

Energy issues facing Connecticut

by Carrie Conaway

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Carrie Conaway is deputy director of the New England Public Policy Center. These remarks are her own and do not necessarily reflect positions of the Federal Reserve Bank of Boston or the Federal Reserve System.

I've been asked to talk with you today about the energy policy issues facing Connecticut and New England. Energy can be a tough issue to get people's attention on. People know it's important, but it's not something they want to focus on. They just want their lights to turn on, and they don't want to pay too much. Or put a little more formally, they want a reliable energy system at a reasonable cost.

So, people only tune in when there is a crisis, like large rate increases or brownouts. Then they want quick fixes—something simple and easy to do in the short term that will solve the problem. But these quick fixes don't necessarily lead toward the ultimate goal of a reliable energy system at a reasonable cost.

I hope my talk today convinces you of a few points: one, that high energy prices are a symptom, not a disease; two, that there are no quick fixes or win-win alternatives in energy policy; and three, achieving a reliable energy system at a reasonable cost necessarily involves tradeoffs and difficult policy decisions, but is also critically important to your state's economic future.

Why are Connecticut's energy prices high?

There's no doubt that energy prices have been on the rise, both in Connecticut and nationwide. Natural gas prices have doubled in Connecticut over the last decade, and they've actually tripled for the U.S. overall. Gasoline prices to end users have doubled in the last four years. Electricity prices have been a little more stable, but they've still increased by about 20 percent for both Connecticut and the nation in the last decade. The increases here in Connecticut are similar to those in the rest of the region, but I'm sure that's small consolation to the individuals and businesses who are affected by them.

I would urge you to consider, though, that these high prices we've been experiencing aren't a problem in and of themselves; rather, they are symptoms of much greater issues in energy policy. I'd like to take a few minutes to talk about some the major factors driving up prices here in New England.

First, increasing global demand for energy, especially among developing countries, is driving up prices for primary fuels worldwide. The total amount of energy consumed worldwide has increased by nearly 50 percent since 1980. At the same time, countries outside the OECD have increased their share of global energy consumption. China and India are already in the top five globally, and within just a few years, more energy will be consumed outside the OECD than inside it.

Given relatively fixed supply, this has meant higher prices for everyone. World petroleum and natural gas prices have increased by more than 300 percent over the last decade. Those price increases for primary fuels feed into electricity prices down the line, too, since primary fuels are inputs into electricity production. While prices aren't projected to get much higher, they also aren't projected to decline anytime soon.

What does this mean for Connecticut? You are what economists call a price-taker in primary energy. You don't buy enough energy to influence the price. So there's not much you can do about higher prices, at least in the short run—you just have to pay them, or use less fuel.

Second, New England's prices have always been higher than the national average. The main reason is that we don't have any indigenous sources of fossil fuels here—no petroleum, no natural gas, and no coal. We have to import almost all the energy we use, and the cost of transporting the fuel here gets added into the final cost to consumers. So, our prices are generally higher than those elsewhere in the nation.

Another factor in higher energy prices is the region's increased reliance on natural gas. New England has increased its consumption of natural gas by more than 70 percent over the last 15 years, as compared to a 20 percent increase for the U.S. as a whole. Today one-quarter of Connecticut's electrical generation, and one-third of the region's, is fueled by natural gas, up from virtually none 30 years ago.

There are a lot of good reasons to use more natural gas. It's cleaner-burning and more efficient than other fuels, and it's cheaper and easier to build natural-gas powered electricity generation plants. Plus, up until recently, natural gas was less expensive than other fuel alternatives.

The problem is, too much reliance on one source of fuel can affect both reliability and costs. A perfect example was the impact of Hurricanes Katrina and Rita. Because so much natural gas infrastructure was damaged in the storms, gas prices shot up by 40 to 50 percent between July and September 2005. If we continue to increase our demand for natural gas at the expense of other fuels, we may end up with too many eggs in one energy basket.

A fourth factor contributing specifically to high prices for electricity rates is the kinks we've experienced in the deregulation process. Connecticut, along with four other NE states, deregulated its wholesale electricity markets about a decade ago. The idea was to have generators compete to supply power rather than having it provided by a single utility. This was supposed to reduce rates for consumers by instilling market discipline into price-setting.

This works well in theory, but it's been hard to implement in practice. One big problem is setting the right incentives to build new generation. Electricity demand increases fairly steadily each year—on the order of 500 MW per year for the region as a whole, or enough to power about half a million homes. We can get a good part of the way there through conservation, but eventually we will probably need to add new power plants in order to meet demand.

However, right now we aren't building many new plants. In fact, up until six months ago, hardly anything was under construction or even in early planning stages. The generating companies say this is because the prices that they receive when they sell their electricity on the open market are enough to cover the costs of operating the plant, but not enough to cover the fixed cost of building and maintaining the plant in the first place. It's as if we bought a new car but offered the dealer only to pay for the gas, not the car itself. Because prices aren't high enough, they don't generate enough revenues to cover the full costs of investment. So generators have shied away from building new facilities. This leaves us vulnerable to problems with reliability, because we need enough new facilities to meet demand as well as to have a buffer in case any power plants come off line.

Resolving this issue has led to years of debate, finally resulting in a legal settlement last year that created an auction for the region's expected future generation needs. The idea is to plan farther ahead and to provide greater assurance to businesses that they can make back their investment in new plants.

Rather than delve into how all of this works, I would direct those of you who want more information to a short policy brief I wrote on this topic called "Ensuring adequate electrical capacity in New England," available on the Policy Center's website. What's important about this for our purpose is that as a result of the settlement, electricity throughout the region is going to become even more expensive. It has to, in order to ensure the right incentives for investment and therefore for system reliability. So, hard as it is to swallow, it's possible that if we want to ensure a reliable energy system, our electricity prices are too low, not too high.

No easy solutions

So, the high prices we've been seeing are symptoms of a greater set of problems, many of which are ones that Connecticut has relatively little control over. But the issue is even more complicated than that, because we don't just want low prices—we want low prices and a reliable energy system. This of course is easier said than done, especially because the pain of high prices is felt immediately, while the pain of an unreliable system is much longer-term and more intangible.

Nonetheless, there are a few broad approaches to energy policy that would help support the dual goals of reliable energy and reasonable cost.

First, encouraging fuel diversity is key. Too much dependence on one fuel risks both reliability and cost. The region has historically been one of the most diverse in the country, and policymakers can do a lot to maintain that diversity. They can find ways to reduce the growth in natural gas use. They can promote renewable energy sources, which are the only sources of energy that are really indigenous to

the region. And they can help foster investment in technologies of the future which might bring benefits to the region down the line.

Second, we can't ignore the potential impact of reducing demand growth. Most of the new generation we need is used only a few times per year, on days of peak demand. If we could reduce our peak demand—say, by making prices to end consumers higher when demand is higher—we could reduce the amount of new facilities we'd need to build. And in the process, consumers could save energy dollars, since the cheapest kilowatt is the one you don't have to build in the first place. Another approach is encouraging energy efficiency, which reduces the overall level of demand rather than demand at peak times. Our region is already a leader in promoting energy efficiency, but there's always more we can do in this area.

Third, if policymakers want a reliable energy system, they must confront the difficult and related challenges of investing in and siting energy infrastructure. This is probably the number one concern in ensuring the long-run reliability of New England's electrical system. In terms of investment, it appears that the new legal settlement signed back in June may be spurring some new building. Several thousand new megawatts have been planned region-wide in the last six months since the policy was put in place. However, it's not clear how much of the planned capacity will actually get built, and some important players, including the Connecticut Attorney General's office, still oppose this approach. In any case, it will take several years before we know whether it has solved the incentive problem.

And even if we can get the incentives right, we'll have to figure out a place to put these new facilities. This, too, has become more difficult and complex over time, as Connecticut has seen with the Broadwater proposal in Long Island Sound. The fundamental problem here is that the benefits of energy infrastructure accrue regionally or nationally, but the costs are borne locally. The current process gives those who bear the greatest costs from a particular project—localities—the greatest say in its approval or denial. But if every town can say no, then who will say yes? There is currently no coordinated way for federal, state, and local officials to decide collectively which proposals are most appropriate given regional needs and community concerns. Some of the steps in the siting process are clearly necessary in order to protect the public interest, but their cumulative effect may be indirectly undermining the reliability of the energy system—and reliability is also in the public interest.

Conclusion

Solving Connecticut's energy problems will not be easy. There is no silver bullet, no simple strategy that will result in a reliable system and reasonable costs for consumers. It's going to be incremental. It's going to involve choosing between unpleasant options and making difficult decisions in the public interest. It will take time to resolve; and even if you resolve it, there won't be much glory in it. And it will likely cost money.

But at the same time, making progress on this issue is probably one of the most important policy issues the state legislature can take on. Energy is a critical input to the modern economy and to our modern quality of life. Ensuring reliable energy at a reasonable cost means ensuring an economic future for your citizens, and few issues are more important than that.