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Analytics

Statement

Subsidies for Selected Nuclear Power Plants in New Jersey

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Joseph Bowring

The Independent Market Monitor for PJM

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I am the Independent Market Monitor for the PJM wholesale power markets. I do not speak for PJM. The role of the independent market monitor (IMM), as defined by FERC and included in the PJM tariff, is to help ensure that the PJM markets are competitive by proposing market rules that incent competition, by monitoring for the exercise of market power and by reporting on the markets to regulators and market participants. I support efficient, competitive wholesale power markets which bring clear benefits to customers as well as to suppliers of power.

The PJM Interconnection, L.L.C. (PJM) operates a centrally dispatched, competitive wholesale electric power market that, as of June 30, 2017, had installed generating capacity of 183,089 megawatts (MW) and 1,007 members including market buyers, sellers and traders of electricity in a region including more than 65 million people in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

The goal of competition in the wholesale power markets is to provide customers wholesale power at the lowest possible price, but no lower. The PJM markets work. The PJM markets bring customers the benefits of competition. But the PJM markets face new challenges that threaten the viability of competitive markets.

A benefit of competitive power markets is that they are dynamic, flexible and resilient. The PJM market has resulted in a reliable system despite significant changes in underlying market forces. Technical innovation and significantly lower gas costs have been key market forces. In PJM, there have been substantial unit retirements and there has been substantial new market entry as a result of market forces. In New Jersey, there have been both unit retirements and new market entry based on market signals. The PJM market design has worked flexibly to address both market exit and entry without preferences for any technologies. The result of new entry has been lower costs and increased reliability.

Particularly in times of stress on markets and on some generating technologies, nonmarket solutions may appear attractive. Top down, integrated resource planning approaches are tempting because it is easy to think that experts know exactly the right mix and location of generation resources and the appropriate definition of resource diversity and the appropriate definition of reliability and therefore which technologies should be favored through exceptions to market rules. Subsidies are tempting because they maintain existing resources and provide increased revenues to asset owners in uncertain markets. Cost of service regulation is tempting because guaranteed rates of return and fixed prices may look attractive to asset owners in uncertain markets.

But once the decision is made that market outcomes must be fundamentally modified, it will be virtually impossible to return to markets. The subsidy model is inconsistent with the PJM market design and constitutes a significant threat to PJM markets.

The issue of external subsidies continued to evolve in 2017. The Ohio subsidy proceedings and the Illinois ZEC subsidy proceeding originated from the fact that competitive markets result in the exit of uneconomic and uncompetitive generating units. Regardless of the specific rationales offered by unit owners, the proposed solution for all such generating units has been to provide out of market subsidies in order to retain such units. These subsidies were not requested to accomplish broader social goals. Broader social goals can all be met with market based mechanisms available to all market participants on a competitive basis and without discrimination.

The proposed legislation in New Jersey to subsidize specific nuclear power plants represents a significant expansion of the rationale for subsidies beyond the already unsupported rationales advanced in Ohio and Illinois. The proposed subsidies in New Jersey would result in a market intervention that would have a negative impact on PJM's competitive wholesale power markets and would provide subsidies to units that have not demonstrated that they are not financially viable.

Nuclear and coal plants face strong competitive pressures in the PJM markets as a result of low gas prices and efficient combined cycle units, including new combined cycle units in New Jersey. But there is no evidence that PSEG's nuclear plants are uneconomic and facing a retirement signal from the PJM markets. A plant is economic if it covers the annual expenditures required to operate the unit because it is more profitable to continue to operate the plant than to shut it down.

The results for nuclear plants are very sensitive to small changes in PJM prices. In 2016, PJM prices were at the lowest level since the introduction of competitive markets in 1999. In 2016, PSEG's Hope Creek plant fell short of covering its annual avoidable costs. But Hope Creek covered its annual avoidable costs on average over the last six years by a substantial margin even when 100 percent of NEI's capital expenditures are included. Hope Creek has higher annual avoidable costs than many other nuclear plants, including Salem, because it has a less efficient one unit configuration. In 2016, the Salem plant also fell short of covering its annual avoidable costs. But the Salem plant covered its annual avoidable costs on average over the last six years by a more substantial margin than Hope Creek even when 100 percent of NEI's capital expenditures are included. Neither plant is defined as at risk according to the criteria that the IMM applies to all units in the IMM's annual PJM State of the Market Report. The reported results are based on public data including LMP, capacity market prices and cost data from the Nuclear Energy Institute (NEI).

The same conclusions about subsidies apply whether the New Jersey plants are economic or uneconomic. The proposed subsidy solutions ignore the opportunity cost of subsidizing uneconomic units. Such subsidies suppress energy and capacity market prices and therefore suppress incentives for investments in new, higher efficiency thermal plants but also suppress investment incentives for innovation in the next generation of energy supply technologies and energy efficiency technologies. These impacts are large and long lasting.

Subsidies are contagious, as this legislation illustrates. If subsidies are provided to one generating plant, this will suppress prices for all generating plants and create a need for additional subsidies for the remaining units. Competition in the markets will be replaced by competition to receive subsidies. Subsidies to economic units are simply a way to increase prices to individual plants at the expense of customers, with no impact on the operational status of the units.

There is no reason to intervene in the markets in order to provide reliability and resilience. If PJM or FERC or DOE identify a need for greater reliability, it can be addressed using market mechanisms.

Competitive markets were introduced as an alternative form of regulation to ensure that wholesale power is provided to customers at the lowest possible price. The PJM markets are working. The PJM markets provide competitive, reliable and resilient outcomes. The PJM markets should be permitted to continue to work.