

# ***GRANTS CONNECTOR***

## **ENERGY PROJECT GRANTS, INCENTIVES AND OTHER FUNDING OPPORTUNITIES**

**June/July 2012**

## **Grants Connector – June/July 2012**

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## *Grants Connector – June/July 2012*

### **Tri-Gen Systems Statewide – Maine**

RFP # 201205324

State of Maine, Bureau of General Services

The State of Maine through the Bureau of General Services in the Department of Administrative and Financial Services and in cooperation with other participating departments of State government seeks to enter into agreements with private companies to develop tri-generation plants at various State facilities. Each separate facility will have its own agreement for development of the tri-generation system. While the State is not committing capital funding to these projects, it is willing to enter into a cost-sharing agreement through a Power Purchase Agreement. The State would look at the use of natural gas (trucked or pipeline), wood or bio-mass at those facilities as a cost savings measure over its current energy costs.

A copy of the full Request for Proposal is available on the Bureau's website at <http://www.maine.gov/bgs/>.

To participate, a vendor must register by emailing a request to [alan.henry@maine.gov](mailto:alan.henry@maine.gov) by 2 p.m. on Tuesday, June 19, 2012. Please include "Tri-Gen System" in the subject line. Questions and answers will be emailed to registered vendors only. All bids must be delivered and received by 2:00 P.M., Thursday, June 28, 2012, the time of bid opening, to:

Division of Purchases  
Burton M. Cross Building, 4th Floor  
"PROPOSAL FOR TRI-GEN SYSTEMS"  
RFP # 201205324"  
111 Sewall Street  
9 State House Station  
Augusta, ME 04333-0009

### **26 Million Multi-Agency Competition to Strengthen Advanced Manufacturing Clusters**

The Obama Administration announced a \$26 million multi-agency Advanced Manufacturing Jobs and Innovation Accelerator Challenge to foster innovation-fueled job creation through public-private partnerships. These coordinated investments will help catalyze and leverage private capital, build an entrepreneurial ecosystem, and promote cluster-based development in regions across the United States. This is the third round of the Jobs Accelerator competition, which is being funded by the U.S. Department of Commerce's Economic Development Administration (EDA) and National Institute of Standards and Technology (NIST); the U.S. Department of Energy; the U.S. Department

of Labor's Employment and Training Administration; the Small Business Administration; and the National Science Foundation (NSF).

Manufacturing accounts for 70% of private-sector R&D and 60% of U.S. exports—including a record \$1.2 trillion in goods exported in 2011. Over the past 25 months, manufacturers have created nearly half a million jobs. The Jobs Accelerator Challenge is designed to assist the development and implementation of regionally-driven economic development strategies that will support advanced manufacturing and cluster development. The goal is to create jobs, grow the economy, and enhance the competitiveness of U.S. manufacturers in the global marketplace.

Approximately 12 projects are expected to be chosen through a competitive inter-agency grant process. Applicants are encouraged to submit proposals that will help grow a region's industry clusters by strengthening connections to regional economic development opportunities and advanced manufacturing assets; enhance a region's capacity to create high-quality sustainable jobs; develop a skilled and diverse advanced manufacturing workforce; increase exports; encourage the development of small businesses; and accelerate technological innovation.

The deadline for applications is July 9, 2012, and guidelines for submissions are accessible on [Manufacturing.gov](http://Manufacturing.gov). In addition to the six funding partners, the initiative is supported by eight other federal agencies: U.S. Departments of Agriculture, Education, Housing and Urban Development; Environmental Protection Agency; Denali Commission; and the U.S. Department of Commerce's International Trade Administration (ITA), Minority Business Development Administration (MBDA), and U.S. Patent and Trademark Office (USPTO).

### **Launch of Energy Innovation Hub for Critical Materials Research**

The U.S. Department of Energy announced plans to invest up to \$120 million over five years to launch a new Energy Innovation Hub, establishing a multidisciplinary and sustained effort to identify problems and develop solutions across the lifecycle of critical materials. Rare earth elements and other critical materials have unique chemical and physical characteristics, including magnetic, catalytic, and luminescent properties that are important for a growing number of energy technologies. These critical materials are also at risk for supply disruptions. The Hub, funded by up to \$20 million in Fiscal Year 2012, will work to advance U.S. leadership in energy manufacturing—such as electric vehicles, wind turbines, efficient lighting, and others—through research aimed both at having a reliable supply of these rare earths and other critical materials, as well as finding efficiencies and alternatives that reduce the amount we actually need.

First established in 2010, the Hubs are major integrated research centers, with researchers from many different institutions and technical backgrounds. They are modeled after the strong scientific management characteristics of the Manhattan Project, Lincoln Lab at MIT that developed radar, AT&T Bell Laboratories that developed the transistor and, more recently, the highly successful Bioenergy Research Centers established during the

Bush Administration to pioneer advanced techniques in biotechnology, including biofuels. The new Critical Materials Hub's research and development will advance innovation at all stages of critical materials science and technology. The Critical Materials Hub builds on the Department's Critical Materials Strategy report, which addresses the use of rare earths and other critical materials in clean energy components, products, and processes. The goal of the Critical Materials Hub will be to reduce U.S. dependence on critical materials and ensure that the deployment of domestic energy technologies is not hindered by future materials supply shortages. The Hub will address challenges across the entire life of each critical material including mineral processing, manufacture, substitution, efficient use, and end-of-life recycling.

Universities, national laboratories, nonprofit organizations, and private firms are eligible to compete and are encouraged to form partnerships when submitting their proposals. The award selection is expected this fall. The full Funding Opportunity Announcement (FOA) will be available at <https://eere-exchange.energy.gov/>. This will be the fifth Energy Innovation Hub established by the Department since 2010. The other Energy Innovation Hubs are:

The Joint Center for Artificial Photosynthesis, which focuses on advanced research to produce fuels directly from sunlight.

The Consortium for Advanced Simulation of Light Water Reactors, which is seeking to improve nuclear reactors through sophisticated computer-based modeling and simulation.

The Greater Philadelphia Innovation Cluster for Energy-Efficient Buildings, which is working to achieve major breakthroughs in energy efficient building design.

A Batteries and Energy Storage Innovation Hub was also announced earlier this year. The deadline for submitting competitive proposals was this week.

Information on the existing Hubs can be found on the Energy Innovation Hubs website.

Letter of Intent Deadline: 6/29/2012 5:00 PM ET

Full Application Submission Deadline: 8/30/2012 5:00 PM ET

### **Energy Department Announces Funding to Test a Wave Energy Device**

The Department of Energy announced that \$500,000 is available this year to test the technical readiness of technologies that can harness energy from waves to supply renewable power to highly-populated coastal regions. The funding will support one project to deploy and test a wave energy conversion device for one year at the Department of Navy's Wave Energy Test Site off of the Marine Corps Base Hawaii in Kaneohe Bay, Oahu. This funding will demonstrate and accelerate wave power technologies that could further develop the country's significant ocean energy resources. Through the funding opportunity, the DOE will provide technical support to test and evaluate the best wave energy options to provide power to DOD facilities. The DOE estimates that there are over 1,170 terawatt hours per year of electric generation available from wave energy off U.S. coasts, although not all of this resource potential can realistically be developed. The Navy has supported wave energy conversion research with the expectation that this technology can be used to assist DOD in reaching its

agency goal of producing or procuring 25% of its electricity from renewable sources by 2025.

The DOE expects to select a proposed wave energy device that is substantially complete and ready for testing and data collection without significant modification. The testing will include a comprehensive performance assessment—as well as a review of all pre- and post-deployment activities, operations and maintenance activities, and related analysis—to advance understanding of these innovative technologies and identify areas of performance improvement that will benefit this emerging industry as a whole. See the [funding opportunity announcement](https://eere-exchange.energy.gov/#2658c370-ae4-45c9-a432-c51e4b1140af) at <https://eere-exchange.energy.gov/#2658c370-ae4-45c9-a432-c51e4b1140af>. Application submission deadline: 6/18/2012.

### **Energy Department Offers \$5 Million to Spur EV and Alt Fuels Adoption**

The U.S. Department of Energy announced that up to \$5 million in funding is available this year to help expand the use of alternative fuel vehicles, including electric vehicles (EVs), in cities and towns across the country. The DOE anticipates awarding 10 to 20 projects this year to be completed within two years. The DOE seeks proposals that address barriers to the adoption of these vehicles, provide safety training, coordinate initiatives, and drive market development and transformation to make alternative fuel vehicles and fueling infrastructure widely available. Proposed projects should cover each of these areas. This funding opportunity does not provide for the purchase or installation of vehicles or infrastructure. DOE strongly encourages organizations to form teams that include one or more active, designated Clean Cities coalition as well as other partners with relevant experience and expertise. Applications are due by June 18, 2012. See the Energy Department [Progress Alert](#) and the [funding opportunity announcement](https://eere-exchange.energy.gov/#3a7bc384-523f-4762-b2bb-dbd5d264b526) at <https://eere-exchange.energy.gov/#3a7bc384-523f-4762-b2bb-dbd5d264b526>.

### **Energy Department Announces up to \$2.5 Million to Deploy Fuel Cell Powered Baggage Vehicles at Commercial Airports**

The DOE announced up to \$2.5 million available this year to demonstrate and deploy fuel cell electric vehicles for transporting passenger baggage at major U.S. airports. The projects selected for funding will demonstrate first-generation, fuel cell powered baggage towing tractors under real-world operating conditions, and collect and analyze data to test their performance and cost-effectiveness. The DOE seeks applicants to demonstrate and test the performance and economic viability of advanced fuel cell systems for up to three years. The 50% cost-shared projects will supply information on fuel cell system operation and data on the economics of these vehicles to the Hydrogen Secure Data Center at the Department's National Renewable Energy Laboratory (NREL) for analysis and comparison. Data will be collected from actual airport operations so that engineers and economic analysts can assess the technology's performance, durability, and cost-effectiveness under the real-world conditions of commercial airports. Conclusions will be drawn from the data to evaluate the commercial viability of this fuel cell application, and

the data will be shared with fuel cell manufacturers, helping to improve their designs and optimize overall performance and costs.

The Department plans to select up to three projects, which will leverage more than \$2.5 million in additional funding from private and other sources. For more information, including application requirements and instructions, please visit the [Funding Opportunity Exchange website](https://eere-exchange.energy.gov/default.aspx#b354ca47-7a0c-44b0-b23e-7199c9074aef). <https://eere-exchange.energy.gov/default.aspx#b354ca47-7a0c-44b0-b23e-7199c9074aef>. Full application deadline 6/11/2012.

### **Energy Department Offers \$9 Million to Improve Solar Forecasting**

The DOE announced that \$9 million is available this year to help utilities and grid operators better forecast when, where, and how much solar power will be produced at U.S. solar energy plants. Enhanced solar forecasting will allow power system operators to integrate more solar energy into the grid and help ensure the economic and reliable delivery of renewable energy. The selected projects, part of DOE's SunShot Initiative, will last up to three years and will require more than 20% of the total funding from private and other sources. Changes in weather conditions can cause variations in solar power production. Improved forecasting technologies will help utilities and power system operators better predict when clouds and other weather-related factors will reduce the intensity of incoming sunlight at solar facilities. This information will allow utilities and operators to more accurately anticipate changes in solar power production and take actions to ensure the stability of the national power grid. This can reduce the cost of integrating solar power plants into the grid.

DOE will competitively select one or two projects for this funding, potentially partnering with national laboratories, universities, and industry. Awardees will strive to improve the accuracy of solar forecasting in the sub-hourly, short-term (1–6 hours), and day-ahead timeframes. The DOE plans to fund projects that could improve advanced weather modeling, find breakthrough methods for accurately predicting solar energy output, work to incorporate solar energy forecasts into power system operations, and demonstrate the economic benefits and improved system reliability from more accurate forecasts. See the [full announcement](https://eere-exchange.energy.gov/#79cfa08a-cbc8-4c23-93fb-564080e0b47f) on the Funding Opportunity Exchange <https://eere-exchange.energy.gov/#79cfa08a-cbc8-4c23-93fb-564080e0b47f> and the [SunShot Initiative website](#).

Letter of Intent Submission Deadline: 5/16/2012 5:00 PM ET

Full Application Submission Deadline: 6/19/2012 5:00 PM ET

### **Energy Department Announces Solar "Plug-and-Play" Funding Solar**

The DOE announced that up to \$5 million is available this year to develop "plug-and-play" photovoltaic (PV) systems. These are off-the-shelf systems that can be purchased, installed, and operational in one day. This effort is part of the Energy Department's strategy to spur solar power deployment by reducing non-hardware, or "soft" costs, such as installation, permitting, and interconnection, which currently amount to more than half of the total cost of residential systems. The funding, part of the Energy Department's

SunShot Initiative, will help drive innovations to fundamentally change the design and installation of residential PV systems, reducing costs for homeowners and simplifying installations and grid connectivity. As the costs of solar PV modules continue to come down, soft costs and other non-module hardware costs, such as electronics and mounting hardware, now account for a majority of the total costs of systems. This offers significant opportunities to bring down costs through more efficient installation and permitting processes or new ways to affordably and effectively connect solar panels to the grid. Plug-and-play solar energy systems will make the process of buying, installing, and connecting solar energy systems faster, easier, and less expensive, potentially unlocking major cost reductions in this area. Plug-and-play PV systems could be installed without special training or tools, and simply plugged into a PV-ready circuit. An automatic detection system would initiate communication between the solar energy system and the utility. Plug-and-play systems are already in wide use in the computer and automotive industries, and DOE believes that similar innovations can be made in the solar energy industry to reduce costs and simplify installations. As part of a planned five-year program, DOE will invest an initial \$5 million this year for two projects that will develop innovative plug-and-play prototypes through partnerships with universities, industry, utilities, and other stakeholders. The Energy Department plans to make an additional request of \$20 million to Congress over the next four years to support these efforts. See the full [funding opportunity announcement](#), and the [SunShot Initiative website](#). <https://eere-exchange.energy.gov/#bf5631a6-44d3-4d22-9034-9d0dc0bdf3d3>.

Full Application Submission Deadline: 6/18/2012 5:00 PM ET

### **Small Business Efficiency, Renewable Research Funding**

The DOE announced that up to \$9 million is available this year to fund about 50 small businesses to advance innovative energy efficiency and renewable energy technologies. This initiative will help businesses with promising ideas that could improve manufacturing processes, boost building efficiency, cut oil reliance, and generate renewable electricity. DOE's Office of Energy Efficiency and Renewable Energy (EERE) is offering the funding through the department's Small Business Innovation Research and Small Business Technology Transfer programs. These allow federal agencies with large research and development budgets to set aside a fraction of their funding for competitions among small businesses. Small businesses that win awards in these programs keep the rights to any technologies they develop and they are encouraged to commercialize them. This broad topic research solicitation gives small business broadly framed problems to work on and goals to achieve, and gives them the freedom to innovate. It also encourages small businesses with groundbreaking concepts to become part of the EERE programs' research teams. The funding opportunity includes 8 broad topics and 30 subtopics in areas including advanced manufacturing, energy-efficient buildings, biomass, hydrogen and fuel cells, solar energy, and wind and waterpower technologies. The Energy Department will fund selected small businesses with one-year awards of up to \$150,000. Awardees with successful projects will have the opportunity to compete for more than \$1 million in follow-on funding. See the [EERE Progress Alert](#) and

the [funding opportunity announcement](https://eere-exchange.energy.gov/#b3ab7cc1-f5b1-45f2-9f4d-0d5a091f8ef5) on the Funding Opportunity Exchange website. <https://eere-exchange.energy.gov/#b3ab7cc1-f5b1-45f2-9f4d-0d5a091f8ef5>.

Full Application Submission Deadline: 7/3/2012 11:59 PM ET

### **\$20 Million Available for Clean Diesel Projects**

The U.S. Environmental Protection Agency (EPA) is announcing the availability of up to \$20 million in FY 2012 grant funding to establish clean diesel projects aimed at reducing harmful pollution from the nation's existing fleet of diesel engines and improving air quality and Americans' health. In addition to these grants, approximately \$9 million will be available through direct state allocations. EPA estimates that for every \$1 spent on clean diesel funding up to \$13 of public health benefit is realized.

This is the first competition since the Diesel Emission Reduction Program, also known as DERA, was reauthorized in 2011. The program cleans up existing diesel vehicles, many of which can be operated for decades, by targeting projects that utilize the most cost-effective clean diesel strategies. By reducing diesel emissions in areas that have significant air quality issues the program can have a direct impact on community health.

States, tribes, local governments, and non-profits are eligible to apply for these grants. Projects can reduce air pollution from older school buses, transit buses, heavy-duty diesel trucks, marine engines, locomotives, and other diesel engines. The closing date for receipt of proposals is June 4, 2012.

DERA was enacted in 2005 and since it was first funded in FY 2008, EPA has awarded over 500 grants nationwide. These projects have reduced hundreds of thousands of tons of air pollution and saved millions of gallons of fuel. As part of EPA's National Clean Diesel Campaign, many of these projects fund cleaner diesel engines that operate in economically disadvantaged communities whose residents suffer from higher-than-average instances of respiratory ailments.

Request for Proposals forms and related documents:  
<http://www.epa.gov/otaq/diesel/prgnational.htm>.

### **Hydropower Gets a \$5 Million Energy Department Opportunity**

The DOE announced that up to \$5 million is available this year to assess opportunities to increase power production at up to 40 existing hydropower facilities around the nation. Through this competitive funding opportunity, the Energy Department will work with hydropower professionals to conduct standardized assessments to identify opportunities to increase generation and value at hydropower plants.

As much of America's aging hydropower infrastructure is more than 50 years old, this effort could help accelerate the deployment of upgrades at existing hydropower facilities, creating jobs and increasing the supply of renewable energy to American families and

businesses. Conventional hydropower already supplies more than 6% of the nation's electricity. The assessments to be completed through this solicitation are part of the Energy Department's larger Hydropower Advancement Project, which seeks to accelerate the improvement and expansion of U.S. hydropower plants. See the [DOE Progress Alert and Funding Opportunity Announcement](https://eere-exchange.energy.gov/#5a485f59-64c8-42b8-b2c0-dfa7eff7466e). <https://eere-exchange.energy.gov/#5a485f59-64c8-42b8-b2c0-dfa7eff7466e>.

Also, the Energy Department on April 17 released a report detailing the potential to develop electric power generation at existing U.S. dams that aren't equipped to produce power. The renewable assessment estimates that without building a single new dam, the available hydropower resources could provide more than 12 gigawatts (GW) if fully developed. That total would be roughly 15% of current U.S. hydropower capacity. The report, titled *An Assessment of Energy Potential at Non-Powered Dams in the United States*, analyzes more than 54,000 sites that could be developed to generate power. The results indicate that the non-powered dams could provide enough energy to power over four million households. The greatest hydropower potential was found at locks and dams on the Ohio, Mississippi, Alabama, and Arkansas rivers in facilities owned by the United States Army Corps of Engineers. The top ten sites alone have the potential to provide approximately 3 GW of generating capacity, while the top 100 sites together could potentially provide 8 GW. Many of these dams could also likely be converted to power-generating facilities with minimal impact to critical species, habitats, parks, or wilderness areas.

The assessment by DOE's Oak Ridge National Laboratory in partnership with Idaho National Laboratory also concludes that many potential hydropower sites are in areas with fewer wind or solar resources. And because hydropower provides reliable baseload power day and night, developing existing dams could also provide flexibility to the electric grid, and allow utilities to integrate other renewable energy sources such as wind and solar power.

Full Application Submission Deadline: 6/14/2012 5:00 PM ET

### **Army Plans \$7 Billion in Industry Partnerships for Renewables**

The U.S. Army reported on March 19 that it will partner with industry to invest up to \$7 billion over the next 10 years in renewable energy sources, including wind, solar, biomass, and geothermal energy. The military department has released a draft request for proposal (RFP) that could allow multiple projects to begin nationwide. The draft RFP indicates that the Army intends to primarily purchase renewable-generated electricity through power purchase agreements with the project developers.

The investment will help the Army reach its goal of having 25% of its estimated 2.5 million megawatt hours come from renewable sources by 2025. In addition to energy conservation, installations will strive to establish alternative forms of energy that will allow them to "island" or continue to operate should the power grid fail.

The Army's Energy Initiatives Task Force (EITF) serves as the central managing office to plan and execute large-scale renewable energy projects of greater than 10 megawatts (roughly enough to power 30,000 homes) on Army installations, which will be accomplished by leveraging private-sector financing. A renewable-energy project guide will be issued for comment later in the spring.

The task force has been working closely with the U.S. Army Corps of Engineers to develop a request for proposal under the Multiple Award Order Contract (MATOC). The MATOC provides a two-step process. In the first step, companies submit initial proposals and qualifications that are not project-specific. The draft RFP for the MATOC is available at

[https://www.fbo.gov/index?s=opportunity&mode=form&id=6af3d8417865b78eff12c717e293ea0f&tab=core&\\_cvview=1](https://www.fbo.gov/index?s=opportunity&mode=form&id=6af3d8417865b78eff12c717e293ea0f&tab=core&_cvview=1). The EITF plans to have a summit in May to meet with industry and discuss the renewable-energy development guide as well as specific projects.

### **Up to \$9 Million Available for Clean Energy Startups**

DOE's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs announced up to \$9 million in total funding to be distributed among as many as 50 U.S. companies. This opportunity targets small businesses with breakthrough solar cost-reduction proposals or transformational manufacturing and materials technologies. The SBIR and STTR programs allow federal agencies to set aside a fraction of their research and development budgets to serve as seed capital for early stage research and development (R&D) efforts. These awards strive to foster participation in the marketplace by socially and economically disadvantaged small businesses.

To qualify for either program, a business must be for-profit, at least 51% U.S.-owned, and have 500 or fewer employees in the United States. Under an STTR award, the company must collaborate with a non-profit research institution. The company is required to perform the majority of the R&D in the SBIR program, but collaboration is optional. Both programs take a phased R&D approach with three funding levels: feasibility demonstration (Phase I), prototype development (Phase II), and commercialization (Phase III). The applicants selected for Phase I grants under this opportunity may receive up to \$150,000 for a 9-month project. If successful, awardees may be eligible for continued funding in Phase II.

This opportunity targets four solar research areas in line with SunShot Initiative goals: Photovoltaic module cost reductions that can achieve an installed system cost of \$0.50/W by 2020. Power electronics (inverters, DC/DC converters, plug-and-play innovations, etc.) cost reductions that can achieve an installed system price of \$0.10/W by 2020 or hardware (racking systems, BIPV designs, wire management, etc.) balance-of-system cost reductions that permit an installed system price of \$0.18/W by 2020

Non-hardware balance-of-system (customer acquisition, permitting, installation, inspection, interconnection, etc.) cost reductions that can achieve an installed system price of \$0.22/W by 2020

Concentrating solar power (heliostat, trough, molten salt, power cycle, materials reduction, etc.) breakthroughs that can achieve a levelized cost of electricity of \$0.05–0.06 kWh.

In addition, the opportunity extends to small businesses with transformational manufacturing processes and materials that can reduce primary energy use in manufacturing by 50% without sacrificing product quality, production throughput, or life cycle cost.

Pre-applications are due on May 1, 2012, and full applications must be submitted by July 3, 2012. For additional details, read the [DOE press release](#) or see application requirements on [EERE's funding opportunity exchange](https://eere-exchange.energy.gov/#b3ab7cc1-f5b1-45f2-9f4d-0d5a091f8ef5). <https://eere-exchange.energy.gov/#b3ab7cc1-f5b1-45f2-9f4d-0d5a091f8ef5>.

### **Up to \$2 Million to Collect Data from Hydrogen Fueling Stations and Demonstrate Innovations in Hydrogen Infrastructure Technologies**

The Energy Department announced up to \$2 million available this year to collect and analyze performance data for hydrogen fueling stations and advanced refueling components. By collecting data from advanced hydrogen fueling stations, the Energy Department will track the performance and technical progress of innovative refueling systems operating in real-world environments to find ways to lower costs and improve operation. Many automotive original equipment manufacturers (OEMs) have announced production plans for fuel cell electric vehicles (FCEVs) for retail sale or lease as early as 2015 in the U.S. and other countries, and some states are investing in hydrogen fuel infrastructure to accommodate these vehicles. The funding announced will support projects to monitor the performance of multiple hydrogen fueling stations and advanced components for up to five years to demonstrate technology innovations, gauge progress toward technical targets, and help identify and focus future research and development efforts. The data and resulting analyses from this initiative will also help hydrogen fueling equipment manufacturers improve the designs of existing systems to optimize performance and test new system components.

The department seeks applicants to this funding opportunity to test new refueling component technologies that could substantially reduce the cost of hydrogen. These include, but are not limited to, advanced compressor designs that could reduce the number or size of compressors required at commercial refueling sites; hydrogen delivery tanks with higher capacity and optimal tank pressure—which could reduce the need for compressors and the frequency of deliveries at refueling sites; and advanced electrolyzers that can produce hydrogen at higher pressures, potentially lowering the cost of hydrogen by reducing the amount of post-production compression required.

As part of a planned two-year initiative, the Energy Department will make up to \$2 million available in fiscal year 2012. The department plans to make an additional request for \$2.2 million to Congress next year to support these innovative hydrogen fueling technologies. For more information, including application requirements and instructions, please visit the Funding Opportunity Exchange website at <https://eere-exchange.energy.gov/default.aspx#905c617f-ed00-4bf8-a111-4e4c340e9a27>.

DOE has extended the application deadline for the Light-Duty Fuel Cell Electric Vehicle Validation Data funding opportunity announcement. Applications are now due by 5:00 p.m. EDT on June 18, 2012.

### **USDA Seeks Applications for Economic Development Funding to Create Jobs In Rural Areas**

The USDA is seeking applications for loans and grants to help rural businesses create jobs and spur economic development. The funding is being provided under the Rural Economic Development Loan and Grant (REDLG) program. Eligible recipients are USDA rural utilities program borrowers. Those recipients pass the funds to local organizations. The funding is leveraged to create projects that retain or create jobs and upgrade public infrastructure. The maximum amount of funding for any one project is \$1 million for loans and \$300,000 for grants.

Organizations use REDLG funds to create jobs and improve services. For example, the Utilities District of Western Indiana received a REDLG loan and grant in 2011 to construct an elevated water storage tank and supply lines. The project will serve a technology park and two communities, creating nearly 400 jobs. USDA plans to award up to \$79 million in loan and \$10 million in grants through the program. The deadline for submitting applications is the last business day of each month through September 30th of 2012. Applications must be submitted to the Rural Development state office where the project will be located. A list of these offices is available on the USDA Rural Development web site, <http://www.rurdev.usda.gov/StateOfficeAddresses.html>, or on page 12792 of the March 2 Federal Register, <http://www.gpo.gov/fdsys/pkg/FR-2012-03-02/pdf/2012-5043.pdf>.

### **USDA Invites Applications for Renewable Energy and Energy Efficiency Projects**

The U.S. Department of Agriculture (USDA) recently announced the availability of funding from the Rural Energy for America Program (REAP) authorized by the Food, Conservation, and Energy Act of 2008 (Farm Bill). REAP is designed to help agricultural producers and rural small businesses reduce energy costs and consumption and help meet the Nation's critical energy needs. For 2012, USDA has approximately \$25.4 million budget authority available to fund REAP activities, which will support at least \$12.5 million in grant and approximately \$48.5 million in guaranteed loan program level awards. USDA is accepting the following applications:

- renewable energy system and energy efficiency improvement guaranteed loan only applications on a continuous basis up to June 29, 2012;

More information on how to apply for funding is available in the January 20, 2012 Federal Register, pages 2948 through 2954.

Maine Rural Energy Development Coordinator

Beverly Stone, USDA Rural  
Development, 967 Illinois Avenue,  
Suite 4, P.O. Box 405, Bangor, ME  
04402-0405, (207) 990-9125,

### **Efficiency Maine Trust – Maine PACE and PowerSaver Financing**

#### WHAT IS A MAINE PACE LOAN?

A Maine PACE loan is a loan taken by a property owner to finance the cost of making a qualified whole house energy upgrade with eligible energy savings improvements to the property. What makes a Maine PACE loan different from other loans is that it stays with the property. If a homeowner sells his or her home before the loan is paid off, the loan can either be paid off at the time of sale or can be transferred with the property to become the responsibility of the new owner.

#### WHAT IS A POWERSAVER LOAN?

A PowerSaver loan is a loan taken by a property owner to finance the cost of making a qualified whole house energy upgrade with eligible energy savings improvements to a single-family detached dwelling. PowerSaver Loans are available statewide, provided homeowners meet certain loan criteria.

#### WHAT IS THE DIFFERENCE BETWEEN A MAINE PACE LOAN AND A POWERSAVER LOAN?

[Click Here](#) for a comparison chart.

#### WHAT ARE ELIGIBLE ENERGY SAVING IMPROVEMENTS?

An eligible energy saving improvement is a measure to improve the energy efficiency of a home. Common examples include insulation, air sealing (foam and caulk), heating system upgrades, efficient hot water heaters, and better controls and thermostats for furnaces and boilers.

#### HOW MUCH CAN I BORROW?

You can borrow up to \$25,000 with a PowerSaver Loan, and/or up to \$15,000 with a Maine PACE Loan, provided that you meet the program eligibility criteria.

#### WHAT IS AN ENERGY ASSESSMENT (AUDIT)?

Please [click here](#) to learn more about Energy Assessments.

#### WHO IS ELIGIBLE TO PARTICIPATE IN THE MAINE PACE LOAN PROGRAM?

Any residential property owner in a town that has established Maine PACE is eligible to take advantage of the program by meeting the following criteria:

The homeowners have a debt-to-income ratio of not more than 45%  
Property tax and sewer charge payments are current

The property is not subject to any outstanding tax or sewer liens

The property is not subject to a reverse mortgage

The property is not subject to a mortgage or other lien on which there is a recorded notice of default, foreclosure, or delinquency

Residential buildings that have 1 to 4 housing units are eligible for a single PACE loan of up to \$15,000 where no greater than 15% of building area is used for commercial activities. Condominiums are eligible for PACE loans regardless of the number of total units in a building where the loan can be attached to the deed of the condo owner.

Saving energy and money isn't the only benefit that comes with making your home energy efficient. Other benefits could include increased home comfort, improved indoor air quality, increased property value, local job creation, and reduced need for combustion of fossil fuels and resulting emissions into the atmosphere.

#### WHO IS ELIGIBLE TO PARTICIPATE IN THE POWERSAVER LOAN PROGRAM?

Any residential property owner in Maine is eligible to take advantage of the program by meeting the following criteria:

The homeowners have a debt-to-income ratio of not more than 45%

Property tax and sewer charge payments are current

The property is not subject to any outstanding tax or sewer liens

The property is not subject to a reverse mortgage

The property is not subject to a mortgage or other lien on which there is a recorded notice of default, foreclosure, or delinquency

The property must be a single-family detached dwelling

Homeowner must have a credit score of 660.

PowerSaver Loans cannot be used for pellet stoves or electric heat units.

Condominiums are eligible for PowerSaver loans regardless of the number of total units in a building where the loan can be attached to the deed of the condo owner.

Saving energy and money isn't the only benefit that comes with making your home energy efficient. Other benefits could include increased home comfort, improved indoor air quality, increased property value, local job creation, and reduced need for combustion of fossil fuels and resulting emissions into the atmosphere.

#### HOW MUCH CAN I SAVE IN ENERGY COSTS?

Energy saving results vary per homeowner but can be considerable. The minimum energy savings is at least 25% and some Maine homeowners even saved in excess of 50% after upgrading their home with eligible energy savings improvements. Saving energy and money isn't the only benefit that comes with making your home energy efficient. Home comfort is also improved. Other benefits often include improved indoor air quality, increased property value, local job creation and reduced need for combustion of fossil fuels and resulting emissions into the atmosphere.

#### CAN BUSINESSES APPLY FOR A HOME ENERGY LOAN?

Businesses are not eligible for Efficiency Maine's home energy loans, except for residential building owners who are seeking to conduct energy upgrades in residential buildings of between 1-4 units each. Efficiency Maine currently offers low-interest loans of up to \$35,000 at 1% APR for small businesses. You can find more information on Efficiency Maine's loan program for small businesses [here](#).

#### WHAT IS THE TERM (DURATION) OF A MAINE PACE LOAN?

A PACE loan can be for a term of 5, 10, or 15 years.

#### WHAT IS THE TERM (DURATION) OF A POWERSAVER LOAN?

A PowerSaver loan can be for a term of 5, 10, 15 or 20 years. Smaller loans of up to \$7,500 can be for up to 10 years. Loans of between \$7,501 and \$25,000 can be for up to 15 years (or up to 20 years for projects that include solar installations).

#### WHAT IS THE INTEREST RATE OFFERED FOR AN EFFICIENCY MAINE HOME ENERGY LOAN?

The interest rate for both Maine PACE and PowerSaver loans is currently 4.99% fixed APR with no loan origination, servicing, closing, or pre-payment fees of any kind.

#### WHAT IS THE RESPONSIBILITY OF THE PROPERTY OWNER WHO USES EFFICIENCY MAINE FINANCING TO MAKE ENERGY EFFICIENCY IMPROVEMENTS?

A property owner will be obligated to use the loan funds for energy efficiency improvements and to repay the loan for the shorter of either: 1) the agreed upon term of the loan or (in the case of a Maine PACE Loan) 2) the period of time in which the owner continues to own the property (if the homeowner sells the property, then the new owner takes on the responsibility for loan repayment).

#### WHAT HAPPENS TO A PACE LOAN UPON A SALE OF THE PROPERTY?

With a Maine PACE Loan, if you ever decide to sell your home, you can choose either to pay off the remaining balance, or transfer the loan to the next owner. NOTE: This feature is not available for homeowners who take advantage of a PowerSaver loan.

#### WHO CAN I CONTACT ABOUT ESTABLISHING A PACE PROGRAM IN MY COMMUNITY AND RELATED PACE INFORMATION?

Please contact Dana Fischer at [dana.fischer@efficiencymaine.com](mailto:dana.fischer@efficiencymaine.com) or Peter Roehrig at [peter.roehrig@efficiencymaine.com](mailto:peter.roehrig@efficiencymaine.com) at Efficiency Maine if you are interested in establishing PACE in your community or promoting our home energy loan program. Efficiency Maine will update this FAQ periodically. Please send comments and suggestions to Dana Fischer, Efficiency Maine Residential Program Specialist at [dana.fischer@efficiencymaine.com](mailto:dana.fischer@efficiencymaine.com).

### **Maine Small Business Credit Initiatives**

On September 16, 2011, the U.S. Department of the Treasury and Maine Governor Paul LePage announced the approval of Maine's State Small Business Credit Initiative (SSBCI) application (see Governor's press release at <http://www.maine.gov/tools/whatsnew/index.php?topic=Portal+News&id=304431&v=Article-2008>). The \$13.2 million in funds will help create new private sector jobs and spur more than \$132 million in additional small-businesses lending in that state. The funding will take place in three stages, with the first allocation of \$4.3 million now taking place.

The SSBCI funds will be used to recapitalize three existing, successful programs:

1. \$7 million will be available to a group of 15 regional economic development agencies to make loans to businesses in their area. See FAME's Regional Economic Development Revolving Loan Program.

2. \$3.2 million will be allocated to FAME for the Economic Recovery Loan Program – loans of up to \$1 million that meet the program’s underwriting requirements, which can be used statewide;

3. \$3 million will be allocated to the Small Enterprise Growth Fund – Maine’s state-run venture capital fund.

For more information, please contact FAME’s Bob Corey at (207) 620-3524.

### **Office of Science Financial Assistance Program**

The U.S. Department of Energy announces its continuing interest in receiving applications for the Office of Science Financial Assistance Program. Areas of interest include, but are not limited to: Basic Energy Sciences and Biological and Environmental Research, and Workforce Development for Teachers and Scientists. Subtopics include Solar Photochemistry Research, and Climate Sciences. \$400 million expected to be available, multiple awards anticipated. Responses due 9/30/12. For more info, contact Kimberlie Laing at kim.laing@science.doe.gov or go to: <https://www.fedconnect.net/fedconnect/?doc=DE-FOA-0000660&agency=DOE>. Refer to Sol# DE-FOA-0000600.

### **HUD Multifamily Energy Innovation Fund**

The Department of Housing and Urban Development’s (HUD) Office of Affordable Housing Preservation (OAHP) is issuing a notice of fund availability (NOFA) for the Multifamily Energy Innovation Fund. This fund provides a total of \$25 million in grants to be used for the purpose of energy efficiency upgrades at multifamily properties. The goals of this NOFA are to:

1. Demonstrate solutions to the primary and longstanding challenges to implementing energy efficiency and renewable energy improvements, in existing affordable multifamily properties.
2. Leverage private capital and additional public funding to demonstrate “proof of concept” of specific models.
3. Conduct applied research to document and disseminate mainstream, scalable approaches to retrofitting affordable multifamily properties.

The overall objective of the Energy Innovation Fund is to help catalyze a home energy retrofit market in the United States by accelerating private investment in cost-saving energy efficiency retrofits in the residential sector. Innovative and replicable strategies to improve the usefulness of existing HUD programs--as well as developing new financing tools--will lead to significant reductions in energy consumption, operating costs, and the carbon footprint of both affordable and market-rate housing. More information can be found here: <http://www.hud.gov/offices/adm/grants/nofa10/grpeif.cfm>.

## **FHA, Fannie Mae Launch Energy Efficiency Retrofit Program**

The U.S. Housing and Urban Development Department (HUD) announced on May 31 its Green Refinance Plus, a program between HUD's Federal Housing Administration (FHA) and Fannie Mae to boost energy efficiency in older affordable housing. The program will allow owners of existing affordable rental housing properties to refinance into new mortgages that include funding for energy- and water-saving upgrades, along with other needed property renovations.

Under the program, FHA and Fannie Mae will share the risk on loans to refinance existing rent-restricted projects while permitting owners to borrow additional funds to make energy-saving improvements to their properties. Owners of existing multifamily affordable properties typically refinance their mortgages every 10 to 15 years. In older apartment buildings, however, owners are often hard-pressed to find additional financing to maintain or improve the physical condition of their properties, including making energy-efficient upgrades. Soon, Fannie Mae and its participating lenders will begin accepting applications to refinance owners' debt and improve the energy efficiency of their properties.

The initiative is intended to refinance the expiring mortgages of Low Income Housing Tax Credit properties, and other affordable projects, and to lower annual operating costs by reducing energy consumption. Fannie Mae and HUD anticipate approximately \$100 million in initial refinance volume with an average loan amount of \$3.5 to \$5 million.

[http://portal.hud.gov/hudportal/HUD?src=/press/press\\_releases\\_media\\_advisories/2011/HUDNo.11-106](http://portal.hud.gov/hudportal/HUD?src=/press/press_releases_media_advisories/2011/HUDNo.11-106).

## **Tax Credits for Energy Efficiency** **(<http://www.energysavers.gov/financial/70010.html>)**

If you purchase an energy-efficient product or renewable energy system for your home, you may be eligible for a federal tax credit. Below is an overview of the federal tax credits for energy efficiency that are currently available.

Some energy efficiency tax credits are available through 2016 as noted below.

### **How to Claim Your Tax Credit**

- Visit the IRS website <http://www.irs.gov/> to obtain the correct forms for the tax year you are filing.
- Use the following forms:
  - For renewable and efficiency credits: IRS Form 5695 
  - For alternative motor vehicle credits: IRS Form 8910. Also download instructions for form 8910.

- For qualified plug-in electric drive motor vehicle credits: [IRS Form 8936](#) .
- Save your receipts, or make copies of them, and the Manufacturer Certification Statement for your records.
- NOTE: The credits are nonrefundable—in other words, the credits are only available to the extent you have a tax liability. The credits for home energy improvement products eligible through 2011 may be limited if you are subject to the AMT.
- Tax credits can only be claimed once, and are limited to the year in which they are purchased: If you claimed a home energy improvement tax credit on your 2010 taxes, you cannot take an additional credit for the same purchase on your 2011 taxes.
- There is a \$500 lifetime limit on the federal tax credits that expire in December 2011 (not those that expire in 2016). If you have received a total of \$500 or more in these tax credits from 2006-2010, you are not eligible for any more.

### ***Products Eligible for Tax Credits Through 2011*** ***Products Eligible for Tax Credits Through 2016***

Tax credits for these products are available at 30% of the cost, with no upper limit, through 2016 (Select "See Details" for more information on each product, or see the [printable version](#)).

#### **Geothermal Heat Pump**



*Credit: Bruce Green*

**Credit:** 30% of cost, with no upper limit

**When and Where:**

- Must be "placed in service" by Dec. 31, 2016
- Available on principal home or second home.
- New and existing homes

- See details

<b>Product</b>	<b>Requirements</b>	<b>More Information</b>
<b>Geothermal Heat Pump</b>	Closed Loop: EER >= 14.1; COP >= 3.3 Open Loop: EER >= 16.2;	Learn more about <a href="#">geothermal heat pumps</a> ,

	<p>COP &gt;= 3.6  Direct Expansion: EER &gt;= 15; COP &gt;= 3.5</p> <p>Credit includes installation costs.</p>	<p>including:</p> <ul style="list-style-type: none"> <li>• <u>Types of geothermal heat pumps</u></li> <li>• <u>Efficiency ratings</u> of geothermal heat pumps</li> </ul> <p>All <u>ENERGY STAR geothermal heat pumps</u> qualify.</p>
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**Solar Energy Systems**



*Credit: Cheryl Unger*

**Credit:** 30% of cost, with no upper limit

**When and Where:**

- Must be "placed in service" by Dec. 31, 2016
- Available on principal home or second home.
- New and existing homes

- See details

<b>Product</b>	<b>Requirements</b>	<b>More Information</b>
<p><b>Solar Water Heating Property</b></p>	<p>At least half of the energy generated by the "qualifying property" must come from the sun.</p> <p>The system must be certified by the <u>Solar Rating and Certification Corporation</u> (SRCC).</p> <p>Credit includes installation costs.</p>	<p>Learn more about <u>solar water heaters</u>. All <u>ENERGY STAR solar water heaters</u> qualify.</p> <p>The water must be used in the dwelling. The credit is not available for expenses for swimming pools or hot tubs.</p> <p>Tax credits are only available for the solar water heating system property, not the entire water heating system of</p>

		the household.
<b>Photovoltaic Systems (Solar Electric Property)</b>	Photovoltaic systems must provide electricity for the residence and must meet applicable fire and electrical code requirement.	Learn more about: <ul style="list-style-type: none"> <li>• <a href="#">Small solar electric systems</a></li> <li>• Things to consider when <a href="#">making your own electricity</a> with renewable energy systems</li> </ul>

### Wind Energy Systems



*Credit: Bergey WindPower*

**Credit:** 30% of cost, with no upper limit

**When and Where:**

- Must be "placed in service" by Dec. 31, 2016
- Available on principal home or second home.
- New and existing homes

- See details

Product	Requirements	More Information
<b>Residential Small Wind Turbines</b>	Nameplate capacity of not more than 100 kilowatts. Credit includes installation costs.	Learn more about: <ul style="list-style-type: none"> <li>• <a href="#">Small wind electric systems</a></li> <li>• Things to consider when <a href="#">making your own electricity</a> with renewable energy systems</li> </ul>

### Fuel Cells



*Credit: Capstone Turbine Corporation*

**Credit:** 30% of cost, up to \$500 per .5 kW of power capacity

**When and Where:**

- Must be "placed in service" by Dec. 31, 2016
- Primary residence
- New and existing homes

- See details

Product	Requirements	More Information
<b>Residential Fuel Cell Systems</b>	Efficiency of at least 30% and must have a capacity of at least 0.5 kW. Credit includes installation costs.	<ul style="list-style-type: none"> <li>• Learn more about <a href="#">fuel cells</a></li> </ul>

### **Vehicle Tax Credits**

Tax credits are also available for some vehicles (Select "See Details" for more information on each product, or see the [printable version](#)).

### **Plug-In Electric Vehicles**



*Credit: ©iStockphoto.com*

**Credit:** Varies, see below.

**When:**

- See below; credits phased-out after certain number of vehicles are sold.

- See details

Product	Requirements	More Information
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**Plug-in electric and small neighborhood electric vehicles**

Credit: Up to \$7,500, based on capacity of the battery system.

The first 200,000 vehicles sold get the full tax credit before the credit begins phasing out. Use IRS Form 8936 .

See [Fueleconomy.gov](http://Fueleconomy.gov) to find out which vehicles qualify for the credit.

See the IRS information on the Plug-in Electric Vehicle Credit.

Also see credits for alternative fuel vehicle refueling property.