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**"The Rising Costs of Energy:  
Challenges and Opportunities for Small Businesses"  
SENATE COMMITTEE ON SMALL BUSINESS AND ENTREPRENEURSHIP  
BERKSHIRE COMMUNITY COLLEGE, PITTSFIELD  
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It is my pleasure to provide testimony to the Senate Committee on this important topic. High energy costs are certainly taking a toll on businesses large and small, as well as consumers. We need federal leadership in setting a new course in energy policy, one that reduces our dependence on fossil fuels by being more efficient in our use of energy and by developing alternatives in the form of renewable energy. Energy efficiency is our best protection against rising fuel costs, and in the long run increased use of renewable energy will provide a hedge against fossil-fuel prices. Massachusetts is pursuing both aggressively, and would welcome a partner in the federal government.

The move toward a clean energy future also provides an opportunity for entrepreneurship in Massachusetts, which is blessed with all the resources needed for a clean energy economy: academic strength, technological expertise, and a skilled workforce. Governor Patrick is determined to make Massachusetts a leader in the development of clean energy, and we are well on our way. The clean energy industry employs more than 14,000 people in Massachusetts, most in small companies that are growing rapidly. Governor Patrick believes that clean energy provides an opportunity to meet Massachusetts's own energy challenges and, in the process, make the world our customer.

**THE PROBLEM**

With no coal, oil, or natural gas of our own Massachusetts has always been at a disadvantage when it comes to fossil fuels, and never more so than in today's global market. Crude oil is trading at more than \$135 a barrel. Gasoline is at \$3.92 a gallon for regular. Diesel is \$4.86 a gallon, up 68 percent from a year ago, and that cost finds its way into the price of every product we buy. Home heating oil recently hit \$4.59 a gallon, after breaking the \$3 mark for the first time ever last November. The average household in Massachusetts spent \$2,500 last winter to heat with oil, up from \$1,800 the winter before. Even if the price doesn't continue to go up, next year it will be \$3,600, doubling over the course of three winters.

Although we have a diversified fuel mix for power plants in Massachusetts, the price of electricity is generally set by natural gas. Based on the forward price curve of natural gas, electricity prices are likely to rise significantly over the course of the year. Keep in mind that Massachusetts regulates only a small portion of the electric bill, 25 percent or less – the distribution charge. The bulk of spending is on the electricity itself, and the price for that is set in the competitive marketplace, driven principally by fuel costs.

Whereas other aspects of our national economic troubles will ultimately resolve themselves over time, this one likely will not for the foreseeable future. As China and India surge into the global economy, supplies are constrained and demand is rising, and that means high prices for fossil fuels as far as the eye can see. That hits all of us – businesses and consumers alike – where it hurts: in the pocketbook.

If the price of fossil fuels continues to go up, or even simply remains as high as it is now, the only solutions are to use less of those fuels, by using energy more efficiently, and to provide alternative energy sources that do not rely on fossil fuels – i.e., renewable energy.

### **ENERGY EFFICIENCY**

We are on the brink of passage in the Massachusetts Legislature a comprehensive energy reform bill that will revolutionize energy use in this state. The energy bill now in conference committee will unleash energy efficiency – the cleanest energy of all, and the ultimate defense against rising energy prices. For years, we have given electric utilities a fixed amount – \$125 million a year – of ratepayer funds to spend on energy efficiency upgrades – and not a penny more, no matter how much more we could save on power generation. The pending energy bill will require electric utilities to obtain all energy efficiency in residential, commercial, and industrial settings that costs less than power generation. And it will be done not as an add-on to utility bills, but as an integral part of the way utility companies meet their customers' energy needs. That will be good news for controlling costs and good news for clean energy.

What does unleashing energy efficiency mean for business? Here is an example: Crane & Co. is a venerable institution here in Western Massachusetts that has been making the specialized paper used for U.S. currency since 1879. Governor Patrick visited the Crane facility in Dalton and was told they were getting killed by energy costs. Phil Giudice, our Commissioner of the Division of Energy Resources, went to see them, leading one of our new Commonwealth Energy Resource Teams – SWAT teams of professionals from multiple state agencies, all focused on solving energy challenges for industry.

This visit was followed up by a full energy audit conducted by the Industrial Assessment Center at UMass-Amherst. The recommendations include measures that will result in significant savings for the company.

Under the new energy legislation, it will become easier to do. Instead of waiting for companies to call and ask for an energy audit, the utilities and independent energy services companies will be coming to you, looking for ways to improve your energy efficiency – at your company, at your home – save you money, and save all of us by reducing electricity demand overall.

It's about meeting the energy needs that come from growth in the smartest, cheapest, most environmentally responsible way.

There are more than a dozen power plant projects now going through the state permitting process. Under our restructured electricity system, whether they get built is up to the market. And when efficiency competes with generation on the basis of cost, efficiency generally wins. ISO New England, which operates our power grid, recently held its first auction for the Forward Capacity Market, accepting bids for ways to meet future electricity needs. Two-thirds of the awards went to demand-management resources, only one third to generating resources.

Energy efficiency, like other forms of clean energy, represents an economic growth opportunity in and of itself. It means jobs for people who remove old light fixtures and install new ones, replace old furnaces and air conditioners, swap out old motors with new variable frequency ones – even people who go door to door, replacing incandescent light bulbs with compact fluorescents today, light-emitting diodes tomorrow.

Energy efficiency is just one part of the clean energy economy of the future – and our energy legislation is just one of the ways government can create synergies with Massachusetts's strengths in academic research, venture capital, and technological entrepreneurship to stimulate innovation, and cash in on jobs and growth in the clean energy industry.

### **RENEWABLE ENERGY**

We will be vulnerable to the high prices of fossil fuels as long as we remain dependent on fossil fuels. Conversely, the more we develop and deploy renewable energy alternatives the more we hedge against fuel costs. Ironically, the higher fossil fuel prices go, the more competitive many forms of renewable energy become.

The energy legislation I mentioned before will require utilities to enter into long-term contracts for renewable energy, providing renewable power developers the means to get financing for their projects. The bill's "net metering" provisions will also make it easier for people who own smaller scale solar, wind or other distributed power to sell their excess power back to the grid at a favorable rate.

Massachusetts is also helping to make solar electric power more affordable. Commonwealth Solar, a \$68 million rebate program launched in January, uses existing renewable energy funds to defray the cost of solar with rebates of up to 60 percent of the cost for homeowners, and up to 40 percent for businesses – rebates can go up to \$1 million for the largest installations. Our goal is to increase installed solar power from 4 MW at the time Governor Patrick took office to 250 MW over the next 10 years, in the process growing a solar power manufacturing and installation industry. Evergreen Solar chose to locate its first full-scale US manufacturing facility in Massachusetts in large measure due to Governor Patrick's commitment to growing the market for its products here. Solar installers are also setting up shop in Massachusetts, and electrical contractors are adding solar power as a new line of work.

We have high hopes for the potential of another technology: wind power. Before Governor Patrick came to office, Massachusetts had a reputation for being anti-wind, the result of opposition to the Cape Wind project by virtually all of our state's major political leaders. Governor Patrick supports Cape Wind, which completed state environmental review last year, and supports expanded use of wind power generally. Siting remains an obstacle to wide-scale development of wind power. But if we are to reduce our reliance on imported fossil fuels, wind must play a much bigger role in our clean energy future.

Here, too, Massachusetts has a chance to lead the nation and the world toward a clean energy solution. Last year, the Commonwealth was chosen by the federal Department of Energy to host to one of just two Wind Technology Testing Centers in the U.S. This facility will turn Massachusetts into a center for offshore wind R&D. Offshore wind has enormous potential for large scale renewable power – and we aim to become the world's hub for it. The Oceans bill, which is being signed by the Governor today, will make Massachusetts the first state in the nation to have a comprehensive management plan for our state waters, including identification of sites that could be appropriate for the development of renewable energy.

Biofuels is another renewable energy technology that holds promise for the future. While concerns are being raised around the country about the unintended consequences of first-generation biofuels, made from corn and soy, Massachusetts researchers and companies are at the forefront of next generation of biofuels, which come from the cellulose that's found in non-food sources like wood, agricultural wastes, and switchgrass. A bill filed by Governor Patrick, with the support of the House Speaker and Senate President, will exempt cellulosic biofuel from the state's gasoline tax, providing stimulus for Massachusetts companies like Mascoma and SunEthanol – a spinoff of research at UMass-Amherst – to bring their products to market. Long-term support for advanced fuel and vehicle technologies will come from a Low Carbon Fuel Standard, which the Governor, the Senate President, and Speaker have agreed to develop as well.

## **FEDERAL LEADERSHIP**

Massachusetts is making great strides toward creating a clean energy future, but we need the federal government as a better partner than it is now on our current energy challenges and future needs. We need the federal government to increase funding for the Low Income Heating Assistance Program, which has been cut repeatedly even as the price of heating fuel has gone up. We need the federal government to fund low-income weatherization, which the Department of Energy has zeroed out for next year. And we need the federal government to lead with twenty-first century approaches to vehicle emissions, and to fund a major research and development program for the renewable energy technologies of the future.