

Summary of Major Existing Massachusetts and Federal Government Policies Related to Reducing Greenhouse Gas Emissions

Policy	Page
Cap-and-Trade (electricity generation)	
Regional Greenhouse Gas Initiative	2
Energy Efficiency	
Utility-Administered Energy Efficiency Programs	2
All Cost-Effective Energy Efficiency (expanded efficiency programs)	3
Low-Income Weatherization Programs	3
Incentives for Combined Heat And Power	4
Decoupling (Remove Disincentives for Utilities to Maximize Efficiency)	4
Energy Efficiency in Building Codes, Training, and Commissioning	4
Federal and State Appliance/Product Efficiency Standards	5
Governor's Clean Energy Challenge	5
Renewable Energy	
Renewable Portfolio Standard	6
Mass. Renewable Energy Trust	6
Sustainable Forest Bioenergy Initiative	6
Governor's Wind Goal: 2000 by 2020	7
Commonwealth Wind	7
Offshore Wind and the Oceans Management Act	7
Commonwealth Solar	8
Electric Utility Long Term Contracts for Renewable Energy	8
Net Metering (Higher Capacity Limits and Higher Rates for Self-Generators of Electricity)	8
Transportation/Smart Growth	
Federal café Standard (Vehicle Fuel Efficiency)	9
California Vehicle GHG Standard	9
Federal Renewable Fuel Standard	10
Gasoline Tax Exemption for Cellulosic Biofuel	10
Low Carbon Fuel Standard	10
Mandate for Biofuel Use in Diesel Motor Fuel and Home Heating Oil	11
Commonwealth Capital (Smart Growth/Smart Energy) Policy	11
Sustainable Development Principles	11
Business Development And Workforce Training	
Clean Energy Center (Green Jobs Act)	12
Large-Scale Private Development	
Mass. Environmental Policy Act (MEPA) GHG policy	12

Government Operations	
Leading by Example (Mass. state government operations)	13
Green Communities Program	13

Cap-and-Trade (electricity generation)

Regional Greenhouse Gas Initiative (RGGI)

RGGI is an agreement among 10 northeast states, from Maine through Maryland, to jointly limit CO₂ emissions from electricity power plants. Under a Memorandum of Understanding (MOU) signed by most of the states in December 2005, and later amended as other states joined, there is an overall limit on emissions from the northeast. The limit (“cap”) went into effect in January 2009, and remains fixed through 2014. It then drops 2.5% a year through 2018, so that in 2018 emissions are required to be 10% below the 2009 level. Each state has an individual limit, and these were negotiated among the states. Each power plant of 25MW capacity or greater must have an “allowance” (or permit) for each ton of CO₂ emissions. The MOU requires each state to use at least 25% of its allowances for a “consumer benefit or strategic energy purpose”; the remainder can be used as the state wishes, including providing them to electricity generators at no cost. In practice, the states have chosen to sell (auction) the vast majority of the allowances, and the funds are being used predominantly to pay for energy efficiency and renewable energy programs. Under the terms of Section 7 of the Green Communities Act, Massachusetts is auctioning almost 100% of the allowances, and using at least 80% of the funds for efficiency. This strategy is intended to ramp up energy efficiency and reduce electricity costs in the long term. The interstate MOU also allows electricity generators to meet a portion of their allowance requirements by using “offsets,” which are methods of reducing greenhouse gas emissions not connected to electricity generation, such as planting trees.

Energy Efficiency

Utility-Administered Energy Efficiency Programs

Under the 1997 electricity restructuring law, a “systems benefit charge” was added to electricity bills, yielding about \$125 million annually in recent years, which is used for industrial, commercial, residential, and low-income efficiency programs. There is no such charge on natural gas bills, but gas utilities also have consumer-oriented efficiency programs (historically funded at lower levels in relation to total revenues than for electricity). In addition, because it is recognized that much of the efficiency potential for residences is in space heating, the electric utilities have provided some funding for homes that use fuel oil for heating. For all three of the energy sources, these funds pay for a range of energy efficiency services, including: energy audits to identify energy efficiency opportunities, contractors to install energy efficiency measures, financial

incentives to install efficiency measures and appliances, and information about energy use and carbon footprint. Our analyses indicate that the cumulative impact of these investments has reduced the Commonwealth's annual electricity use by approximately 8%.

All Cost-Effective Energy Efficiency (expanded efficiency programs)

Historically, the utility-run efficiency programs have been limited by the amount of funding provided by the systems benefit charge for electric utilities and rate case settlements for gas utilities. The Green Communities Act (GCA) greatly expands the opportunities for savings from utility-run efficiency programs by (a) providing the utilities with additional funds (i.e., at least 80% of funds generated through the Regional Greenhouse Gas Initiative auctions are dedicated to efficiency programs), (b) mandating that utilities invest in all efficiency and demand-side resources that are cost-effective, which is defined as costing less per unit of energy saved than supplying more electricity or natural gas (for example, currently energy efficiency programs cost about 3-4 cents per kilowatt-hour compared with electricity supply costing 8-10 cents per kilowatt-hour). It is anticipated that this mandate will result in at least a tripling of utility driven efficiency over the next few years. In addition, the GCA provides for greater oversight of utility energy efficiency plans and programs. In the past utilities have developed their plans in consultation with DOER, and have been required to obtain a determination from the Department of Public Utilities that the programs are cost-effective. The GCA creates an Energy Efficiency Advisory Council, which is chaired by DOER and includes a variety of stakeholders. It is required to oversee and approve each utility's energy efficiency plan, to ensure that the GCA mandate to provide all demand side resources that are cost-effective is met.

Low-Income Weatherization Program

The Mass. Weatherization Assistance Program helps low-income households reduce their heating bills by providing full-scale home energy conservation services, using federal and state funding. The program is operated by community action agencies throughout the state, coordinated by the Low Income Energy Assistance Network and the state's Dept. of Housing and Community Development. To the extent possible, work is coordinated with any utility-funded energy efficiency programs that may be available in the area. Local weatherization contractors are hired to complete the work at no cost to the occupants. Typical work completed includes air sealing, attic and/or sidewall insulation, weather-stripping, and minor repairs associated with the weatherization work. (Heating system work, if needed, is typically referred to a separate program.) All work receives a thorough quality control inspection by an energy auditor. Funds from the federal American Recovery and Reinvestment Act (ARRA) will help this critical program expand in 2009 and 2010.

Incentives for Combined Heat and Power

Combined heat and power (CHP) facilities produce both electricity and heating/cooling. When sized properly and at appropriate host sites, CHP systems are highly efficient and provide a substantial opportunity for GHG reductions relative to conventional heating and power supply. There are two significant new incentives available to customers seeking to install CHP. First, pursuant to the GCA, CHP is now eligible to receive rebates from the electric utility energy efficiency programs. The pending utility plans now include financial support for (a) technical assistance to ensure cost-effectiveness and (b) rebates for capital costs of CHP installations. Second, the GCA directs the creation of an Alternative Energy Portfolio Standard, which requires retail electricity suppliers (both regulated distribution utilities and competitive suppliers) to obtain a percentage of their electricity from sources that qualify as Alternative Energy Generation Units (of which CHP is currently the most commercially viable resource). The APS begins with an obligation of 1% in 2009 and increases annually up to 5% in 2020. The number of certificates created by a facility increases as a host customer maximizes use of its thermal output, resulting in a maximum incentive for sites most appropriately using this technology. Both of these new incentives are expected to foster more aggressive adoption of CHP at locations where it has the best promise of mitigating GHG emissions.

Decoupling

The Decoupling Order issued by the Massachusetts Department of Public Utilities (DPU) on July 16, 2008, will help ensure that utilities improve their efficiency programs as envisioned by the GCA. The old system of rate structures meant that utilities would lose money when their customers cut their energy use through efficiency measures. By breaking the link between utility revenues and energy sales, decoupling removes disincentives for utilities to provide expanded, quality energy efficiency programs. Pursuant to the Order, over the next few years utilities will transition to a new set of rate structures that eliminate the economic disincentives to their investment in energy efficiency and distributed generation.

Energy Efficiency in Building Codes, Training, and Commissioning

Section 55 of the Green Communities Act requires the state to adopt the latest revision of the International Energy Conservation Code (IECC) as part of the state building code, within one year of its enactment. Prior to this legislation there had been long delays in updating the building code to incorporate current efficiency standards. As a result of the GCA the state's Board of Building Regulation and Standards (BBRS) has already adopted the 2006 IECC and the 2007 amendments to it; and by law the BBRS must adopt the 2009 IECC by the end of this year. The BBRS, in conjunction with DOER, is also empowered to adopt more stringent standards that it decides are warranted. Section 55 also requires the BBRS and DOER to develop regulations for training and

certification of local building inspectors regarding the energy provisions of the building code, and to ensure that all new construction and renovation passes inspection by inspectors who have had such training. Section 55 also instructs DOER to issue regulations requiring that buildings larger than 10,000 square feet undergo “commissioning” (which is regular performance monitoring) or acceptance testing.

Federal and State Appliance/Product Standards

Appliance and equipment standards set the bar for minimum energy efficiency of products, and are one of the most effective tools for reducing energy use and greenhouse gas emissions. Most such standards are set by the federal government, and states are only allowed to set standards on those products which are not federally regulated. Massachusetts has set standards on several where it is not preempted by federal action, such as metal halide lamps used in stadium lighting, and single voltage external AC to DC power supplies.

The Commonwealth’s original appliance standards legislation was enacted in 1986. In November 2005 these standards were expanded to cover additional appliances and equipment, including a standard for gas furnaces that is more stringent than the federal standard. Due to federal preemption, however, this state furnace standard is subject to a waiver from the federal Department of Energy. In addition, Massachusetts supports the development and use of more efficient appliances and products through DOER’s involvement in energy efficiency programs offered by Massachusetts utilities, which offer financial incentives for people to buy and install EnergyStar products and appliances, as well as other highly efficient products/appliances.

Governor’s Clean Energy Challenge

In November 2008, Governor Patrick issued a challenge to Massachusetts operating companies, service providers, and non-profits to reduce energy consumption and save money. The Governor’s Clean Energy Challenge supports companies in reducing their energy use and emissions by at least 10% over the next three years. The Challenge is an initiative developed by the New England Clean Energy Council and the Massachusetts High Technology Council, in partnership with energy distribution utilities NSTAR, National Grid, Western Mass Electric, and Unitil. Challenge participants will be supported in their efforts by the utilities and by mentor companies like Millipore, Pfizer, Genzyme, Staples, and Raytheon. These mentor companies were an important part of the agenda at the Challenge’s kick-off conference and exposition on May 12 at the Worcester DCU Center. Organizations interested in the Challenge and the Conference can get more information and register on www.governorscleanenergychallenge.com.

Renewable Energy

Renewable Portfolio Standard

Created by the Electricity Restructuring Act of 1997 (Chapter 164 of the Acts of 1997, see: <http://www.mass.gov/legis/laws/seslaw97/sl970164.htm>) the Massachusetts Renewable Energy Portfolio Standard (RPS) requires retail electricity suppliers (both regulated distribution utilities and competitive suppliers) to obtain for their retail customers a percentage of electricity from sources that qualify as New Renewable Generation Units (i.e., post-1998), with compliance by means of purchasing Renewable Energy Credits. The RPS began with an obligation of 1 percent in 2003 and increased by one half percent annually since then, reaching 4 percent in 2009. Pursuant to the GCA, the RPS annual increase will double to 1 percent annually after 2009. Consequently, by 2020, 15% of the supply for non-exempt retail sales, or about 7.5 million megawatt-hours (MWh) at current load levels, is to be from new, renewable resources. This commitment to renewable energy will strengthen the renewable energy infrastructure, thus paving the way for more widespread use of green energy sources.

Massachusetts Renewable Energy Trust

The Massachusetts Renewable Energy Trust (MRET) was created as a component of electric utility industry restructuring to promote the development of renewable energy in the Commonwealth. As such, MRET seeks to maximize environmental and economic benefits for the Commonwealth's citizens by pioneering and promoting clean energy technologies and fostering the emergence of sustainable markets for electricity generated from renewable sources. The Trust provides financial assistance for development of solar, wind, biomass, and hydro projects. The goal is to generate the maximum economic and environmental benefits from clean energy resources to citizens of the Commonwealth. The Trust also provides critical support to help the nascent renewable energy industry thrive and create new jobs in Massachusetts. Funding for MRET derives from a small charge on customers' electricity bills that results in \$25M per year.

Sustainable Forest Bioenergy Initiative

The Department of Energy Resources and the Department of Conservation and Recreation (our forestry agency) have identified biomass as a renewable energy resource with significant potential in Massachusetts. This initiative facilitates the development of biomass energy projects while maintaining the highest standards for sustainable forestry. The Initiative has established essential technical information on the biomass resource, sustainable harvesting silviculture practices, and macroeconomic benefits that can form the basis of sound biomass policy and market development. The initiative will support market development of biomass harvesting supply infrastructure,

biomass CHP projects, and wood pellet production and thermal boiler technologies for high efficiency, low emissions heating and cooling applications.

Governor's Wind Goal: 2000 by 2020

On January 13, 2009, Governor Patrick announced a goal of 2,000 MW of wind energy installed in Massachusetts by 2020. This would provide enough power for 800,000 homes, meet 10% of the state's current electricity load, and reduce GHG emissions by 3.1 million tons, or roughly 12% of emissions from power plants today. Consultants for Mass. DOER estimate that there is approximately 1,500 MW of technical potential for onshore wind and over 6,000 MW offshore in Massachusetts. Included within this is approximately 947 MW of potential commercial scale wind energy on state-owned lands. It will take a careful balancing of public interests to decide how much of the renewable energy potential of these sites on state land should be pursued.

Commonwealth Wind

The Massachusetts Renewable Energy Trust's (MRET) Commonwealth Wind initiative will provide an overarching framework to expand investments for wind energy installations in Massachusetts. The three types of projects listed below could qualify for technical and/or financial assistance from MRET:

1. Commercial scale projects that primarily serve wholesale markets.
2. Community-scale projects in the 100 kW to approximately 2 MW range, where the project sponsor and primary beneficiary is a private company or organization, a municipality, or a government agency.
3. Small-scale projects under 100 kW serving residential, small commercial, or institutional buildings.

Offshore Wind and the Oceans Act

Offshore wind is the most plentiful source of renewable energy in Massachusetts, and one of the most abundant sources in the United States. The National Renewable Energy Laboratory (NREL) calculated approximately 900,000 MW of potential in offshore wind, and the US Department of Energy's recent "20% by 2030" report determined that 54,000 MW of offshore wind could be developed in the US by 2030 with current technology, enough to meet 20 percent of US electricity demand. Consultants for DOER estimate that there is over 6,000 MW of technical potential in offshore wind in the state. Several other developers aside from EMI (Cape Wind) have proposed wind projects off the coast of Massachusetts, including Jay Cashman/Patriot Renewables (300 MW), The Town of Hull (12 MW), Blue H (floating platform design, 420 MW), and Bluewater. The Commonwealth expects a significant increase in proposed projects once the federal and state regulatory regimes have been finalized. The Department of Interior's Minerals Management Service (MMS) recently released its final rule regarding renewable energy leasing on the outer continental shelf (three miles from shore and

beyond), while Massachusetts plans to complete the nation's first state ocean management plan by December of 2009. Governor Patrick signed the Oceans Act in 2008, which mandates the creation of this comprehensive plan, which will identify locations in state waters other than the Cape Cod Ocean Sanctuary, off the coast of the national seashore, for potential development of "appropriate-scale renewable energy facilities."

Commonwealth Solar

To achieve Governor Patrick's goal of 250 MW of solar PV installed in Massachusetts by 2017, DOER and the Renewable Energy Trust have established Commonwealth Solar. Begun in January 2008, Commonwealth Solar provides rebates for solar installations for residences, businesses, and public buildings backed by \$68 million of existing renewable energy funds. As the rebate program expires, Commonwealth Solar will transition to other forms of support for solar power, such as the solar carve-out within the Renewable Energy Portfolio Standard, as provided for in the Green Communities Act. In addition, the Commonwealth Solar goal will also be met by the new opportunity for our regulated utilities to own and implement solar photovoltaic (PV) generation installations. In the first year of its implementation, Commonwealth Solar doubled the installed capacity of PV in the state, and is on the road to quadrupling by the end of this year.

Electric Utility Long-Term Contracts for Renewable Energy

The Green Communities Act requires that the electric distribution companies solicit proposals from renewable energy developers and enter into cost-effective long-term contracts for renewable energy, in order to facilitate the financing of renewable energy generation within the Commonwealth, including state waters, or in adjacent federal waters. Long-term contracts assist renewable energy developers in obtaining financing, by providing assurance of revenues from sales over a number of future years. Since the restructuring of energy markets in Massachusetts, power contracts have typically been for only six months to one year, far too short to allow financing of the typically high capital costs involved in developing renewable generating facilities.

Net-Metering

Net-metering allows electricity customers who install distributed power generation, such as solar PV (photovoltaics), to sell electricity generated in excess of their own electricity consumption back to the electric distribution company. In the past, net-metering in Massachusetts was limited to customers whose generation capacity was below 60 kW, with customers paid the wholesale price for surplus power. The Green Communities Act increases the net-metering capacity limit to 2 MW (about 33 times as high) and increases payments to the customer to the retail price. By requiring that the market

accurately price distributed renewable power generation, net-metering provides greater revenue for renewable generators, thereby making such installations more cost-effective.

Transportation

Federal CAFE Standard for Light Vehicles

The Corporate Average Fuel Economy (CAFE) standard was first enacted in 1975 and was established to reduce energy consumption by increasing the fuel economy of cars and light trucks on a fleetwide basis. The fuel economy standards are set by the National Highway Traffic Safety Administration, with the Environmental Protection Agency calculating the average fuel economy for each automobile manufacturer. Starting in 2004, the fleet average for passenger cars must exceed 27.5 mpg, and light trucks must exceed 20.7 mpg. Trucks under 8,500 pounds must average 22.5 mpg in 2008, 23.1 mpg in 2009, and 23.5 mpg in 2010. Under the Energy Independence and Security Act of 2007, automakers are required to meet a 35 mpg fleet-wide average for passenger cars and light duty trucks by 2020. NHTSA issued a "Notice of Intent to Prepare an Environmental Impact Statement for New Corporate Average Fuel Economy Standards" on March 27, 2009.

California Vehicle Greenhouse Gas Standards

Under the federal Clean Air Act, states are preempted from adopting motor vehicle standards that vary from federal standards, except that California is allowed adopt motor vehicle standards and enforce such standards if a waiver is granted by EPA under section 209(b) of the Act. Other states are allowed to adopt California's standards under section 177 of the Act. MassDEP is required to adopt the California standards under MGL c. 11 section 142K unless such standards will not achieve greater emission reductions than federal standards. As a result, in December 2005 MassDEP adopted California's GHG standards for passenger cars, light duty trucks, and medium duty vehicles under the low emission vehicle (LEV) program regulations, 310 CMR 7.40. EPA denied California a waiver for its GHG standards in 2007, but the request is now being reconsidered by the Obama administration. The standards would apply to model year 2009 and newer vehicles and will be fully phased-in for model year 2016. The standards can be met through reduction of vehicle-associated GHG in 4 areas: (1) tailpipe emissions of carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O); (2) tailpipe emissions incurred by the load of running air conditioning; (3) air conditioning system refrigerant leaks; and (4) upstream emissions associated with the production of fuel. Nationwide, by calendar year 2020, California's more stringent limits will reduce cumulative GHG emissions in California and other LEV states by 450 MMTCO₂e, a 43% improvement over the proposed federal CAFE standards.

Federal Renewable Fuel Standard

Title II of the federal Energy Independence and Security Act of 2007 creates a “renewable fuel standard,” which requires that such fuel used in the U.S. will rise from 4.7 billion gallons in 2007 to 36 billion gallons in 2022. Of that, “advanced biofuel” must rise from 0.6 billion gallons in 2009 to 21 billion gallons in 2022, and cellulosic biofuel must rise from 0.1 billion gallons in 2010 to 16 billion gallons in 2022. Renewable fuels must be produced from renewable biomass, replace other transportation fuel, and achieve at least a 20% reduction in greenhouse gas emissions on a lifecycle basis for “new facilities.” (Existing facilities, and expansion of such facilities, such as those producing corn-based ethanol, are exempt from the greenhouse gas criterion.) Advanced biofuel excludes ethanol derived from corn starch, and must yield at least a 50% lifecycle reduction in greenhouse gas emissions, while cellulosic biofuel must achieve a 60% reduction. The law contains provisions allowing the EPA administrator to reduce both the percentage greenhouse gas reductions and the volumes of production required. The three categories are not additive -- cellulosic fuel counts as part of advanced fuel, and both count as part of the renewable fuel mandate.

Tax Exemption for Cellulosic Biofuel

Section 1 of the Clean Energy Biofuels” Act, Chapter 206 of the Acts of 2008, exempts cellulosic biofuel from the state’s gasoline tax. This includes both ethanol derived from cellulosic sources and any other fuel derived from cellulosic sources that can be used in place of gasoline (or as part of a blend). To be eligible for the tax exemption, the biofuel must yield at least a 60% reduction in lifecycle GHG emissions relative to petroleum-based fuel sold in 2005 (the same definition is used in Renewable Fuel Standard provisions of the 2007 federal energy law). The tax exemption went into effect on Jan. 1, 2009, although no such fuel is yet being supplied in the state.

Low Carbon Fuel Standard

Section 6 of the Clean Energy Biofuels Act requires the state to work toward implementing a low carbon fuel standard (LCFS) for transportation fuels among the northeast states participating in the Regional Greenhouse Gas Initiative (RGGI). A LCFS, which is an idea first put into law by Executive Order in California, would require that the average carbon content of transportation fuels be reduced by a specific percentage by some future date. The Act requires that the GHG emissions be measured on a “full fuels cycle basis” (meaning the entire lifecycle) and that a declining standard be set so that a 10% reduction in emissions is achieved. The state is also directed to make use of analysis done by the California Air Resources Board, if applicable, to determine the carbon intensity of different fuels. At present NESCAUM (Northeast States for Coordinated Air Use Management) and MassDEP are leading regional discussions among the northeast states to develop a plan for a LCFS. In December 2008 environmental commissioners from the RGGI states and Pennsylvania

signed a letter of intent to develop a memorandum of understanding by the end of 2009 concerning the structure of a regional LCFS.

Mandate for Biofuels Use in Diesel Motor Fuel and Home Heating Oil

Sections 2 and 3 of the Clean Energy Biofuels Act instructs DOER to require that a percentage of both diesel motor fuel and home heating oil (number 2 oil) consist of fuel derived from renewable biomass, which must also yield at least a 50% reduction in lifecycle GHG emissions relative to petroleum-based fuel sold in 2005. The fraction begins at 2% on July 1, 2010, and grows to 5% by July 1, 2013. However, the Commissioner of DOER is empowered to delay the requirement if sufficient supplies of eligible fuel are not available, due to lack of supply, lack of blending facilities, or unreasonable cost. The mandate sunsets if and when a low carbon fuel standard that achieves equal or greater reductions in GHG emissions goes into effect. DOER shall also consider the feasibility of extending the mandate to number 4 and number 6 petroleum distillate fuels. Finally, DOER is instructed to study the feasibility of making the mandate apply on a statewide average basis, rather than on each gallon of fuel sold, making possible the development of a credit trading system. At present, the California Air Resources Board, on which Massachusetts has planned to rely (along with federal EPA) for estimates of the percentage lifecycle GHG reductions due to biofuels derived from different feedstocks and manufactured in different ways, has not yet completed its analysis.

Commonwealth Capital (Smart Growth/Smart Energy) Policy

Commonwealth Capital explicitly endorses 32 land use planning and regulation practices that are consistent with the Commonwealth's Sustainable Development Principles. The program makes available more than \$600 million annually in grants and low interest loans for a variety of capital investments, in part based on Commonwealth Capital scoring. - The more smart growth/smart energy oriented a community is, the more likely it is to receive funding. Almost 300 (out of 351) of the Commonwealth's communities have applied for funding, and municipal consistency with the Sustainable Development Principles has improved significantly, up 10% over the past five years, with the median score rising from 63 to 77 (out of a possible 140). Visit the [Governor's Commonwealth Capital page](#) for more information, including detailed analysis of past results and the 2009 application.

Sustainable Development Principles

The Patrick Administration utilizes a set of [Sustainable Development Principles](#) to guide the creation and implementation of state agency policies and programs, as well as investments in land and infrastructure. Municipalities, through policies like Commonwealth Capital, are also asked to modify their planning, regulatory, and funding

actions to achieve consistency with the Principles. The state's Sustainable Development Principles include promoting clean energy, in the form of energy efficiency and renewable power generation, in order to reduce greenhouse gas emissions and consumption of fossil fuels. They also encourage the creation of "pedestrian-friendly" districts and neighborhoods that mix commercial, civic, cultural, educational, and recreational activities with parks and homes. In regard to housing, the Principles call for building homes "near jobs, transit, and where services are available."

Business Development and Workforce Training

Clean Energy Center

The Green Jobs Act of 2008 created the Massachusetts Clean Energy Center to accelerate job growth and economic development in the state's clean energy industry. This new quasi-public agency serves as a clearinghouse and support center for the clean energy sector, making direct investments in new and existing companies, providing assistance to enable companies to access capital and other vital resources for growth, and promoting training programs to build a strong clean energy workforce that capitalizes on the job opportunities created by a vital new industry. Recently the Center issued an RFP to create a statewide system for training energy efficiency auditors, contractors, and installers; responses are due May 15.

Large-Scale Private Development

Mass. Environmental Policy Act Greenhouse Gas Policy (MEPA GHG)

The MEPA Greenhouse Gas Emissions (GHG) Policy and Protocol requires that certain Projects undergoing review under MEPA (M.G.L. c. 30, Sections 61-62I) quantify their GHG emissions and identify measures to avoid, minimize, or mitigate such emissions. In addition to quantifying project-related emissions, the Policy also requires proponents to quantify the impact of proposed mitigation in terms of emissions and energy savings. This Policy is part of a larger effort to focus attention on the causes of climate change and harness creative thought and technology to implement long-term solutions. This Policy is not intended to create a numerical GHG emission limit or a numerical emissions reduction target. Rather, in keeping with MEPA's overall purpose to evaluate alternatives that avoid, minimize and mitigate environmental impacts, the Policy is intended to ensure that project proponents and reviewers have carefully considered the GHG impact of their projects and taken all feasible means to reduce those impacts. All projects that require an Environmental Impact Report (EIR) are subject to review under the Policy unless the project's emissions are anticipated to be minimal.

Government Operations

Leading by Example (state government operations)

The Leading by Example (LBE) Program, established in April 2007 by Governor Patrick's Executive Order No. 484, works to reduce environmental impacts at all executive branch agencies, as well as the 29 public institutions of higher education and several authorities. The program oversees efforts to reduce energy and fuel use at the state's 65 million square feet of buildings and among the thousands of light and heavy duty vehicles, increase recycling, reduce water consumption, promote environmentally preferable purchasing, facilitate the construction of green state buildings, and reduce carbon emissions across state government. EO 484 sets the following targets for state government: 25% reduction in GHG emissions by 2012, 40% by 2020, and 80% by 2050; 20% reduction in energy use by 2012 and 35% by 2020; increase in consumption of renewable electricity to 15% of total electric use by 2012 and 30% by 2020; and a 10% reduction in water consumption by 2012, 15% by 2020. The LBE Program is responsible for tracking energy use and GHG emissions for state government, and provides pilot funding, technical assistance and training for dozens of agencies and hundreds of staff each year.

Green Communities Program

Created by the Green Communities Act of 2008, the Green Communities Program is intended to help municipalities become more sustainable, control rising energy costs, and incubate the clean energy technologies and practices that will put our cities and towns, and the Commonwealth, at the center of the 21st century clean energy economy. Envisioned as a way to encourage municipalities to make greener energy decisions, the Program is mandated to offer grant and loan opportunities to municipalities in order to be designated as "green communities." Types of assistance offered by the Program include helping communities qualify for state funding by adopting local by-laws and regulations that facilitate the siting and permitting of renewable energy facilities, benchmarking municipal energy use and reducing energy consumption, purchasing fuel-efficient vehicles for municipal fleets, and taking steps to reduce lifecycle energy costs for new commercial, industrial and residential buildings. The Act allows funding of \$10 million per year for the program from the proceeds of Regional Greenhouse Gas Initiative allowance auctions. The Green Communities Program also serves all Massachusetts cities and towns as a one-stop shop for energy efficiency and renewable energy opportunities, helping them understand all the programs in the state at their disposal and providing streamlined delivery of those programs. To achieve the goal of serving all 351 cities and towns in Massachusetts, the Green Communities Division of DOER offers a number of programs and services including the Energy Audit Program, Green Communities Grant Program, Energy Management Services technical assistance, stimulus grant programs and support, an Energy Information Reporting System, an information website and four Regional Coordinators to provide direct support to cities and towns.