Deregulation in New Jersey has not resulted in electricity price decreases or desired in-state generation. This has led to tensions between state and federal authorities over control of the state's energy future.

Summary

New Jersey is an important state to review in the context of electricity deregulation for four reasons. First, the reason stated most often for the enactment of the legislation that deregulated New Jersey's electricity market was high electricity rates. After almost 14 years of deregulation, however, electricity rates continue to be high compared to those in other states, and New Jersey's relative position nationally hasn't changed. Second, New Jersey is an example of a state that has relied on a "capacity market" pricing system designed and operated by the federally regulated regional transmission organization (RTO) to induce needed new generation capacity. The ability of this pricing model to actually attract the investment necessary to build this new capacity has been questioned, as little new generation has been built to meet New Jersey's growing energy needs. Third, dissatisfied with the results of the RTO capacity market system in terms of both the price of power and its availability, New Jersey enacted new legislation in 2011 designed to create its own incentives for the construction of new generating capacity within the state—that is, a new form of state regulation and intervention. This attempt, however, has been contested by the RTO, the Federal Energy Regulatory Commission (FERC), and energy providers that want to import electricity into the state from outside New Jersey. This has led to the fourth key feature of the New Jersey deregulation experience: a dispute regarding who will control New Jersey's energy future—the state or the federal government via the RTO and FERC.

History and Profile

New Jersey passed its Electric Discount and Energy Competition Act (EDECA) in early 1999, one of a number of states to enact similar legislation in the late 1990s. As with many of these states, the legislation deregulated the energy generation sector but maintained a traditional cost-of-service regulation approach for the transmission and distribution segments of the industry.[1] Under this deregulated system, the state's four main utilities continued to own distribution systems, regulated by the state Board of Public Utilities (NJBPU), and regional transmission firms were regulated by the FERC. Beginning in August 1999, customers in all classes had access to retail competition, and the legislation established a four-year transition time during which electricity prices were capped at 10% below the 1999 prices.

For the first decade of deregulation, New Jersey saw very little participation, or "switching," among residential or commercial customers. Initially, the price cap imposed by the EDECA did not provide much opportunity for new suppliers to make a profit, so there was little new offering of competitive prices. Even after the price cap was lifted, consumers were generally apathetic about switching and participation remained below 2% until about 2008. Recent declines in natural gas prices have brought additional providers offering lower prices into the market, and by July 2013 the number of customers that had switched service from their incumbent provider was approximately 17.5%.[2] This participation rate, however, is still well below rates in other deregulated states.

TIMELINE

1999—Electric deregulation law passed; retail access available to residential, commercial and industrial (C&I) customers

2003—Rate cap expires; minimal residential or commercial switching has occurred

2008—Natural gas prices begin to decline in late 2008, and forward electricity prices correspondingly drop

2010—Percentage of residential participation in alternative provider services increases from less than 1% to almost 10% with decline in market prices

2011—New Jersey Legislature passes Long-term Capacity Agreement Pilot Program (LCAPP) (P.L. 2011, Chapter 9), which promotes development of ~2,000 MW of new baseload or mid-merit generation facilities in New Jersey

2011—FERC approves PJM's proposed modifications to its Minimum Offer Price Rule, making the LCAPP more financially challenging

2012—Two of the proposed LCAPP generating facilities clear the PJM Base Residual Auction price, and one does not clear

2013—PJM's Markets and Reliability Committee abandons effort to add a long-term capacity auction or alternative multi-year mechanism to the revised PJM charter

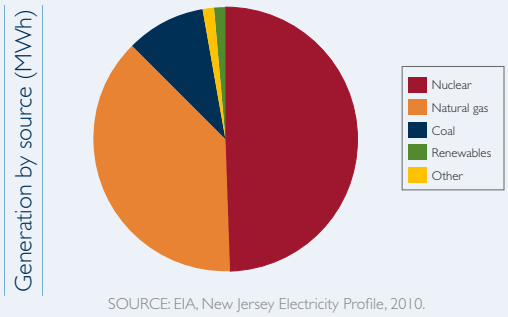
Market Share Served by Alternative Providers

18% of customers

44% of load (based on total MWh)

SOURCE: New Jersey Board of Public Utilities, *New Jersey Electric Switching Statistics*, July 2013.

- Deregulated in 1999
- Regional transmission organization (RTO)/ independent system operator (ISO): PJM
- Organized wholesale energy and capacity markets (PJM) under FERC jurisdiction
- Retail electricity sales (270 trillion BTUs): (#20 in nation)
- Average electricity price (cents/kWh in 2011): 14.3 (#6 in nation)



SOURCE: EIA, New Jersey Electricity Profile, 2010.

New Jersey, unlike Michigan, is fairly dependent on energy imports, with over 25% of its electricity bought on the wholesale market and transmitted to New Jersey from plants in other states.[3] This has influenced the success of deregulation, as discussed further below. New Jersey's in-state generation mix is largely made up of nuclear and natural gas, with a modest amount of coal, renewables, and other sources.[4]

New Jersey is a member of PJM, which is the RTO that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia. In order to assure that adequate generation capacity is available in the region to meet potential peak demand—that is, an adequate supply of electricity at all times—PJM established a "capacity market" and a capacity market pricing model in 2007 called the Reliability Pricing Model (RPM). According to PJM, its RPM capacity market is supposed to:

> *…create long-term price signals to attract needed investments in reliability in the PJM region…and stimulate investment both in maintaining existing generation and in encouraging the development of new sources of capacity—resources that include not just generating plants, but demand response and transmission facilities.*[5]

Unhappy with the results of this capacity mechanism in terms of both its inability to stimulate new generation sources within the state and the price of electricity, the New Jersey legislature, with the support of Governor Chris Christie, enacted new legislation in 2011, the Long-term Capacity Agreement Pilot Program (LCAPP). This legislation represents a new form of state regulation and intervention designed to ensure adequate capacity generated by in-state facilities at acceptable prices.

The enactment of this legislation has sparked an ongoing battle between the State of New Jersey and the PJM, the FERC, and various out-of-state electricity providers that continues to this day both in federal court and at the FERC.

Issues

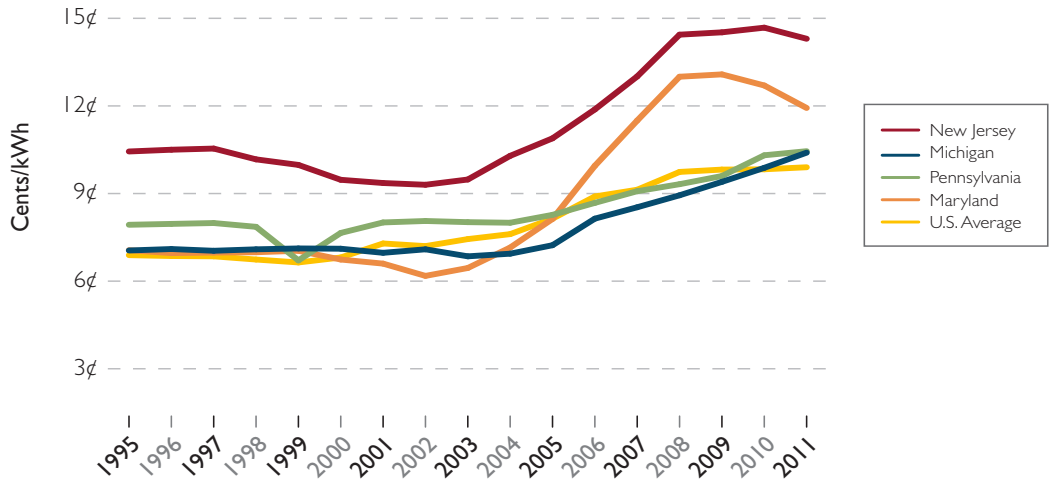
Affordability

New Jersey has historically had some of the highest electricity prices in the nation, consistently ranked 6th or 7th highest in the nation in the years just prior to deregulation. Lowering the cost of electricity was, in fact, one of the driving forces behind deregulation. Legislators and the Board of Public Utilities hoped that greater competition would drive down prices for New Jersey residents and businesses. When the EDECA passed the state legislature, electricity cost 9.98cents/kWh.[6]

Like other states that deregulated their electricity industry, New Jersey instituted a transition period during which electricity prices would be reduced and capped for a number of years in order to protect consumers from price increases while a new competitive market was developing. Although mandated price reductions or freezes obviously help consumers in the short term, they often deter new competitors from entering the market to compete with incumbents because there is not enough profit at the lower prices. In addition, dramatic price increases often occur once the caps are removed. This is precisely what occurred in New Jersey.

As the transition period ended in 2003, electricity prices in New Jersey began to climb again, going from 9.3 cents/kWh in 2002 to 14.3 cents/kWh in 2011—a 54% increase. New Jersey's electricity prices are highly correlated to natural gas prices, so the prices have dipped slightly during the last two years as natural gas prices have declined.[7] However, the state is still ranked 6th highest for electricity prices in the nation, and New Jersey electricity prices have been an average of 3.3 cents/kWh higher than the U.S. average price over the last 15 years.

New Jersey Prices Consistently Higher than Other States



SOURCE: EIA State Profiles and Energy Estimates database.

State Concern about the "Capacity Market" Pricing Model and Dependence on Out-of-State Electricity Imports

It has been the contention of the Christie administration and the NJBPU that PJM's capacity market and its RPM have not worked as intended or to the advantage of New Jersey because they have not resulted in new generation and keep New Jersey overly reliant on the transmission of expensive power from outside the state. Net electricity imports since 1999 have consistently been more than 20 million MWh/year, more than a quarter of its electricity use.

New Jersey contends that the capacity market is biased toward existing or expanding generators because it does not accommodate the need for long-term or multi-year price contracts. PJM allows capacity prices to be locked in for only one year, and therefore generators of new projects are unable to obtain financing at reasonable rates because of uncertain future revenue.[8] According to the state, this inhibits new generation in areas where it is most needed, such as in northern New Jersey where the grid is most congested.

New Jersey Electricity Imports
25% to 35%
over the last decade

New Jersey also points to the fact that clearing prices in the capacity market for New Jersey (and Maryland) are often quite a bit higher than those for unconstrained areas of PJM. For the 2016–2017 delivery year, for example, the clearing prices for the Public Service Electric and Gas (PSEG) Locational Deliverability Area (LDA), which covers New Jersey, rose 31% from the previous year, while all other PJM regions saw substantial decreases in prices (down 29% in the mid-Atlantic region and 68% in the northern Ohio area, for example). The New Jersey area was over $160/MW-day higher than the rest of the PJM area. PJM's summary of the 2016–2017 auction notes that the only LDA that saw price increases in the auction was PSEG, which has historically been transmission constrained. The PSEG area did not attract much of the new generation entry, and accounted for over half the electric generation facility deactivations since the last auction.[9]

A New Kind of State Regulation and Intervention Attempted

Dissatisfied with the results of deregulation and PJM's capacity pricing model in terms of reducing prices or stimulating new in-state capacity, the state created a new program, the LCAPP, which was designed to encourage new in-state generation. The LCAPP requires the state's regulated distribution-only utilities to enter into long-term contracts for new generation at a price that justifies the investment. The state issued a request for proposals to select generation projects and chose three gas-fired combined-cycle facilities that together would provide New Jersey with almost 2,000 MW of new capacity. The program allowed for contracts from the state that pay the new generators a subsidized minimum long-term price—one that is likely to be higher than the prices available on the PJM capacity market.

It is New Jersey's position that expanding in-state generation—by constructing or replacing power plants—would be cheaper and more reliable than depending on the PJM capacity pricing model and the transmission of electricity from western areas of PJM into New Jersey.[10 11]

State vs. Federal Control of New Jersey Energy Policy

New Jersey policymakers want generation sources located in New Jersey for additional reasons beyond attempting to lower electricity prices. The state wants to meet its electricity needs with a more diverse and "clean" portfolio of energy sources than the predominantly coal-fired generation sources that are currently imported into the state through the PJM market. New Jersey has also cited the value of more than 2,400 temporary and about 80 permanent jobs that would be created by the construction of the new LCAPP-awarded generation facilities.

PJM and its network of incumbent generators have opposed New Jersey's efforts to encourage new in-state generation through LCAPP. They argue that New Jersey would, in effect, be subsidizing these facilities, therefore artificially depressing prices that would create an unfair economic advantage for them compared to others in the PJM region. Critics have also claimed that New Jersey is just using a work-around of the PJM system, leaving perceived deficiencies of the system in place. They have argued that New Jersey should instead be working with PJM to evaluate and modify the system as a whole to make it more effective. However, PJM's Markets and Reliability Committee recently abandoned efforts to add a long-term capacity auction or alternative multi-year mechanism to the revised PJM charter, leaving New Jersey's concerns about the RPM unaddressed.[12]

PJM has been successful in persuading the FERC to change various rules regarding minimum price offers, which have kept the LCAPP program from fully moving forward as planned.[13] At the same time, incumbent PJM generators have filed suit in federal

> *"New Jersey is opposed to a FERC-imposed paradigm that impedes in-state generation development while simultaneously imposing on our ratepayers an investment premium for transmission projects that import power from out-of-state generation sources far away from the state's loads."*
>
> —*State of New Jersey*

court challenging the constitutionality of LCAPP under the federal supremacy clause.[14] The FERC rule changes and federal court challenges have limited New Jersey's ability to feasibly pursue its own energy policies as represented by LCAPP.

Conclusion

New Jersey's experience with deregulation has undoubtedly not been what the state had either desired or anticipated. Price decreases—the primary reason for enacting the original legislation in 1999—have not materialized. New Jersey began its experiment with deregulation as the 6th highest priced state in the nation for electricity prices, and it is still the 6th highest priced state in the nation. The persistence of relatively high electricity prices led New Jersey to the conclusion that it would be better to rely on new in-state generation rather than the transmission of power from other areas of the PJM region. Because PJM's capacity markets and the associated pricing model have not resulted in the development of this in-state generation, however, the state attempted a new type of government intervention to control electricity prices and supply—the LCAPP. This state policy effort has, however, been successfully opposed by both the regional transmission organization and the federal government (FERC). It is also being contested in federal court by out-of-state energy providers that have an interest in continuing to export power to New Jersey. Because of PJM rule changes, the two LCAPP-funded power plants that have gone forward cleared the capacity market at a price well below their state-guaranteed rate, requiring the state to subsidize the difference. This will cost New Jersey taxpayers over $40 million in the first year.

What began as an attempt to reduce prices with deregulation has resulted in further government intervention and a struggle between the state and the federal government over control of state energy policy, without the desired price reductions.

Endnotes

1. State of New Jersey, December 6, 2011, *2011 New Jersey Energy Master Plan*. Available: http://nj.gov/emp/docs/pdf/2011_Final_Energy_Master_Plan.pdf (accessed 7-28-13).

2. New Jersey Board of Public Utilities, July 2013, *New Jersey Electric Switching Statistics*. Available: www.state.nj.us/bpu/pdf/energy/edc07.pdf (accessed 8-12-13).

3. While Michigan is not a net importer of electricity, it is almost completely reliant on imports of energy feedstocks to supply its electric generating facilities. In total, 82% of Michigan's natural gas and 100% of coal and nuclear fuel are imported from outside the state, accounting for about 72 cents of every dollar spent for energy by Michigan's residents and businesses. Michigan Public Service Commission, October 2011, *Michigan Energy Overview*. Available: www.dleg.state.mi.us/mpsc/reports/energy/energyoverview/ (accessed 8-12-13).

4. U.S. Energy Information Agency (EIA), July 2012, *New Jersey State Profile and Energy Estimates*. Available: www.eia.gov/state/?sid=NJ (accessed 7-25-13).

5. PJM, Reliability Pricing Model website. Available: www.pjm.com/markets-and-operations/rpm.aspx (accessed 9-8-13).

6. The EIA tracks electric prices in all U.S states. Electricity prices noted in this paper are the EIA's average of residential, commercial, and industrial prices.

7. EIA, *New Jersey State Profile*.

8. State of New Jersey, *Energy Master Plan*.

9. PJM, N.d., *2016/2017 RPM Base Residual Auction Results* (PJM Docs #753726), p. 31. Available: www.pjm.com/~/media/markets-ops/rpm/rpm-auction-info/2016-2017-base-residual-auction-report.ashx (accessed 8-18-13).

10. State of New Jersey, *Energy Master Plan*.

11. Tom Johnson, June 18, 2013, Assembly Panel Faults BPU for Failure of Deregulation, *NJSpotlight*. Available: www.njspotlight.com/stories/13/06/17/assembly-panel-faults-bpu-for-failure-of-deregulation/ (accessed 7-29-13).

12. "PJM Abandons Long-Term Capacity Effort," August 6, 2013, *RTO Insider*™, Available: www.pjminsider.com/long-term-capacity-1/ (accessed 8-21-13).

13. Three developers were selected under the LCAPP pilot program to provide new generation facilities: NRG, Hess Corporation, and Competitive Power Ventures (CPV). CPV and Hess cleared the capacity auction in May 2012, and both are under construction, but NRG has not cleared the last two auctions and that facility's future development is in question.

14. Roger Stark and Daniel Simon, January 1, 2012, Traps for Unwary Project Sponsors—the LCAPP Saga, *Electric Light and Power* (Jan/Feb 2012). Available: www.elp.com/articles/2012/01/traps-for-unwary-project-sponsors-the-lcapp-saga.html (accessed 7-28-13).

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