

# Power Struggle

Experts examine NH's looming energy crisis

BY MICHELLE SATURLEY

**O**n Aug. 2, 2006, NH and the rest of New England received a major wake-up call when ISO New England announced that it took the emergency step of a 5 percent voltage reduction on a major regional power grid to prevent a rolling brownout.

Searing summer heat and subsequent air conditioner use had pushed the grid to its limit, causing ISO New England, which is responsible for managing New England's electricity supply, to issue the voltage reduction across the six New England states. Public Service of NH confirmed that the single-day NH peak usage rate was at an all-time high that day, hitting 2,248 Megawatts. PSNH COO Gary Long, along with a chorus of other energy experts, says it's only a matter of time before it happens again.

*Business NH Magazine* recently gathered energy experts for a roundtable discussion about NH's energy needs and what needs to happen in our state to insure energy supplies. The demand side of the energy equation is at the tipping point in New Hampshire. Once demand outweighs supply, New England, like California and New York, may soon be seeing brownouts and even blackouts. "We have seen a number of warnings over the years that the supply of energy is not going to meet the growth of demand," says Carl Gustin, president of the New England Energy Alliance. "A year ago, [NEEA] put out a report prepared by our analysis group that said that there are plausible scenarios under which demand could exceed supply within two years for both natural gas and electricity."

So, what can NH businesses, leaders and policymakers do to prevent this? Is the state on the right path when it comes to generating energy, or are our collective heads buried in the sand? And most importantly,

how much control does the state have over its own energy destiny?

## Deregulation Fallout

In 1998, NH grabbed national attention with its first-in-the-nation pilot program opening up retail competition in the electric industry. At the time, NH had the dubious distinction of charging the highest retail electric rates in the country, mostly due to the costs associated with building and maintaining the Seabrook nuclear power plant. The program gave 11,000 residents the freedom to choose their electricity supplier. More than 30 electric companies from around the region descended upon the state, touting lower prices and local control.

That experiment became law in 2001 when the Legislature approved statewide utility deregulation, requiring utilities to sell most of their generating plants to independent merchants. The goal, as outlined by then Gov. Jeanne Shaheen, was to give Granite State residents a choice in how their power was transmitted and distributed. By fostering an environment of competition, the hope was to stimulate growth, streamline power-plant efficiency and lower the cost of electricity.

Some of those goals have been realized. The New England Power Generators Association reports that wholesale electricity rates have dropped in New England by 16.5 percent from 2001 to 2004. According to Public Service of NH, in NH alone rates have dropped by about 15 percent since the restructuring. The merchants who now own these power plants have invested more than \$6 billion in newer, cleaner, next-generation technology, so emissions of key pollutants have decreased even as electricity consumption has increased.

However, NH consumers are still searching for that freedom of choice promised by

the Legislature. The 30-plus electric companies that once courted NH consumers have since fled, scared off by hostile environmentalists, towns that were less than receptive to the idea of power plants in their backyards, and the prohibitive nature of NH's regulations on power-plant sites.

"It's still hard to say whether [deregulation] is truly working," says Heather Kaufman, controller for the NH Electric Co-op, a member-owned electric distributor serving 116 towns and cities in the state. "There are so many other factors, such as the increase in the cost of energy—all kinds of energy, from natural gas to electricity—over the last two years. It's true that there aren't large competitive suppliers in the state yet. From the standpoint of choice, it's not working because we don't have choices. But has it lowered cost? It's too hard to say. There are too many other variables affecting the cost of electricity."

In the five years since deregulation, the number of new power plants in the state has dropped significantly. According to the latest listing by the Federal Energy Regulatory Commission, of the 191 new or expanding power-plant project applications submitted in the Northeast last year, only five of the applications were for NH-based power plants. Meanwhile, the growth of NH's demand is expected to exceed that of any of the other five New England states for the next two years. Because the growth rate of new merchant power plants was slower than expected, the Legislature allowed PSNH to continue to own and operate its power generation facilities—about 30 percent of the state's overall plant capacity.

"New Hampshire has higher growth projected than the rest of the region," Gustin says. "ISO New England is forecasting growth of both regional energy and peak usage at about 1.5 percent, while New Hampshire alone is projecting growth of about 1.9



Participants in the Energy Roundtable are, top row from left: Gary Epler of Unitil, Fred Kocher of GT Solar, Jack Ruderman of the NH Office of Energy and Planning; Bob Garside of the Oil Heat Council of NH; middle row from left: Heather Kaufman of NH Electric Co-op, Gary Long of Public Service of NH, Thomas Getz of the NH Public Utilities Commission; bottom row from left: Carl Gustin of the New England Energy Alliance, Lisa Shapiro of Gallagher, Callahan & Gartrell, and NH Rep. Jim Garrity.



Carl Gustin of the New England Energy Alliance, left, and Gary Long of Public Service of NH.

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percent. It's growing substantially faster than the rest of the region, which presents some challenges specifically for this state."

So, while NH's demand for electricity grows, its ability to build more power plants has all but disappeared, which means that the events of Aug. 2 could happen on a more regular basis, and sooner than we think. "It takes three to five years to build a new power plant, from the approval process to construction to opening it," Long says. "So, if by NEEA's estimation, by the time we do encounter this shortage it could be too late to do anything about it."

### The Bigger Picture

New Hampshire is a net exporter of electricity, since the state generates more energy than it consumes. The power generated within state borders feeds New England's regional power grids. The upside to being an exporter is the revenue it brings into the state. "I think NH has benefited enormously from being a net exporter," says Lisa Shapiro, chief economist with Gallagher, Callahan & Gartrell, a law firm in Concord. "Not so much from a power supply perspective, but in terms of the jobs, property value and revenue at a local and state level, the state has seen a boost."

The downside to that arrangement is the loss of local control. "What's happened is that we've moved from being a state-regulated industry to being more of a federally regulated industry," Long says. "So less and less do we have a say over policy on the local utility decision. Instead it's more of the regional marketplace responding to a federally made decision. The fact that we are a net exporter doesn't mean that we are in any better of a situation than anyone else in New England."

The NH House of Representatives' Energy Policy Commission, an offshoot of the Science, Technology and Energy Committee, has made attempts to exert some control. "At

the legislative level we are seeing less and less of the power pie that we can have any policy impact on," says Rep. Jim Garrity, a member of the commission. "But what we can touch, we address by taking a message to the regional and federal groups on behalf of the state. New Hampshire does speak its mind and it does get listened to."

But other experts say that until NH stops thinking of itself as a singular entity and more of a piece of the regional pie, little progress can be made. "There is a lack of coordination regionally on energy issues between the New England states," Gustin says. "As an example, at the New England Governors-Eastern Premiers Conference held in May, a resolution was passed on energy issues and the New England states were not that well represented. There's a lack of strong regional focus on energy infrastructure issues right now. We've got policies across the region that are not in harmony. We've got an environment that is relatively hostile to the development of new energy infrastructure, so companies are not looking to New England as a site for new plants. Meanwhile our baseload plants are aging."

The idea of collaboration, according to Thomas Getz, chairman of the NH Public Utilities Commission, is still a new concept for a region known for its Yankee independence. "All of the six states are going to be governing their own sovereignty," Getz explains. "For a problem of this size and magnitude, New England is too small a region to be broken up by state borders. But it's tough for state leaders to cede some of their state sovereignty for the sake of building a new, regional plant in that state's borders."

But Getz says there are instances of the states working together successfully. "One example is the New England States Committee on Electricity," he says. "By working together, the New England states came up with

a solution that creates auctions for bidding on new capacity. That has lessened some of the concerns over what is going to happen to the cost of electricity in the next couple of years when demand exceeds supply."

However, Fred Kocher, president of the NH High Technology Council and a senior advisor at GT Solar Inc., a Merrimack-based company that creates the equipment used to build solar technology, says more needs to be done in the way of interstate leadership to avert the shortage crisis. "We've got to raise the bar. If we don't come to grips with the energy issue, it's going to become the state's number one concern in the next five years," he says. "We have to have an effective, across-the-border solution. This region is falling behind, and like it or not, that region includes New Hampshire. We need to come together around some goals that we can all agree on. We don't have that leadership right now. We need a sense of urgency, and we don't have it yet."

### Weighing the Options

"The silver lining in last year's energy spike is that the regular consumer started thinking about other sources of energy besides electricity and oil," says Bob Garside, president of the Oil Heat Council of NH. "People are starting to ask, 'Is there another way for me to power my house, my car?' Our responsibility as energy leaders is not to let that die. We need to take the initiative to keep that going."

If the experts are correct, and the demand exceeds the energy supply in the next two years, what can NH do about it? There is no single answer. "There are many pieces to the puzzle, and you've got to look at all of them," says Gary Epler, senior counsel at Unitil Service Corp in Hampton.

Rep. Garrity agrees. "There are many pieces to solving this puzzle: energy efficiency, building new plants, investing in



NH Rep. James Garrity of the House Energy Policy Committee makes a point.

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renewable energy, making sure that there is regulatory assistance, streamlining of existing plants, and so on,” he says.

How committed is the state to these solutions? “The governor just signed on to a new national program called ‘25 by 25’ that increases the use of renewable energy to 25 percent of total energy usage in the state by the year 2025,” says Jack Ruderman, deputy director of the NH State Office of Energy and Planning. “[Renewable energy] is something that the state is looking at. We’re exploring ways to increase renewables through the Energy Policy Board and the private sector, which is also driving this on its own. There are firms that are looking to develop wood burning and wind power outlets here in the state.”

One viable source of renewable energy is wind power. “We need to increase our fuel diversity and depend less on fossil fuels,” Garrity says. “Currently, we are looking at alternative energies such as wind power, which has been in the news recently. The Site Evaluation Committee [of the NH Energy Policy Committee] is looking at possible locations for a small windmill farm.”

And although the concept of solar power has been around since the ’70s, Kocher thinks it’s time for New England to revisit that option. “Where is solar being used? Germany, Japan, China, and Spain are big markets. Believe it or not, the Ukraine is a big user,” he says. “But not this country, with the exception of California and New Jersey. Other than that, this country has not embraced solar energy. And we need to start doing that on a major scale, even if it means some cost. It comes down to a mix of efforts.”

Garrity says NH leaders are examining ways to reach out to NH residents to encourage the use of renewables. “We’re also asking some questions internally,” Garrity says. “How do we encourage re-

newal energy—is that something we need to mandate? Is that something we need to educate about? What is it going to cost the consumers of New Hampshire?”

Then there’s the NIMBY (Not In My Backyard) syndrome to contend with. Much like the protests around the construction of Seabrook, a number of groups in the Granite State are reluctant to host sites for new power plants, and not just coal or nuclear power generators. “Wind is what we hear the most about, but wind projects are not getting built here,” Garside says. “Vermont doesn’t want them on their mountains. Massachusetts doesn’t want them, either. The region needs to come to grips or we will continue to rely on gas.”

Whether it’s solar, wind or some other form of renewable energy, the experts think that the solution will be market-driven. “Right now, one of the biggest markets in renewable energy is biodiesel,” Getz says. “Biodiesel infrastructure built in Iowa and Nebraska is providing a tremendous amount of renewable energy for that part of the country, and it’s being looked at in New England, but it’s a slow process. There first has to be a demand for it, then there has to be a way to price it and sell it to a consumer. We don’t have the infrastructure to take it in. That involves millions of dollars in infrastructure investment just to be able to handle the product.”

### Point of No Return

Whatever the combination of solutions—new plants, energy efficiency education, alternative power sources—many of the experts agree that going back to the old system of regulated utilities should not be an option. “We can’t go back to the system where it was a ‘club.’ I think that would be a mistake,” Shapiro says. “Deregulation means we can harness cost as a motive to make sure that the most efficient

plants are built. If there are mistakes, the utilities need to be held accountable instead of the customers.”

Adds Epler of Unital, “We would like to see the market continue to move towards competition. We do see a difference between New Hampshire and Massachusetts in terms of the competitive market response, and I think that it would be a benefit in New Hampshire to continue down this path.”

While the path to new energy sources may be long and arduous, it seems that the wake-up call of this past summer has at least begun an interstate dialogue. Epler suggests that business leaders and state government take a moment to reflect on the progress of the last five years before tackling the solutions. “We have to recognize that this is a process. All these changes occurred over a very short span of time,” he says. “We, as a state, didn’t get a chance to stop and regroup. Those efficiency improvements, service improvements and price drops were happening while the restructuring process was taking place. We should realize that we’ve done a lot of things right, and there are a lot of smart initiatives in place, and we should continue that. We should set the policy, give clear direction and allow the market forces some time to respond.”

Long says the time to act—as a state and a region—is now. “I would advocate that in these policies we need to do more work with policymakers,” he says. “Our first interest is obviously the state of New Hampshire, but we are part of a bigger picture. More so than any time in the past there is a critical need for state leaders, political leaders and utilities to get together. There is no single solution. Regulated generation, independent generation and renewable energies all need to be explored. And we need to be more forward-thinking in the future so that this situation doesn’t come up again after we solve this problem.” ■