

Ensuring Adequate Electrical Capacity in New England

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A settlement accepted by the Federal Energy Regulatory Commission on June 15, 2006, may finally resolve years of disagreement over how to increase New England's electrical capacity. The final settlement was signed by 107 of the 115 parties negotiating for four months to create a forward capacity market for electricity in the region. Despite such strong support, however, several important parties oppose the plan, and its economic impact on the region is not yet clear.

Background

New England's deregulated electricity market has not provided sufficient incentives for investment in new capacity. While substantial new capacity came online immediately after deregulation was adopted, this burst mainly filled demand built up during years of uncertainties about how deregulation would play out.

The region's energy markets may not be producing enough capacity

Investment has since slowed; in 2005 the region added only 11 megawatts of capacity. The problems are particularly severe in eastern Massachusetts, southwestern Connecticut, and northwestern Vermont, where strong demand, limited generating

capacity, and barriers to importing electricity threaten local service reliability. In some areas, ISO New England, the independent group that monitors the region's wholesale markets, has had to issue "reliability must-run" contracts, paying generators that otherwise would not operate or would operate at reduced levels to produce more electricity.

In April 2003, FERC asked the ISO to develop a market-based mechanism to ensure adequate incentives for meeting the region's future needs. About a year later, the ISO proposed a "locational installed capacity market" (LICAP) under which the ISO would have allocated payments within five geographical zones based on a formula that reflected the fact that capacity is more valuable when it is more scarce. As capacity decreased, capacity prices and payments would have increased. The goal was to help ensure reliability by paying for the capacity needed to meet both day-to-day requirements and system reliability needs.

LICAP was opposed by almost everyone in the energy community except for the ISO, the administrative law judge assigned to the proceedings, and the generators themselves. Opponents felt the cost of the payments to generators was too high, particularly since there was no requirement that the new capacity actually be online when it was most needed and since it represented a potential windfall to generators that were already in the market.

FERC twice delayed implementing LICAP but said it would be implemented in October 2006 if no agreement were otherwise reached. This ruling precipitated the negotiations among LICAP opponents that ultimately led to FERC's June 15 approval of the landmark settlement agreement.

Terms of the agreement

Under the forward capacity market plan, ISO New England is responsible for creating three-year forecasts of expected regional capacity needs. To secure that capacity and determine its price, ISO will conduct auctions at which electrical generators will bid the number of kilowatt-hours they will be willing to supply at an initial bidding price set by ISO. If more resources are bid than the capacity needed, the price is lowered, and generators re-bid until the amount of capacity bid equals the amount needed. The first auction is set for early 2008 to cover capacity needs anticipated for the year beginning June 1, 2010.

Most stakeholders have approved the settlement, but several important parties remain opposed

Other key elements of the agreement:

When bidding into the auction, generators adding new capacity would have the option to commit that capacity (and thereby lock in its price) for between one and five years. The longer periods are meant to encourage new investment in capacity by guaranteeing financial backers a rate of return for the first few years of operation.

While new generation will set the auction price, every generator in the market—existing and new—will receive the same price for each kilowatt of capacity it provides.

In order to ensure that capacity is available when really needed and to help prevent generators from exploiting their market power to drive up prices during times of peak demand, generators will be required to bid into the market and will face financial penalties if they bid into the system and then are not available when demand spikes.

ISO will determine whether separate

auctions are needed to adjust for geographic differences in available capacity.

For the first time in the United States, reductions in demand through energy efficiency and demand response programs, as well as increases in supply from intermittent resources such as wind power, will be considered capacity and will be rewarded equally.

During the transition into the forward capacity markets, generators will receive fixed payments based on the number of kilowatt-hours of electricity they produce to help ensure short-run reliability.

Support and opposition

More than three-quarters of the generators, transmitters, distributors, end users, and alternative resources that participate in New England's wholesale electrical market approved the settlement. A key reason is that they see its costs as significantly less than LICAP, which was to go into effect in October if no alternate agreement were reached. In addition, longer-term savings from forward capacity markets, while difficult to predict, could be substantial if the market works as expected and provides appropriate incentives to generators to build new capacity. Environmental advocates also like the proposal for the equal weight it places on demand reduction and alternative energy sources as capacity, relative to more traditional sources of energy supply.

Support for the settlement is not universal, however. The attorneys general of Massachusetts and Connecticut, the Maine Public Utility Commission, the Maine Public Advocate, three consumer coalitions, and Massachusetts utility NSTAR remain opposed. One of their primary concerns is the settlement's cost, particularly during the transition period. The ISO estimates that forward capacity markets will provide about \$5 billion in transitional revenues to generators. Although this is a significant savings over what LICAP would have cost during this period, it will still increase electricity expenses for end consumers. The transition costs, opponents argue, are not supported by either market conditions or the cost of service and are not necessary because of the existing reliability must-run contract process. And the costs once the market is fully implemented, though harder to predict, will almost certainly be higher than current prices.

Key dates in forward capacity market development

April 25, 2003	FERC asks ISO to develop a market mechanism to ensure the reliability of New England's electricity system.
March 1, 2004	ISO submits a proposal for a locational installed capacity market (LICAP). Protests are filed almost immediately.
June 2, 2004	FERC delays implementing LICAP until January 1, 2006.
August 10, 2005	FERC again delays implementing LICAP, but says LICAP will be implemented on October 1, 2006, unless the parties reach an alternate agreement.
October 21, 2005	FERC grants the LICAP opponents' request for settlement proceedings to resolve the issue. FERC Administrative Law Judge Stephen Brenner is put in charge of the settlement proceedings.
March 6, 2006	107 of 115 parties to the negotiations agree to a forward capacity market for New England and submit a settlement agreement for FERC approval.
June 15, 2006	FERC approves the agreement.
4Q 2006	ISO is to develop rules on a range of issues, including how to calculate its capacity requirements and how intermittent and demand-side resources will be included in the new market.
1Q 2008	First forward capacity auction is to take place, to cover capacity needs for June 1, 2010 through May 31, 2011.

Representatives from Maine, which has no capacity problems and in fact exports excess electricity to other parts of the region, are particularly opposed to the plan. Mainers feel that in being asked to pay to resolve capacity constraints elsewhere in the region, they are in essence being punished for doing a better job than other states in building competitive electrical generation markets. The ISO response is that capacity prices need to differ within the region only to the extent that there are transmission, not generation, constraints. So long as Maine is able to transmit its excess power to other parts of the region, it can make up the cost of the capacity payments by selling its exports.

Other opponents cite a potential negative economic impact on the region and its residents. Since New England already has the highest electrical rates in the nation, some worry that even higher rates will be a deterrent for businesses, particularly large industrial firms, seeking to locate in the area. Rates may also be prohibitively high for low-

income residents. This again is a particular concern for Maine, which is lagging the rest of the region economically and has the lowest per capita income in the region.

More broadly, opponents contend that the current system is working. They feel the market-clearing price is high enough to support building peaking capacity, just not baseload capacity, and the region does not need more baseload capacity, which they see as a reasonable market result. Further, they feel FERC did not allow ample time to come up with a more acceptable alternative to LICAP. As Joseph Rogers of the Massachusetts Attorney General's office said recently, "the choice between the noose and the firing squad is no choice at all."

Next steps and challenges

Though opponents remain unhappy with the settlement, as of mid-summer none had announced firm plans to formally challenge the ruling. Meanwhile, ISO New England must now develop rules for the transition period. The ISO must also determine how

intermittent, energy efficiency, and demand-response resources will be incorporated into the forward capacity markets, and how it will estimate the region's capacity needs in preparation for the auctions beginning in 2008.

The settlement's impact on the region's energy markets and economy remains uncertain. Some analysts note that planning only three years ahead may not allow enough time to build baseload generators fueled by anything other than natural gas, since coal and

The settlement's impact on the region's energy markets and economy is still uncertain

nuclear plants often take longer to site and build. This could further heighten the region's dependence on natural gas and exacerbate price volatility in both electricity and home heating markets. Others warn that guaranteeing returns on new capacity for no more than five years may not be enough

incentive to interest investors in generation projects. In this case, insufficient capacity will be built, continuing the region's reliability problems of the last decade.

While the costs of forward capacity markets are certainly large and could ripple throughout the regional economy, proponents respond that doing nothing would also have been costly. From an economic and business development perspective, higher electricity rates are not necessarily a greater negative than the possibility of rolling blackouts and other service interruptions. Whether forward capacity markets will solve New England's electrical reliability problem remains to be seen. But the settlement's broad support throughout the region—despite important pockets of opposition—indicates that for all its uncertainties and risks, this agreement is perceived as a step forward for New England's energy markets.

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