

A national push for energy innovation

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Michigan governor Jennifer Granholm delivers her talk during a clean-energy event at MIT on Tuesday. Photo: Justin Knight

In a spirited talk at MIT, former Michigan governor Jennifer Granholm presented a plan for a bipartisan initiative that she said could help the United States regain a world leadership role in the creation of new clean-energy technologies — and the thousands of new jobs that those technologies could provide.

Introduced by her “old pal,” Massachusetts Gov. Deval Patrick, and MIT President Susan Hockfield, Granholm spoke at Tuesday’s reception on clean-energy innovation. The event was hosted by the MIT Energy Initiative and the Joint Program on the Science and Policy of Global Change, a program that its co-director, TEPCO Professor of Atmospheric Science Ronald Prinn, described as a “unique collaboration between the natural and social sciences.”

“At MIT, we’re bullish on clean energy,” Hockfield said in her introduction. In fact, she said, “bullish is an understatement. We’re maniacs about it!” She added that she sees the clean-energy domain as a major area in which to rebuild the nation’s economy.

Patrick said his attendance was intended “to celebrate the leadership of MIT” in clean-energy technology. He said the Institute “has gone so far beyond the basic science ... to commercialize so many great ideas” in clean energy, and that in today’s climate of volatile oil prices, “all the elements align for moving ourselves rapidly to a clean-energy future.” He added that in Massachusetts, there has been a 60 percent increase in energy-related employment “during the worst economy in living memory.”

Granholtz, who now represents the Pew Charitable Trusts’ Clean Energy Program, said other countries have been “much more aggressive” than the [United States](#) in pushing for clean energy, while this country has “a patchwork” of state policies and no strong national program to promote such technologies. In searching for what Granholtz called “pragmatic energy policies that can get bipartisan support” even in the current highly polarized political debate, her organization has identified four specific policy priorities, she said.

First, “a national renewable energy standard” would call for at least 20 percent of the nation’s energy to come from renewable sources by 2020, she said. Such a policy “sends a market signal” that would help businesses focus on developing needed technologies.

A second priority, she said, is encouraging more energy efficiency in industrial facilities. She pointed to the example of a French company called Veolia Energy, which develops combined heat and power systems that can be up to 90 percent efficient in using natural gas, the cleanest of all fossil fuels, compared to typical fossil-fuel powerplant efficiencies of

around 50 percent. Granholm pointed out that so much energy is wasted in U.S. powerplants in the form of heat that “if you could just capture that waste heat, you could power the entire nation of Japan.”

Third, she said, is to push for more electrification of the transportation system — including a 25 percent market share for new electric cars by 2020 — and improved efficiency for non-electric vehicles. That would help spur the growth of companies such as the MIT-spinoff A123 Systems, which is already “hiring hundreds of people” for its new battery factories.

And fourth, she said, is to “increase the amount of money we, as a nation, invest in energy development.” ARPA-E, the U.S. Department of Energy’s agency for investment in innovative energy technology, currently has a budget of \$3.8 billion per year. “If we boost that to \$16 billion, we could really be on the map” as a major producer of energy systems, she said.

Granholm pointed out that since 2004, there has been a 630 percent increase in private-sector investment in clean energy worldwide. In 2008, the United States was number one in production of clean-energy technology, but by 2009 China had surged ahead, and in 2010 both China and Germany were ahead of the United States. “Every day, businesses make decisions about where to locate,” and without a strong clean-energy policy, the country’s competitive position “will continue to ratchet down,” she said.

While some people worry that implementing any national policy on clean energy may be difficult right now given the polarized atmosphere in Washington, Granholm said, a recent national survey gives reason for hope. “Eighty-four percent of Americans want to see a national energy policy that encourages renewable [energy](#) and efficiency,” a number that includes 74 percent of Republicans, and even a majority of Tea Party

members, she said.

Patrick said fostering [clean-energy](#) technologies “is good for us, it’s good for the environment, it’s good for the economy, it’s good for jobs. So let’s get on with it!”

Provided by Massachusetts Institute of Technology

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