

New England's potential as an energy giant

By Richard K. Lester | November 27, 2006

DIRTY, vulnerable, and underinvested? Or clean, clever, and competitive? That, says the International Energy Agency in its latest "World Energy Outlook" report, is the choice the world faces as it struggles toward a sustainable energy future. It is also the choice facing this region. The bad news is that our aging electric and gas infrastructure will soon be inadequate to meet growing demand. The good news is that the region is well positioned to emerge as a major global energy center -- the Qatar, if not the Saudi Arabia, of the 21st-century energy industry.

How can New England, with virtually no energy resources, become a global energy capital? Surprisingly, this is a real possibility, because the most important resource in tomorrow's energy industry will be human brainpower. Already, local firms and universities are mobilizing to meet the need. But a serious regional development strategy is lacking.

To ensure the supply of clean, affordable, reliable energy, three problems will have to be tackled. First, world energy demand will likely double by 2050. Second, the world's dependence on the politically unstable Middle East for oil and gas will persist for decades. And third, to have any chance of avoiding global climate change, the world must make deep cuts in greenhouse gas emissions from fossil fuels by mid-century.

The best hope for navigating safely through these problems is innovation. New technologies for storing energy efficiently; new strategies for minimizing environmental damage; new services to help businesses and homeowners manage their energy use; new regulatory approaches to encourage adoption of carbon-free energy sources; new competitive business models to replace traditional energy monopolies; new technologies to lower the cost of renewable and nuclear electricity -- all this, and more, will be needed.

Our region is emerging as a center of innovation in many of these fields. Scores of local businesses are developing and marketing an array of innovative energy technologies and services, including advanced fuel cells, ultra-lightweight insulators, photovoltaic systems, biofuels, and energy management services.

Multinational energy corporations are relocating their research labs to the area. And local universities are gearing up. At MIT -- where President Susan Hockfield recently announced a major new energy initiative -- the campus is buzzing with engineering and entrepreneurial activity, much of it led by students eager to change the world.

If the region does indeed become a global capital of energy entrepreneurship, it will partly be because of the same assets that drove the development of our biomedical and information technology industries -- the large and vibrant university sector and the deep pool of risk capital. But some of those achievements were short-lived -- the loss of computer

industry leadership to Silicon Valley is now old news -- and even the continued growth of the region's lively biotech sector is not assured. Other regions are seeking to build tomorrow's technology-based industries.

For New England to become a preferred location for the new energy industry, we need to bridge the fault lines that intersect our famously non collaborative region. For example:

Old-line energy utilities and entrepreneurial tech-based energy firms, traditionally suspicious of each other, should work together more closely, especially on innovations to reduce energy use.

Public and private universities should combine forces on new multidisciplinary energy research programs .

Greater Boston has universities and entrepreneurial resources, but also high costs and limited space. Other parts of the region have more space and lower costs. Collaboration on transportation can help ensure that manufacturing of locally developed technology is "homeshored," not offshored.

State government has an important role here, and more development funds will be needed. But we cannot afford a public-subsidy "arms race" with other regions. Nor is this necessary. Governments around the world are pouring money into new energy technology programs. The opportunities for the area's energy firms will be legion, and the state should support joint marketing efforts to identify promising targets worldwide.

The most important role for state leadership will be to reverse our image as a business-unfriendly location. Even clean energy industries need development. And prompt, predictable, sensible regulation will be crucial to our emergence as a global energy leader.

Richard K. Lester is director of the MIT Industrial Performance Center and a professor of nuclear science and engineering at Massachusetts Institute of Technology.

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