbines or small clusters installed by consumers (municipalities, businesses, institutions, or residents) looking to reduce reliance on the power grid, or by private developers looking to supply green power. A less detailed treatment of fuel cell, microturbine, and PV systems in DG applications is also incorporated.

For wind energy, the report provides background information on turbine design, siting, operations, and economics. It reviews tradeoffs for small-scale installations, characterizing both environmental and economic benefits of non-emitting DG systems as well as aesthetic, ecological, and other concerns. Applicable federal, state, and local siting criteria are reviewed, and technical data are provided on commercially available turbines ranging from 0.4 kW to 4.5 MW in rated capacity.

In addition, the report analyzes how local regulations—e.g., height restrictions, setback requirements, permitting processes, etc.—might affect projects incorporating turbines of up to 1.5 MW in capacity, the maximum considered relevant for DG applications.

The technology assessment, scheduled for release later this spring, provides baseline data and information for two other elements of a joint CCC-CLC project funded by the MTC. A working group has been convened to develop a model bylaw to guide

municipalities in regulating wind projects within their borders, and a GIS-based suitability map will integrate wind resource, zoning, habitat, and other data.

### Contact

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## PV Education and Outreach Grant Awarded

Self-Reliance's PV installation and capacity-building program was recently awarded \$10,000 by the Cape Cod Economic Development Council (EDC) under the Cape & Islands License Plate Small Grants Program.

Self-Reliance's program, which is funded by the MTC, targets deployment of a total of 100 kW of grid-tied PV panels on Cape Cod and Martha's Vineyard. It offers incentives, standardized PV systems, financing options, and experienced contractors, helping reduce costs for homeowners and businesses.

TJ Design is lead PV contractor on the Cape, and the program is coordinated by Under the Sun on the Vineyard. To date, installations totaling more than 45 kW have been completed or are in planning and permitting stages, making this the largest renewable energy project in the region.

Self-Reliance's program also includes efforts to publicize PV installations and to increase local knowledge and expertise through outreach, education, and training involving Upper Cape Cod Regional Technical High School, Cape Cod Regional Technical High School, Massachusetts Maritime Academy, CCCC, and electricians and other contractors. The EDC grant will support these activities.

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Expert installers and trainees fasten PV panels to a local rooftop. (Source: Anju Rajani)