

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

State Policies and Wholesale Markets)	
Operated by ISO New England Inc., New)	Docket No. AD17-11-000
York Independent System Operator, Inc., and)	
PJM Interconnection, L.L.C.)	

**Pre-Technical Conference Comments of Lathrop Craig on
Behalf of The PSEG Companies**

I. Executive Summary

The PSEG Companies¹ appreciate the opportunity to express our views regarding the pressing need for the wholesale markets in the Northeast to evolve in ways that will incorporate legitimate state public policy objectives. The industry is faced with a significant challenge – the need to bridge the disconnect between market structures designed to provide electricity at the lowest cost – with the actions by states to foster particular state policy goals. Legitimate state public policy objectives such as environmental attributes and system resiliency are not being valued by the markets at this time.

A clear example of this disconnect is the efforts of certain states to fill in the gaps in the wholesale market design by taking steps to preserve the nuclear assets that support the achievement of state policies. Nuclear plants are being financially challenged by current and expected market conditions. Unless the wholesale markets evolve to ascribe value to environmental attributes and system resiliency, nuclear plants will retire prematurely. While the PSEG Companies support the Commission’s willingness to discuss approaches for internalizing state public policy goals into market design, it must be acknowledged that the states are in the forefront of addressing the issues facing nuclear generation. Accordingly, until this evolution in wholesale markets occurs, the Commission should not interfere with the operation of state programs to support nuclear power.

**II. The Wholesale Energy Markets are Generally Working As Intended But
Need to Evolve To Internalize State Public Policy Initiatives**

The competitive markets in the Northeast have delivered benefits to customers and society as a whole in the close to two decades that they have been in existence. The choice by

¹ The PSEG Companies are PSEG Power LLC, PSEG Energy Resources & Trade LLC and Public Service Electric and Gas Company.

some states to move from a vertically-integrated, cost-of-service business model to competitive markets for the electric generation sector was the key energy policy issue towards the end of the last century. In many ways, the markets have achieved their original objectives. Competition has flourished with overall lower costs to consumers, numerous new generation owners, new generating units, and new technologies entering all of the markets, some successfully, and some not. And when there have been failures by new entrants, the costs have been born by investors rather than customers, exactly as intended.

The RTO/ISO markets in the Northeast are designed to create market signals to incent both new build (market entry), and retirement (market exit) through energy and capacity prices. The PSEG Companies provide instructive examples of response to those signals. Specifically, we are currently investing \$2B in construction of three new state-of-the-art combined cycle units in the PJM and New England markets. These units will take advantage of historically low natural gas prices to provide economic energy and a combination of flexible operating characteristics and back up fuel sources, providing enhanced reliability to meet the new Capacity Performance capacity (“CP”) market and Pay for Performance constructs. We are also in the process of retiring 1,200 MW of 1960’s vintage sub-critical coal plants in New Jersey because they have become uneconomic and too inflexible to reliably meet market needs under CP.

Notwithstanding the success of the current market design in facilitating efficient entry and exit of resources, it is also subject to its inherent limitations. The current design of the energy market only incorporates the direct costs of generating unit operations such as fuel, labor and maintenance costs. “External” costs such as environmental impacts associated with operating units that emit carbon or impacts associated with the loss of fuel diversity exposing consumers to greater losses due to low probability, high impact events, are not addressed.² The omission of market structures to internalize these types of externalities is the largest driver of state public policy initiatives that seek to change the energy supply mix away from what the existing competitive markets are delivering in the way of entry and exit on their own.

PJM’s wholesale markets are at a crossroads. The initial impetus for the creation of the markets was largely motivated by the desires of states to lower costs and to reduce risks to consumers – an effort that has been successful. Time has revealed, however, that the scope of this mission was too narrow. The PSEG Companies believe that, for markets to survive, they must be re-designed in ways that take into account other policy goals. The need for a broader scope is most dramatically presented with respect to the current risk to the PJM nuclear fleet.

² Note: Some “external” costs have been successfully internalized in energy markets over the past decades through cap and trade programs under the CSAPR, Acid Rain Program and RGGI, though these markets are for the most part all long allowances and send weak price signals.

III. Nuclear Generation Is Being Exposed to the Risk of Premature Retirement Due to The Lack of Market Structures That Properly Value Its Attributes

Nuclear units, in particular, are adversely impacted by the failure of market structures to value externalities with significant societal benefits. One valuable externality associated with nuclear generation in the PJM footprint relates to the environment. Numerous states in the Northeast (and elsewhere) have taken or are contemplating measures to ensure that a portion of their state's energy supply comes from "clean" resources. This has resulted in significant support payments to solar, wind, energy efficiency and certain demand response resources. States such as New York and Illinois have recognized that nuclear generation has an indispensable role in meeting these same environmental goals and have recently taken steps to ensure that nuclear generators stay in the market, to generate clean energy.

A second valuable externality associated with nuclear generation in the PJM footprint concerns fuel diversity. The PJM market currently enjoys a diverse, fuel-secure, dispatchable, non-intermittent and well-engineered fleet of generating units. These resources were inherited in large part from the previous vertically integrated system. Nuclear generation is a vital component of this beneficial resource mix. Since the initial formation of the RTO/ISO markets, the primary shift in generation in the Northeast markets has been from coal and oil to natural gas and renewables. Recently, nuclear has also become challenged and is increasingly at risk of exiting as well. While initially these shifts have increased resource diversity, the current trend is moving toward a generation mix dominated almost entirely by gas and renewables. This trend is troubling because it leaves PJM in a situation in which it would be relying disproportionately upon a single fuel source that is susceptible to single contingency failure. In response, some state policy makers have entertained supporting coal and nuclear units out of concern for what they perceive as a need to retain a resilient and fuel-diverse generation portfolio.

IV. State Public Policy Goals Could Be Integrated Into Market Design Structures

Both of these concerns – environmental impacts and system resiliency – are valid and worthy policy goals. As the Supreme Court indicated in the *Hughes* case, it is appropriate for states to take actions that support the public good by promoting clean technologies in a manner that does not displace the wholesale market price. The pursuit of policies in support of grid resiliency associated with fuel and technology diversity would also be appropriate. As noted in the recently drafted PJM whitepaper, "PJM must take account of the possibility of larger-scale disruptions of the natural gas supply system."³ Because of the efficiencies that can be realized

³ "PJM's Evolving Resource Mice and System Diversity" PJM Interconnection, dated March 30, 2017 at 35, available at: <http://www.pjm.com/~media/library/reports-notice/special-reports/20170330-pjms-evolving-resource-mix-and-system-reliability.ashx>.

through competition, our preferred approach to addressing state public policy goals is through a market-based solution and we are eager to participate in discussions to that end. There is an array of possible choices for how markets could be re-designed to achieve these public policy goals.

First, the value of clean, non-emitting energy can be reflected in energy market pricing by establishing and reflecting the cost of those attributes on resources that emit. If the value is set correctly, it will incent new entry and the retention of non-emitting or low emitting resources in an economically efficient manner. It is also possible to implement “border adjustments” to limit the impact of these policies to states or regions that have those goals and insulate states or regions that do not. Second, the value of fuel or generating technology diversity can be reflected in capacity markets through additional constraints, conceptually similar to the base capacity constraint that PJM used in the CP auctions leading up to the 2020/2021 auction. The costs of these constraints can be allocated to customers in states that agree to them, protecting customers in states that do not share those views or goals.

V. Until the Policy Goals Are Integrated Into Market Structures States Should be Allowed to Take Steps to Recognize These Attributes Without Interference

We recognize the challenges with getting stakeholders to agree on a solution that could be applied regionally and we recognize that this process will take time. In the interim, the Commission must not stand in the way of the ability of the states to take measures that preserve the nuclear fleet. If immediate steps are not taken, these resources may be forced to retire.

It is appropriate for resources which receive state support for valid public policy goals to participate in the capacity auctions without mitigation. They bid at their avoided costs, net of the support payments. The impact of this design would be to lower prices and incent market exit for some number of resources that otherwise would have been economic to stay in the market (but for the support payments received by the selected resources). Because the payment scheme is intended to support the achievement of policy goals not internalized in the markets, this should be viewed as a reasonable and necessary consequence.

PJM is currently exploring with its stakeholders potential structures to appropriately value all resources while the market design still does not internalize the achievement of state public policy goals. PJM’s first priority should be to develop market design changes that will fully incorporate valid policy goals (such as environmental and fuel diversity/resiliency) into the energy and capacity markets. However, if as an interim measure PJM does seek to change market rules solely to address units that are receiving state support it is critical that these rules do not thwart the achievement of valid while at the same time ensuring competitive market outcomes.

VI. Energy Price Formation Reforms Are Also Critical in Establishing the Right Price Signals

The competitive energy markets are currently being shaped by three primary driving forces: (1) the economics of plentiful and low-cost natural gas; (2) state public policy initiatives to shift generation supply to cleaner sources; and (3) the reality of essentially flat demand. The first two have led to a large influx of new supply, while the third suggests that none is really “needed.”

This rapid and large decline in overall wholesale energy prices has exposed many inefficiencies in energy price formation. We support the Commission’s leadership in recognizing these problems and in continuing to direct key reforms that will ensure the wholesale energy prices more accurately reflect the cost and value of serving load at all times. Getting energy prices right is key to ensuring that the correct price signals are sent to incent efficient investment and market exit decisions. We encourage FERC to press the RTOs/ISOs to implement reforms without delay. While this is not a complete solution to the achievement of the issues facing nuclear generation, improvements in price formation would help.

VII. Where Do We Go From Here?

The PSEG Companies believe that it is incumbent on the Commission to lead the way in seeking the most cost effective means to integrate state public policy goals into the wholesale market design. It is entirely possible, and desirable, to capture the externalities that state policy makers value in the market construct. This can be achieved by reflecting the costs of negative attributes like emissions in unit dispatch (potentially complimented with border adjustments) and allowing policy makers to establish diversity or resiliency goals that can then be implemented through centralized capacity market procurements. However, we caution the Commission to be wary of any potential solution that result in an over procurement of resources.

We understand that it will take a significant amount of time to develop and implement a market-based mechanism that internalizes legitimate state public policy objectives. While this process is underway, we believe that FERC should not interfere with the rights of the states to pursue valid policy objectives such as encouraging clean energy production and the resiliency of the electric grid.

Finally, we appreciate the Commission’s efforts in pushing the RTOs/ISOs to implement a number of important energy price formation reforms and respectfully request that FERC continue to encourage the RTOs/ISOs to implement them without delay. We further request that the Commission remain engaged and monitor and evaluate the RTOs/ISOs progress to ensure that the value of these reforms are actually reflected in market pricing.