

New England and Federal Incentives for Fuel Cell Technologies

The emerging need to reduce the United States' dependence on foreign oil in an effort to control energy prices and to reduce the emission of carbon and other greenhouse gasses to lessen human impact on the environment has led to an increased investment in renewable energy on both the state and federal level. Various incentives offered by the five of the six New England states as well as the federal government are designed to encourage further the development and implementation of renewable energy (including fuel cell technologies) as an effective means of generating clean and efficient energy.

Connecticut Incentives:

Connecticut offers more incentives in support of fuel cell technologies than any other New England state, due to the fact that "Connecticut companies pioneered the development and application of fuel cells and hydrogen generation, and continue to lead the world with a broad infrastructure of original equipment manufacturers, suppliers, academic support, state government support, and regional activity" (CHFCC Online). Most of these incentives come through the Connecticut Clean Energy Fund (CCEF), supporting the state's goal of reducing energy consumption by 20% by 2020. Over \$4,814,000 are available to individual projects through state grants, loans and other incentives.

Two Industry Recruitment/Support grants and loans are available. The [CCEF Operational Demonstration Program](#) awards up to \$750,000 in support of entrepreneurs, developers or integrators looking to commercialize their effective clean-energy technologies. The [New Energy Technology Program](#) awards up to \$10,000 and aims to develop energy-efficient technologies and renewables to save energy, improve air quality and generate employment opportunities in Connecticut. Three grants are available through the CCEF State Grant Program. The [Community Innovations Grant Program](#) offers up to \$4000 to municipalities who commit to the 20% by 2020 program for public awareness and education projects. The [On-Site Renewable Distributed Generation Program](#) grants up to \$4 million for eligible projects to support installation of systems that generate electricity at commercial, industrial and institutional buildings. Recent legislation requires the state's two electric distribution companies (CL&P and UI) to enter into long-term electricity purchase agreements to obtain at least 150 MW of "Class I" renewable energy. The [Project 150 Initiative](#) grant offers a minimum of \$50,000 to aid in the realization of this legislation, as fuel cells fall under the "Class I" category.

In addition to a number of grants, Connecticut also offers a [Property Tax Exemption](#) and a Loan Program. The state provides a property tax exemption for all "Class I" renewable energy systems that generate electricity for private residential use. Municipalities are also authorized (but not required) to provide a tax exemption for combined heat and power systems installed after 7/1/07. Also, the [Department of Public Utility Control](#) provides long-term financing to retail end-use customers for the installation of customer-side distributed resources.

Maine Incentives:

Through the State Grant Program, Maine offers [Voluntary Renewable Resources Grants](#) of up to \$50,000. This provides funding for small-scale demonstration projects designed to educate communities on the value and cost-effectiveness of renewable energy.

Massachusetts Incentives:

The Massachusetts Technology Collaborative (MTC) offers three types of aid. In terms of Industry Recruitment and Support, the [MTC Business Expansion Initiative](#) gives between \$500,000 and \$3 million in loans to support renewable energy companies entering or expanding within the manufacturing stage of commercial development. The [MTC Sustainable Energy Economic Development \(SEED\) Initiative](#) supports financial assistance to support renewable-energy companies in the early stage of development by awarding up to \$500,000 per company per 12- month period. MTC supports the State Grant Program through the [MTC Large Onsite Renewables Initiative \(LORI\) Grants](#). Feasibility LORI grants are capped at \$40,000 with an applicant cost share of 15%. Design Grants are capped at the lesser of \$125,000 or 75% of actual costs. Construction grants are capped at the lesser of \$275,000 or 75% of actual costs. The LORI provides two types of grants, Feasibility Study Grants and Design & Study Grants on a competitive basis to expand the production and use of distributed renewable energy technologies in the state. The maximum total of available grants in Massachusetts is over \$3,775,000.

The state also offers an Alternative Energy Conservation Patent Exemption. The 100% [Corporate Excise Tax Deduction](#) is offered for any income received from the sale or lease of a US patent deemed beneficial for energy conservation or alternative energy development by the MA Department of Energy Resources and any income received from the sale or lease of personal or real property or materials manufactured in MA and subject to the approved patent. The same regulations apply to a [personal deduction](#).

New Hampshire Incentives:

The state of New Hampshire does not currently offer incentives to support the development or production of fuel cell technologies.

Rhode Island Incentives:

The Rhode Island Economic Development Corporation (RIEDC) offers up to \$750,000 through the State Grant Program's [Renewable Energy Fund Grants](#) for renewable energy projects that "directly benefit the state of Rhode Island". RIEDC also offers up to \$750,000 through the State Loan Program's [Renewable Energy Fund Loans](#), for projects that meet the same criteria as the Renewable Energy Fund Grants.

Vermont Incentives:

Vermont's Clean Energy Development Fund (CEDF) offers a Grant Program and a Loan Program. The [CEDF Grant Program](#) has a budget of \$4 million and awards a varying amount per solicitation. The Grant is seeking to promote the development and deployment of cost-effective and environmentally sustainable electric power resources for the long-term benefit of Vermont electric customers. The [CEDF Loan Program](#) awards between \$50,000 and \$1 million to promote the development of clean electric energy technologies by providing funding for purchasing land and buildings, purchasing and installing machinery and equipment, and working capital.

In addition to grants and loans, two tax exemptions are available. Vermont allows municipalities the option of offering an exemption from [the municipal real and personal property taxes](#) for certain renewable energy systems (note, however, state property taxes would still apply). The second option is a 100% [sales tax exemption](#) on systems up to 250 kW capacity that generate electricity using eligible "renewable energy" resources, to micro-combined heat and power systems up to 20 kW and to solar water- heating systems.

Federal Incentives:

The United States Department of the Treasury's [Renewable Energy Grants](#) awards up to \$1500 per 0.5 kW for fuel cell property. The grant is equal to 30% of the basis of the property for fuel cells. Eligible property includes fuel cells with a minimum capacity of 0.5 kW that have an electricity-only generation efficiency of 30% or higher. The Department of Agriculture awards a [Rural Energy for America Program \(REAP\) Grant](#) for 25% of the project cost or a [REAP Loan](#) of up to \$25 million per loan guarantee. These REAP incentives are available to agricultural producers and rural small businesses to purchase renewable energy systems (including systems that may be used to produce and sell electricity) to make energy efficiency improvements and to conduct relevant feasibility studies. The Department of Energy actively promotes projects in manufacturing, stand-alone projects and large-scale integration projects that may combine multiple eligible renewable energy, energy and efficiency and transmission technologies in accordance with a staged development scheme. The [Loan Guarantee Program](#) focuses on projects with budgets exceeding \$25 million and generally does not support research and development projects.

The federal government also offers a [Business Energy Investment Tax Credit](#) of 30% for fuel cells. However, the credit is capped at \$1,500 per 0.5 kW of capacity. Eligible property includes fuel cells with a minimum capacity of 0.5 kW that have an electricity-only generation efficiency of 30% or higher. For Industry Recruitment and Support, a [Qualifying Advanced Energy Project Investment Tax Credit](#) is available. The total amount of credits to be allocated shall not exceed \$2.3 billion. The Treasury Department will issue certifications for qualified investments eligible for credits to qualifying advanced energy project sponsors. The criteria include a commercially viable product, the project with the greatest domestic job creation, the greatest net reduction of air pollution and greenhouse gases, a technologically innovative and commercially developable project, the lowest levelized cost and the shortest project time. Also, a taxpayer may claim a [personal tax credit](#) of 30% of qualified expenditures or a maximum of \$500 per 0.5 kW for a system that serves a dwelling unit located in the United States and used as a residence by the taxpayer. Under the federal [Modified Accelerated Cost-Recovery System \(MACRS\)](#), businesses may recover investments in certain property through depreciation reductions.