

# The Patriot Ledger

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## OPINION

### **PART OF THE MIX: A case for nuclear energy: Dependable fuel for reliable, round-the-clock generation**

By *JAMES T. BRETT and CARL GUSTIN*

From the corner coffee shop to the halls of Congress and the Oval Office, the challenge has been heard: the U.S. must become more self-reliant if it is to ensure affordable and reliable energy for the future.

**An aerial view of the Pilgrim Station nuclear power plant in Plymouth. (File photo)**

All energy supply resources should be considered, and energy efficiency must be a core element, in every realistic and comprehensive energy plan. But today it is more important than ever that policymakers, along with business, labor and community leaders recognize the contributions of nuclear power plants and support this source of clean, dependable and low cost energy.

Such support is particularly important to New England where the region's five nuclear facilities are the backbone of the electricity grid - including Pilgrim Nuclear Station in Plymouth - providing reliable, round-the-clock generation using a dependable fuel source. More than one-quarter of the region's electricity is generated from nuclear facilities. In Massachusetts, nuclear energy provides about 10 percent of the state's electricity.

The importance of the region's nuclear energy plants should be obvious. Since 1975, New England's electricity consumption has doubled to keep pace with New England's growing high tech economy. Even as the region becomes more energy efficient, peak electricity demand is projected to increase by approximately 15 percent over the next decade, according to ISO New England, the independent operator of the region's electricity grid.

To meet that growth, the region needs to add the equivalent of one new 400 megawatt power plant each year. But with no new power plants under construction in New England, nuclear energy is an essential building block to maintain a balance between supply and demand.

Not only are nuclear plants the most reliable - generally operating around the clock for more than 500 days before having to shut down to refuel - but they produce the lowest cost electricity. Their exceptional operating performance coupled with low fuel costs translates into production costs that are just one-third of the costs to produce electricity in natural gas plants.

This is important to New England consumers who pay among the highest electricity rates in the nation. With no indigenous fuel sources, New England imports most of its energy supplies and is particularly sensitive to price volatility. The high cost of energy makes the region less competitive economically. It would be difficult to absorb the price hikes that could result from the need to replace any of the region's five nuclear facilities.

Beyond reliability and cost benefits, nuclear plants provide significant environmental benefits to the region. Nuclear energy plants produce no nitrogen oxide or sulfur dioxide that cause smog and acid rain, and no carbon dioxide, which leads to global warming, or particulate matter, linked to public health effects.

The Nuclear Energy Institute calculated that in 2004 alone, New England's nuclear energy plants avoided the generation of more than 77,000 tons of sulfur dioxide, more than 19,000 tons of nitrogen oxide and 22

million tons of carbon dioxide - the amount of emissions that would have been created if the electricity was generated by fossil fuels.

Nuclear plants will play an important role in attaining greenhouse gas reduction goals, such as those in the Regional Greenhouse Gas Initiative (RGGI) in which four New England states are participating.

If New England's nuclear energy plants had to be replaced by other non-emitting sources of electricity to meet the RGGI goals, the region would be looking at large-scale wind projects, with weather-dependent output, spread over 650,000 acres of land or water at a cost of more than \$10 billion.

For all of these reasons, policymakers need to recognize the significant operational, economic and environmental benefits of nuclear energy as existing plants seek to increase generating output and renew their operating licenses.

Those same policymakers should make sure that New England's existing nuclear plants, as well as the potential to construct a new nuclear facility, are considered in all energy, environmental and economic planning.

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