

The business, programs and policies of moving new energy products into the marketplace

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May 2010

Editor: [Carolyn Hinkley](#)

Associate Editor: [Eric Escudero](#)

[News](#) reports on the increase in utility clean energy programs, innovative energy campaigns and incentives that make solar panel installations or energy retrofits more affordable for consumers.

This month's [Features](#) section highlights water power from conventional small hydro projects to highly advanced devices that capture ocean wave energy, including the Oyster 1 device pictured at right.



Aquamarine Power's Oyster 1 wave device generates power for Scotland's National Grid. Discussions are under way to see if it could generate power for the U.S. grid.

Photo courtesy of: Aquamarine Power

Index

[News](#)

- [EIA predicts renewables will grow nearly 207 percent by 2030](#)
- [Demand surges for utility green power programs](#)
- [Texas customers tout clean energy program in Spanish, English](#)
- [Leasing programs make solar more affordable for homeowners](#)
- [Cities, states pick up the 'PACE' on affordable energy retrofits](#)
- [Venture capitalists show most confidence in electric vehicles](#)
- [New study says grid can handle large increase in wind, solar](#)

[Features](#)

- [Small hydro channels a renewed interest](#)
- [Hydro upgrades make a splash](#)
- [DOE issues funding opportunity to advance wave energy](#)
- ['Oyster' device is a pearl in the ocean](#)

EERE Program News Archive

- [April 2010 —Sustaining small business successes](#)
- [March 2010 — Crank up your energy savings](#)
- [February 2010 — Transmission Transformation](#)
- [January 2010 — Green jobs get going](#)

[News Releases](#)

[Reader Comments](#)

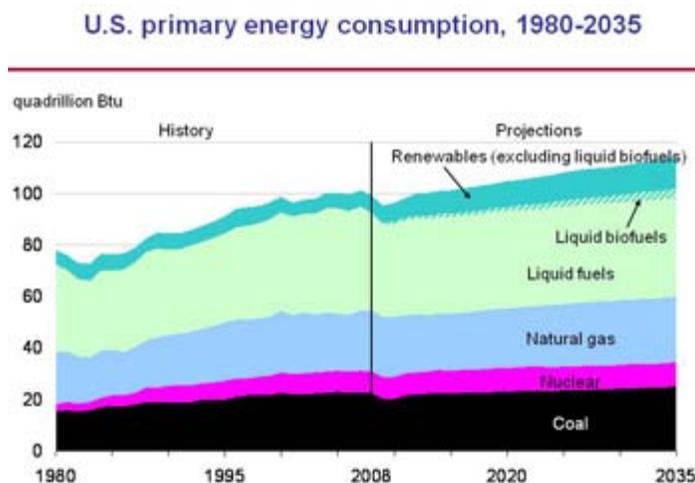
[Speeches, Op-eds and Testimony](#)

[Events](#)

News

EIA predicts renewables will grow nearly 207 percent by 2030

The percentage of U.S. electricity produced by non-hydro renewable energy sources will increase from 4 percent in 2009 to 12.3 percent in 2030, according to the "[Annual Energy Outlook 2010](#)" released May 11 by DOE's Energy Information Administration (EIA).



EIA expects U.S. energy consumption to rise 14 percent from 2008 to 2035, with the strongest growth in biofuels.

Illustration courtesy of: EIA

energy are Federal renewable fuel standards, state renewable portfolio programs and Recovery Act funds. EIA suggests the growth could continue if current policies and tax credits are extended since some expire as early as 2012.

EIA also projected U.S. primary energy consumption will increase by 14 percent from 2008 to 2035, representing an average annual growth rate of 0.5 percent—only one-fifth of the projected 2.4-percent annual growth rate of the nation's economic output.

[Comments:](#)

[return to index](#)

The report predicts that renewable energy technologies (excluding hydropower) will represent 41 percent of the new electricity capacity built between 2008 and 2035. EIA projects new renewable energy facilities will provide three times the capacity compared to new coal plants and nearly 11 times the capacity developed with new nuclear plants.

The strongest growth is projected in biofuels used to generate electricity and to produce liquid fuels for transportation.

Primary factors contributing to the projected growth in renewable

Demand surges for utility green power programs

As consumers become more aware of clean energy technologies, more are choosing to spend a little more to power their homes using renewable energy.

According to DOE's National Renewable Energy Laboratory (NREL), more than 850 utilities nationwide now offer green power programs, with 650,000 customers participating—up from 600,000 in 2008. Utility [green power sales in 2009](#) exceeded 6 billion kilowatt-hours (kwh), and they represent more than 5 percent of total electricity sales for the most popular programs. Comparatively, 2008 sales exceeded than 5 billion kwh and 2007's sales were 4.5 billion kwh.

Why a sudden surge in utility green power programs? "Costs decreasing over the last decade are the key," said NREL Market Transportation and Policy Analyst Jenny Sumner. "In addition, as the programs have been around longer, utilities have improved the marketing of what types of programs they offer. We have also seen more utilities working with third-party marketers."

By examining how much renewable energy that utilities sold in kilowatt-hours last year, as well as customer participation rates and other factors, NREL developed the "Top 10" rankings of utility green power programs of 2009.



Wind energy represents two-thirds of electrical generation provided through green power programs.

Courtesy of: Green Mountain Energy

With close to 765 million kwh in total green power sales, up from 724 million kwh in 2008, the voluntary program of Austin Energy came out on top in the total sales category, with most of its renewable resources coming from wind and landfill gas. Making green energy options more affordable led to the increase, said Austin Energy spokesman Carlos Cordova. "We bought the green energy in batches to give customers a hedge against the volatility of fossil fuel prices and long-term cost certainty. When you can lock in the price, it's a very competitive edge."

Austin Energy has purchased six batches of green energy to date. Four of the six batches purchased have resulted in customers paying less than conventional fuel costs. "The first batch we purchased was in 2001," Cordova said. "On the typical 1,000 kilowatt-hour bill, our customers locked in their price at 1.7 cents per kilowatt-hour for the fuel charge portion of the bill in 2001. They are locked in that price for 10 years. Currently the conventional fuel charge is 3.65 cents a kilowatt-hour, so they are saving almost \$20 dollars a month." He said large manufacturing companies with high operational costs have saved millions of dollars.

Second in green power sales was Portland General Electric (PGE), with nearly 741 million kwh. PGE also had the most customer participants. In 2009, PGE had 72,812 participants, up from 69,258 in 2008.

The cost to support renewable energy programs adds about \$2-\$10 to most participants' monthly electric bills. The analysis showed that the average net price premium for utility green power products has decreased from 3.48 cents/kwh in 2000 to 1.75 cents/kWh in 2009. NREL estimates that consumers who take advantage of their utilities' green power programs can receive up to 45 percent of their energy from renewable sources. Wind energy represents about two-thirds of electricity generated for green energy programs nationwide.

Comments:

Texas customers tout clean energy program in Spanish, English

What better way to promote a clean energy program than using actual customers as spokespeople? That's what the Green Mountain Energy Company of Austin, Texas did when launching its "For Everyone" campaign in March.

The campaign integrates bilingual TV, radio, billboard and web advertisements in the Houston, Corpus Christi and the Rio Grande Valley markets through May 31. Radio ads are also broadcast in Dallas.



In one ad in English, this Green Mountain Energy customer says he chose clean energy because the price was right.

Courtesy of: Green Mountain

last round of research, people were leaps and bounds ahead and knew we could meet their motivations of buying clean energy for their kids or to get this country off of foreign sources of oil."

Their honest responses during focus groups or via e-mail and online surveys made this campaign unique. "We went through several rounds of interviews with customers and they didn't know up front they would be in an ad. Because we had recorded their answers ahead of time, we didn't have to put disclaimers that it was a paid customer endorsement," she noted. Paul Markovich, senior vice president of Residential Services, said, "They all just expressed their own, personal motivations about why they chose Green Mountain."

Fagan added, "At Green Mountain, we have a unique bunch of customers. "In fact, one of the Spanish speakers took a three-hour bus ride to San Antonio and then took a plane to Dallas—there and back in one day."

While she is currently analyzing the campaign's impact, Fagan noted the increase in phone inquiries. "We have a phone number we only use on the Spanish-speaking ads, and we have seen a dramatic increase in calls to that number. The Spanish-speaking group is less likely to switch providers and needs more convincing, but they are huge proponents of protecting the environment and they latch on strongly."

In fact, eight 15-second TV spots feature customers explaining in English or Spanish why they purchase 100-percent clean energy from Green Mountain Energy, which comes primarily through agreements with wind facilities.

Since deregulation in 2001, Texans have [chosen](#) their electricity providers and [compared rates](#) and electricity products through the Texas Public Utility Commission, including 12.9 cents per kilowatt-hour (kwh) in some service areas for Green Mountain Energy's clean energy products.

Rachel Fagan, senior manager of marketing, said this year's market research showed how much the industry has quickly evolved. "A few years ago, when asked where their power came from, people didn't have a clue. In this



This mother and daughter pair is featured in one of two Spanish-speaking ads touting the benefits of Green Mountain Energy's For Everyone campaign.

Photo courtesy of: Green Mountain Energy

Markovich said, "We've learned from our customers that clean energy no longer appeals to a niche segment of the market—that it truly is 'for everyone.'"

Comments:

[return to index](#)

Leasing programs make solar more affordable for homeowners

Leasing options are making solar power more affordable for homeowners nationwide. For many years, \$25,000 to \$50,000 installation costs and maintenance fees priced most homeowners out of the home solar panel market. Yet a recent expansion of solar panel leasing has made powering a home with solar energy a realistic option.

[SolarCity](#) of Foster City, Calif.—one of the nation's first solar leasing providers—now has about 6,000 leasing customers in five states thanks in part to pioneering the no-money-down concept. It offers 15-year leases and allows customers to lock in lower electricity rates for their lease term. Savings they achieve from lower electric bills may be more than leasing costs.

Communications Director Jonathan Bass said SolarCity's customer base has jumped at the opportunity ([video](#)). "Saving money and doing something environmentally friendly...is the most powerful thing about leasing for our customers. That is in contrast to before solar leasing was introduced because going solar for environmental reasons was too costly for many people."

San Francisco-based SunRun takes the credit for being the first to offer solar leasing in 2007, while the number of programs being offered in other states—such as CT Solar Leasing in Connecticut—continues to climb. In fact, some companies have waiting lists.

The [Solar Energy Industries Association](#) (SEA) reported that nationwide [residential solar power](#) (1 MB PDF) installations are growing rapidly due in part to removal of the \$2,000 Investment Tax Credit. In 2009, 156 MW of residential solar electricity capacity was added, compared to 78 MW of capacity in 2008. SEA reported that California leads the nation in cumulative solar installations with 1,102 MW, followed by New Jersey with 128 MW and Nevada with 100 MW.

Generally, [most solar leasing plans](#) (566 KB PDF) are from 15 to 20 years with leasing fees ranging from \$35-\$95 per month based on the system's size and the company's program. "Prices to lease a solar system have dropped in the past 12 to 18 months," said Jason Coughlin, an analyst with DOE's National Renewable Energy Laboratory (NREL). "The new lease options help lower the up-front costs so there is an option to pay over time."

An additional benefit is that most solar leasing companies cover all maintenance and insurance costs. Many solar providers also set up a monitoring system to verify that the system is functioning correctly at all times.

What happens if homeowners sell their house? "There are plenty of options in most solar provider plans," Coughlin said. "Some homeowners pay off the lease early and include



Solar panels installed on this Phoenix home absorb the abundant Arizona sunshine.

Photo courtesy of: SolarCity

the solar option as a selling point. If the home buyer has a good credit history, some solar companies allow the new homeowner to just pick up the lease plan. Some companies allow the homeowners to purchase the system at the end of the lease period."

One of the common incentives is the potential to reduce electricity bills. If the local utility has a net-metering policy, the homeowner can receive credit on monthly utility bills for electricity produced. "There is never any certainty that your electricity bills will be lower because there is no way to know exactly what electricity rates or usage will be in future," Coughlin said. "However, the common goal for many providers is to structure your transactions so you are paying the same or less what you paid before going solar."

Comments:

[return to index](#)

Cities, states pick up the 'PACE' on affordable energy retrofits

Looking to dramatically accelerate energy upgrades, more cities and states are poised to pick up the 'PACE'—or launch [Property-Assisted Clean Energy programs](#) that team up private lenders and government agencies to encourage solar installations or energy retrofits.

With PACE, commercial or residential property owners typically borrow money from a new "municipal financing district" to [finance energy upgrades](#) (802 KB PDF) up to 20 years through annual property assessments. The district then issues bonds backed by private lenders. Since the city approves the system or upgrades and a program administrator pays the installer, there's no money for property owners to shell out up front (except perhaps a deposit) and it doesn't reduce their equity.

When they sell the property, the solar system or repayment obligations go with it and the municipality holds the lien. It is also an opt-in program, so only property owners participating are responsible for the PACE financing costs.

Most new PACE programs are requiring that energy efficiency improvements achieve at least a 20-percent reduction in energy use. To protect lenders and the government, PACE is limited to 10 percent of the home's current appraised value and applicants must prove they have no liens against the property and are not in default on their taxes or on their mortgages.

The [City of Berkeley, Calif.](#) (1.55 MB PDF) launched the national pilot program in 2008 by funding 13 solar installations. [Nineteen states](#) now have legislation enabling their programs, with 14 more states considering it. Once states pass the legislation, it's up to cities and towns to establish the PACE programs.

Up to \$453 million in Recovery Act funds were made available for this program via competitive grants under DOE's Energy Efficiency Conservation Block Grant Program.

Comments:

[return to index](#)

Venture capitalists show most confidence in electric vehicles

The electric vehicle industry attracted the biggest increase in clean energy venture capital in the year's first quarter, according to Ernst and Young. [Bloomberg News](#) reported May 6 that Coda Automotive and [Fisker Automotive](#) led a 68-percent increase in venture capital investments in the clean technology sector.

DOE's Advanced Technologies Vehicles Manufacturing (ATVM) program provided Fisker

with a [\\$528.7 million conditional loan](#) in September to develop two lines of plug-in hybrids by 2016, including the Fisker Karma, a four-door plug-in hybrid electric premium sports car. Initial deliveries are expected this summer, with annual production projected to reach 15,000.



The Fisker Karma is a plug-in hybrid sports car that may be available later this summer.

Photo courtesy of: wikipedia commons

beginning in late 2012. It will produce the new car at General Motors' former factory in Wilmington, Del. The combined projects are expected to save or create about 5,000 jobs.

Fisker will use about \$169 million of the loan to work with U.S. suppliers on the design and equipment and to further develop manufacturing processes at its Pontiac, Mich., and Irvine, Calif., offices. While the Karma's final assembly will be completed overseas, more than 65 percent (based on cost) of the vehicle's parts will come from U.S. suppliers.

The company will use the remaining monies for its [Project Nina](#), another plug-in hybrid. Fisker estimates up to 75,000-100,000 of these highly efficient vehicles will roll off U.S. assembly lines annually,

Venture capital firms invested \$733.3 million in clean technology companies during 72 financing rounds, outpacing the 11-percent gain among all industries. Nearly half of those investments were targeted toward the early-stage financing, Bloomberg noted.

One investment firm, however, is financing established companies that are developing clean energy technologies during the "awkward later phase, when they need hand-holding, time and money," reported the [New York Times](#). Virgin Green Fund, backed by Richard Branson, has invested \$220 million in established companies, not the hottest new clean energy start-ups. The *Times*' reported that the firm "has been quietly investing \$220 million in established companies—some more than a decade old—that are trying to develop renewable energy or make the use of natural resources more efficient."

New study says grid can handle large increase in wind, solar

The nation's western power grid could handle the integration up to 35 percent of wind and solar capacity within seven years without any major system upgrades, said DOE's National Renewable Energy Laboratory in its [Western Wind and Solar Integration Study](#). However, the May 20 study noted that such integration will require regional utilities to make significant changes to their standard operating procedures to make this goal a reality.

The study's authors say that interconnecting up to 30 percent wind and five percent solar capacity into the Western power grid by 2017 is plausible if utilities are able to coordinate energy deliveries over a wider geographic area. This change would help decrease the variability of intermittent wind or solar power generation. The study also suggests that utilities schedule energy deliveries more frequently than hourly to allow for changes in system conditions, such as increases or decreases in wind or solar generation.

Comments:

[return to index](#)

Features



Otter Creek Falls in downtown Middlebury, Vt. may provide renewable generation for city residents if a father and son are successful in establishing a run-of-the-river plant on property they own along the creek. Small hydro efforts are cropping up nationwide thanks to citizens' environmental concerns and Federal and state renewable goals.

Photo courtesy of: wikipedia commons

Small hydro channels a renewed interest

Interest in small hydroelectric projects is flowing rapidly as regulatory agencies streamline application processes and as citizens examine renewable energy potential in their communities.

Take the father and son pair of Peter and Anders Holm of Middlebury, Vt., who [plan to generate](#) electricity from a new 5 megawatt (MW) hydro station under property they own along Otter Creek. The Holms' efforts to channel the creek's natural flow to generate and market electricity to businesses and the city government are indicative of an increased worldwide demand in small hydro projects.

According to the Energy Information Administration, small hydro installations similar to the Holms' effort of less than 30 megawatts grew by 28 percent between 2005 and 2008, raising the world's total small hydro capacity to 85 gigawatts (GW)—including 3 GW in the United States.

That number could rise by about 18,000 MW if 5,400 potentially viable low power/small hydro sites mostly in Alaska and the Pacific Northwest are developed, according to a [2006 study](#) (pdf) by DOE's Idaho National Lab. Their potential could result in a 50-percent increase in U.S. hydroelectric generation.

To explore opportunities to develop more hydro projects, DOE, the Department of the Interior and the U.S. Army Corps of Engineers [teamed up](#) in March to coordinate research and development efforts.



Small hydro projects that can tap the natural flow of rivers and creeks are getting a renewed interest these days.

Photo courtesy of wikipedia commons

These changes come as FERC [manages a spike](#) (215 KB PDF) in permit applications. In 2007, the agency issued 15 permits, while in 2009 the number jumped to 50. Pending license applications jumped from 27 to 37 during that same period. Projects involving hydrokinetics—capturing energy from waves, currents and tides—are contributing to that interest.

"It's clear that industry interest in low-head/small hydro is at its highest since the 1980s. We're seeing dozens of [preliminary permits before FERC](#), many projects in licensing—including ours—and several projects under construction," said Mark Stover, vice-president of Hydro Green Energy, the first hydrokinetic project licensed under FERC.

Licensing and permitting time frames, expenses and public support will ultimately determine whether the 18,000 MW of undeveloped small hydropower plants become reality.

Comments:

[return to index](#)

Hydro projects make a splash

Nationwide, DOE is allocating as much as \$30 million for seven hydropower upgrades, four of which are 50 megawatts (MW) or less, to increase the nation's hydropower generation by an estimated 187,000 megawatt-hours (mwh) a year. DOE specifically targeted projects where the cost would be shared by the private sector, and where modifications could be made without significant civil works construction.

Energy Secretary Steven Chu said, "As the single largest owner of hydropower generation in the United States, it is important for the federal government to tap this valuable asset so it can continue to contribute to our clean energy portfolio and energy security."

Here are some of the projects less than or equal to 50 MW receiving funding:

The City of Boulder, Colo.—up to \$1.18 million to replace two turbines at the 100-year-old [Boulder Canyon Hydroelectric Project](#) with a single, high-efficiency unit. The new turbine

would operate at a wider range of flows and higher efficiency ranges to increase generation by 11,000 mwh (30-percent increase). Upgrades to wiring and removal of asbestos would reduce environmental hazards and improve safety.



The Boulder hydroelectric facility.

Energy Northwest—\$800,000 to design, manufacture, and install an efficient Pelton Wheel Turbine at the [Packwood, Wash., Lake Hydroelectric](#) facility by this August. The Pelton turbine is especially useful where flow is limited, but high heads are available. It will increase annual generation by 5,868 million kwh (a 6-percent increase), benefit the local fish population and create more sustainable habitat conditions downstream.

Photo courtesy of: The City of Boulder

Incorporated County of Los Alamos, N.M.—up to \$4.56 million to add a low-flow turbine/generator to the 13.8 MW hydroelectric plant in Abiquiu, N.M., increasing plant capacity by 3 MW and allowing the dam to operate when releases are below or above the two turbines' existing capacity. The upgrade will increase annual generation by 6,462 MWh (a 22-percent increase). The project's environmental benefits include higher dissolved oxygen content in downstream water and increased minimum flows.

North Little Rock Electric Department—up to \$450,000 to install an automated intake maintenance device at its 39 MW hydroelectric facility on the Arkansas River to clear debris currently obstructing the intake and allow the facility to operate consistently at near peak efficiency. The project will significantly reduce the high cost of dredging and reduce air pollution since the debris has been previously burned for removal.

Comments:

[return to index](#)

DOE issues funding opportunity to advance wave energy

To determine how close we are to deploying technologies to tap wave, current or tidal energy, DOE issued a \$38.32 million [funding opportunity](#) April 20 for the Marine and Hydrokinetic (MHK) Technology Readiness Advancement Initiative. This initiative aims to further DOE's goal of deploying technologies to capture the world's largest and most predictable energy sources: oceans. The solicitation closes June 7.



DOE is interested in advancing hydrokinetic devices like this three-bladed water turbine that's designed to generate renewable energy from tidal currents.

According to the International Energy Agency (IEA), the Earth's oceans can produce more electrical energy than the total sum of every other form of energy in use today. Estimates point to the potential for almost 300 gigawatts of capacity for hydrokinetics, which convert the kinetic energy of a moving fluid from waves or from the flow of water in ocean currents, tides or inland waterways into electrical energy.

Current U.S. concepts and prototypes range from cylindrical chambers to tidal generators to devices that mimic the propulsion of sharks and mackerel.

Photo courtesy of: Verdant Power

"In the United States, we have some prototypes and testing of projects in the water, but they aren't yet commercially available," said Tim Ramsey, a project officer with DOE's Golden Field Office who is overseeing the initiative. "It's a very new industry, and we're finding that some people and investors view the technology as too high risk and are reluctant to enter the industry. [DOE's goal](#) (566 KB PDF) is to look at what the industry needs to move projects along the deployment continuum."

Ramsey expects to receive 100 to 150 applications ranging from a readiness level of 1—the conceptual design stage—to as high as readiness level 8, which is open water testing of prototypes at or near full scale. Total federal funding for fiscal year 2010 is expected to be up to \$15.36 million for 26 awards, with the possibility of continued funding at, or near, fiscal year 2010 levels for up to two additional years.

Comments:

[return to index](#)

'Oyster' device is a pearl in the ocean

There is a giant oyster in the sea that's making something valuable—electrical power. The "Oyster" wave energy device off the coast of Scotland is proving to the public that renewable energy generated from ocean waves could be the pearl they've been seeking.

On the western edge of Scotland's Orkney Islands, the 56-foot-tall [Oyster 1](#) device only appears above the surface of the sea. It is a buoyant hinged flap that's actually attached to the ocean floor. It uses the force of the ocean's waves to push the flap's two hydraulic pistons backwards and forwards, driving fresh water via an underground pipe to an onshore hydroelectric turbine, which generates electricity for Scotland's power grid.

Once commercial development begins in 2013, multiple Oyster wave power devices will be deployed in small clusters of typically 100 MW or more over a stretch of coastline off mainland Orkney, with the potential to build a wave farm with an installed capacity of 200 MW. This would provide enough energy to power around 190,000 homes.

The technology has been evolving since 2003 when it was first suggested by Professor Trevor Whittaker at Queen's University, Belfast. Aquamarine Power in Scotland began working to commercialize the device in 2005. Private investors in the United Kingdom and Ireland have provided more than \$10 million in funding and the company is also benefiting from substantial support from research councils, national academies and the Scottish and U.K. governments, as well as national utility, Scottish and Southern Electricity Renewables.



Workers on the warehouse floor look small compared to the Oyster 1 ocean wave device, which is now delivering power into the Scottish National Grid.

Photo courtesy of: Aquamarine Power

The first full-scale Oyster was installed at the European Marine Energy Centre off the Orkney Islands last summer and was connected to Scotland's National Grid in November 2009. Data from Oyster 1 is helping Aquamarine finalize the design of the next-generation [Oyster 2](#), which will be built this year to deploy next summer. Aquamarine representatives are looking for potential sites on the Oregon coast and are in discussions

with several Oregon utilities, including Central Lincoln, a public utility district based in Newport. The soonest it could be deployed would be three to four years.

Comments:

[return to index](#)

Locate potential small hydro, marine projects with Web tools

If you would like to find out where natural stream resources are located, check out the [Virtual Hydropower Prospector](#), a tool developed by the Idaho National Laboratory for DOE's Wind and Hydropower Technologies Program.

By selecting one of the 20 hydrological regions, you can see these natural resources and their power-producing potential. Display cities, roads, transmission lines and facilities to determine the hydro project potential for different sites. It uses data from the U.S. Geological Survey, Environmental Research Systems Institute, Bureau of Transportation, DOE's National Renewable Energy Laboratory, and national atlases, among other entities.

It has also become easier to identify potential sites. The 500,000 water energy resources evaluated by DOE include 130,000 sites considered hydropower-worthy.

Marine and Hydrokinetic Technology Database

DOE's Marine and [Hydrokinetic Technology Database](#) provides current information on marine and hydrokinetic renewable energy, both in the nation and around the world.



OpenHydro's Open-Center Turbine is one tidal prototype listed on the Marine Hydrokinetic database. It is being tested in the United Kingdom.

Photo courtesy of OpenHydro

The database includes wave, tidal, current, and ocean thermal energy, and contains information on the various energy conversion technologies, companies active in the field and the status of projects already in the water. The database can present a snapshot of projects in a given region, assess the progress of a certain technology type or provide a comprehensive view of the entire marine and hydrokinetic energy industry.

The user can also learn more about the different marine and hydrokinetic technology types by selecting the "Technology Glossary" option. Anyone can [submit a technology and/or project](#) to be added to the database after review by an editor.

Comments:

[return to index](#)



News Releases

May 21, 2010

[Secretary Chu postpones China trip to continue work on BP oil spill response efforts](#)

May 12, 2010

[DOE congratulates Under Secretary Johnson for technology leadership award](#)

May 12, 2010

[Secretaries Chu and Salazar lead administration team offering federal scientific and technological support to BP engineers](#)

May 11, 2010

[Global leaders meet to collaborate on energy efficiency goals](#)

May 10, 2010

[DOE hosts record number of attendees at annual small business conference](#)

May 7, 2010

[Secretary Chu announces up to \\$62 million for concentrating solar power research and development](#)

May 7, 2010

[Department of Energy announces \\$60 million for small business clean energy innovation projects](#)

May 6, 2010

[DOE, USDA announce funding for biomass research and development initiative](#)

May 6, 2010

[DOE announces RFI on rare earth metals](#)

May 5, 2010

[DOE announces awardees for the Industrial Energy Efficiency Grand Challenge](#)

May 3, 2010

[North Carolina School of Science and Mathematics from Durham, NC and Albuquerque Academy from Albuquerque, NM win the U.S. Department of Energy National Science Bowl](#)

April 29, 2010

[First Lady Michelle Obama to participate in Energy Dept.'s National Science Bowl Finals on May 3](#)

April 28, 2010

[Secretary Chu will travel to China to highlight clean energy partnerships](#)

April 28, 2010

[Secretary Chu testimony to Senate Energy and Water Development Subcommittee](#)

April 26, 2010

[U.S. and UAE sign agreement to strengthen cooperation on clean energy](#)

April 23, 2010

[Department of Energy announces closing of \\$529 million loan to Fisker Automotive](#)

April 23, 2010

[Department of Energy announces 20th Annual National Science Bowl](#)

April 22, 2010

[Secretary Chu Webchat with the Washington Post](#)

April 22, 2010

[Secretary Chu announces more than \\$200 million for solar and water power technologies](#)

April 21, 2010

[Vice President Biden kicks off five days of Earth Day activities with announcement of](#)

[major new energy efficiency effort](#)

April 15, 2010

[U.S. Department of Energy announces student teams to compete in 2011 Solar Decathlon](#)

April 15, 2010

[Secretary Chu announces new partnerships under the Energy and Climate Partnership of the Americas](#)

April 14, 2010

[Department of Energy issues federal fleet management guidance](#)

April 14, 2010

[U.S. EPA, DOE announce changes to bolster ENERGY STAR program](#)

April 8, 2010

[Obama Administration announces nearly \\$100 million for Smart Grid workforce training and development](#)

April 7, 2010

[Department of Energy releases Open Government Plan](#)

April 7, 2010

[Department of Energy awards \\$9 million in grants for science and technical research to historically Black colleges and universities in South Carolina and Georgia](#)

April 6, 2010

[University of Central Florida students' energy-saving work showcased in new Department of Energy video](#)

April 1, 2010

[Secretary Chu announces more stringent appliance standards for home water heaters and other heating products](#)

March 31, 2010

[GSA doubles the federal hybrid fleet, DOE takes the lead in updating to hybrids](#)

March 31, 2010

[Department of Energy to invest nearly \\$18 million for advanced biofuels user facility](#)

March 30, 2010

[DOE Orders AeroSys to halt distribution of inefficient air conditioner and heat pump models shown to violate minimum efficiency standards](#)

March 29, 2010

[Secretary Chu announces \\$37.5 million available for Joint U.S.-Chinese Clean Energy Research](#)

March 26, 2010

[Department of Energy opens appliance standards investigation for certain Air Con International air conditioners and heat pumps](#)

March 26, 2010

[Secretary Chu highlights Recovery Act tax credits for home energy efficiency improvements](#)

March 24, 2010

[DOE, DOI and Army Corps of Engineers sign Memorandum of Understanding on hydropower](#)

March 24, 2010

[Department of Energy opens investigation into alleged lighting efficiency violations](#)

March 22, 2010

[DOE, USDA, and NSF launch Joint Climate Change Prediction Research Program](#)

March 19, 2010

[EPA, DOE announce new steps to strengthen ENERGY STAR](#)

March 17, 2010

[DOE releases new report on benefits of Recovery Act for small businesses in clean energy](#)

March 10, 2010

[Treasury, Energy announce guidance for tax treatment of smart grid investment grants](#)

March 9, 2010

[Secretary Chu announces up to \\$154 million for NRG energy's carbon capture and storage project in Texas](#)

March 5, 2010

[DOE offers \\$117 million conditional commitment for Hawaii wind power project](#)

March 5, 2010

[DOE offers \\$72 million conditional loan guarantee to SAGE Electrochromics](#)

[return to index](#)

Reader Comments

April

Extreme Energy Makeover

"The first step is to remove 2,000 square feet of the 4,500 square-foot mini-mansion and buy a house within your means. Owners of these homes should have to pay an excessive tax."

— T.B.

Growing a green roof

"Please explain the statement that the payback is 10 years or less. The cost is shown as \$4.9 million and heating, ventilating and air conditioning savings is \$30,000. The article stated the roof will last two times longer than the previous roof, so there may be a re-roofing savings in the payback."

— R.S.

Editor's note: Darlene Casey, senior communicator at USPS, provided the following response:

"The 10-year-or-less payback could be attributed to our energy projects in general, not to the green roof project singularly. The expected green roof savings was estimated based on multiple items, including energy savings, storm water fee reductions, and rebates, not solely on the \$30,000. There were no windows or air handlers involved in the construction of the green roof. The roof cost \$4.4 million, equating to approximately \$40 per square foot.

"The decision to construct a green roof was based on a life-cycle analysis comparing the comprehensive benefits of a green roof with those of a conventional single-ply roofing system."

[return to index](#)

Speeches, Op-Eds and Testimony

May 21, 2010

[Secretary Chu Washington University commencement address](#)

Subject: Encouraging graduates to "do something that matters"

April 16, 2010

[Readout of Secretary Chu's bilateral meetings at the Energy and Climate Partnership of the Americas](#)

Subject: Energy issues affecting the United States and Canada

April 16, 2010

[Secretaries Chu and Clinton praise energy cooperation across the Americas in joint op-ed](#)

Subject: Praise for growing cooperation on energy and climate issues among Western Hemisphere nations

March 17, 2010

[Deputy Secretary Daniel Poneman's remarks as prepared for delivery to the Washington Institute for near east policy](#)

Subject: Strengthening energy partnerships with the Middle East

March 16, 2010

[Secretary Chu Op-Ed on energy efficiency from the World Economic Forum](#)

Subject: Achieving the potential of energy efficiency

Feb. 24, 2010

[Readout of Secretary Chu's Middle East trip](#)

Subject: The United States' commitment to build a close relationship with the United Arab Emirates on clean energy issues.

Feb. 19, 2010

[Secretary Chu's remarks on the anniversary of the Recovery Act](#)

Subject: The Recovery Act's impact on our clean energy future.

Comments:

[return to index](#)

Events

If you have an event scheduled of regional or national interest to the energy efficiency and renewable energy communities, please contact me with pertinent information and a Web link and we will include it in EERE Program News. — [Carolyn Hinkley](#)

[Federal Energy Management Program \(FEMP\)](#) — holds technical workshops around the nation throughout the year, plus webinars; check this link for continuously updated information on these events.

[Industrial Technologies Program](#) — holds specialized workshops and on-line webinars year-around. Check this link for a continuously updated schedule.

[Sustainable Solutions](#) — June 8-9, Chicago, Ill.

This program's presentations are focused on sustainable building technology and innovation, design and delivery, and operations, all with the central theme *Optimization of Building Systems and Facility Operations*.

[Pacific Coast Building Conference](#) — June 9-11, San Francisco, Calif.

The show is designed to revolutionize the concept of trade shows by breaking down the walls between learning, exploring, practicing and doing. Exhibit floor seminars will help transform exhibitors from sellers to educators.

[AIA National Convention and Design Expo](#) — June 10-12, Miami, Fla.

Among other speakers and displays, the American Institute of Architects convention will feature DOE and National Renewable Energy Laboratory building technologies experts, who will host a two-hour workshop on OpenStudio and EnergyPlus.

[13th Annual Nanotech 2010](#) — June 21-25, Anaheim, Calif.

The world's largest nanotechnology event, Nanotech 2010, delivers application-focused research from the top international academic, government and private industry labs.

[ASHRAE Summer Meeting](#) — June 26-27, Albuquerque, N.M.

Attend the American Society of Heating, Refrigerating and Air-Conditioning Engineers' summer meeting to learn about high performance buildings, efficient heating and cooling systems and emerging energy efficiency building codes.

[Intersolar North America](#) — July 13-15, San Francisco, Calif.

This conference promotes the development of business opportunities throughout the U.S. solar industry. It focuses on photovoltaics and solar thermal technology and has quickly established itself among manufacturers, suppliers, wholesalers and service providers as a vital international industry meeting point.

[GovEnergy 2010](#) — Aug. 15-18, Dallas, Texas

GovEnergy 2010 will provide effective energy management training to federal employees and their associated stakeholders, encouraging application of best practices, products, and services within the federal sector.

[2010 IEEE Conference](#) — Sept. 27-28, Waltham, Mass.

Conference will provide a forum to discuss new technologies and innovative applications of current technologies for generation, transmission, storage, monitoring and demand management.

[2010 Excellence in Building Conference and Expo](#) — Oct. 12-14, Portland, Ore.

The conference will feature timely, relevant resources and education about energy efficient houses that work.

[Geothermal Energy Expo 2010](#) — Oct. 24-27, 2010, Sacramento, Calif.

The expo hosts the world's largest gathering of vendors providing support for geothermal resource exploration, characterization, development, production and management. It will be held in tandem with the Geothermal Resources Council's [Annual Meeting](#).

[return to index](#)

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