

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

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

**COMMENTS OF  
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**On her own behalf**

On Certain Matters Relating to State Policy Initiative Affecting  
Wholesale Energy and Capacity Markets Operated by  
Eastern Regional Transmission Organizations (RTOs) and  
Independent System Operators (ISOs)

**April 26, 2017**

**For the May 2 2017 Technical Conference**

## INTRODUCTION

Thank you for the opportunity to comment on various implications for certain federally regulated, centralized wholesale electricity markets of state policies that affect the entry of new generation (and other) resources into the power market.\* This is an issue of importance for the three wholesale markets that are the focus of this proceeding: PJM, New York and New England. But these issues are also critically important in light of state and federal policies that have been established and are otherwise affecting transitions in wholesale markets in these regions and in other parts of the United States. I commend the Commission for calling attention to them through this Technical Conference.

The context for my brief statement is my understanding and appreciation of important economic principles at play in these markets, but also of the following set of facts and realities – most if not all of which the Commission, staff and stakeholders are, of course, fully aware. I mention them here because they provide the foundations for my comments.

- In the United States, nearly two-thirds of the population reside in regions where retail electricity service is supplied by investor-owned and publicly owned utilities that are involved in and affected by the market rules of seven Regional Transmission Organizations (“RTOs”) or Independent System Operators (“ISOs”).<sup>1</sup>
- The six wholesale electricity markets under the Commission’s jurisdiction touch a majority of the states and span roughly 60 percent of the U.S. population.<sup>2</sup>
- Although there are many, important and common threads across these FERC-regulated RTO/ISO markets – especially in terms of such things as transmission planning and price formation in certain electric product markets – in fact the federally approved market rules, the market conditions, the stakeholder processes, the states’ policies, and the roles

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\* Although I have consulted to a wide variety of stakeholders with interests in many parts of the U.S., including Northeast wholesale and retail electric markets, I am speaking for no one but myself in my comments today. My clients have included RTOs, transmission and distribution utilities, generating companies and project developers, interstate pipeline companies, electricity and natural gas consumers, state government agencies, environmental groups, foundations, Indian tribes, associations, and others. I was previously and am no longer a director of EnerNOC, Inc. I currently serve on several advisory commissions and am on the boards of several non-governmental organizations involved with clean energy issues. I was previously a senior government official in Massachusetts and at the U.S. Department of Energy. In my comments, I am speaking for no one besides myself.

<sup>1</sup> The current U.S. population is 325 million. <https://www.census.gov/popclock/>. According to the ISO/RTO Council, the seven U.S. regional transmission organizations (RTO) and independent system operators (ISOs) provide service in regions where 218 million people live: CAISO (30 million); ERCOT (23 million); ISO-NE (14.7 million); MISO (48 million); NYISO (19.5 million); PJM (65 million); and SPP (18 million). <http://www.isorto.org/About/Members/allmembers>. ERCOT is not under the jurisdiction of the FERC.

<sup>2</sup> See: <https://www.census.gov/popclock/>. <http://www.isorto.org/About/Members/allmembers>.

of the states in resource adequacy considerations vary considerably across these RTOs/ISOs.

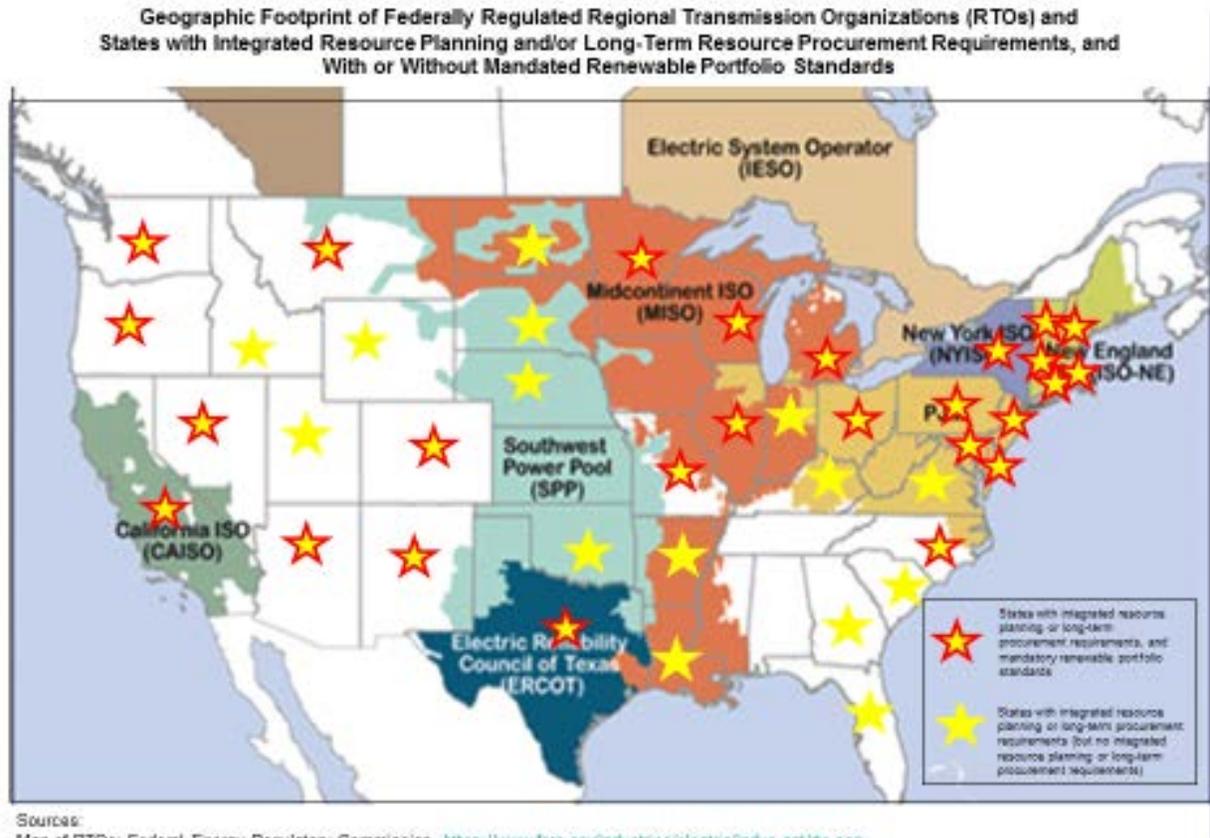
- The three centralized markets that are the subject of this Technical Conference provide wholesale electricity service in 20 states and the District of Columbia<sup>3</sup> and span roughly 30 percent of the U.S. population.<sup>4</sup>
- The market participants in the portions of states that are served by these three RTOs previously decided over a number of years to rely upon a federally regulated capacity market as part of the rules governing wholesale electricity markets.
- The market participants in the other FERC-jurisdictional and non-FERC jurisdictional wholesale electricity markets did not assign resource adequacy responsibilities to FERC as part of the wholesale market rules and do not have centralized forward capacity markets.
- Although many of the market participants that were part of and/or entered the wholesale power markets in ISO-NE, NYISO, and PJM since then may have had reasonable expectations about federal versus state jurisdiction over issues of resource adequacy, the states in these regions have nonetheless evolved in terms of their own aspirations to set standards for the composition and attributes of resources that supply capacity and energy to retail customers in their states.
- In this regard, the states in these three FERC-jurisdictional wholesale markets have policies that are akin to those in many other parts of the United States. For example, as shown in the map below, most of the states – both in and out of RTOs/ISOs – have requirements for either integrated resource planning (“IRP”) and/or long-term competitive power procurement processes as well as for renewable portfolio standards (“RPS”). These state policies can and often do affect the price of electricity in wholesale power markets, and the entry, exit and cost of operations of electric generating resources that are needed to supply retail service to electricity customers. There are many other state policies (and state determinations made pursuant to some of them) that can have similar kinds of impacts. Examples include so-called “loading-order” preferences for certain kinds of resources, requirements for distributed energy resources, siting requirements applicable to generation and transmission facilities, resource-attribute requirements beyond renewable energy supply (e.g., zero-carbon-emission requirements,

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<sup>3</sup> These jurisdictions are: PJM (Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia); NYISO (New York); and ISO-NE (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont). <http://www.isorto.org/About/Members/allmembers>.

<sup>4</sup> According to the ISO/RTO Council, together the three RTOs discussed in this Technical Conference account for 99 million people: PJM (65 million); NYISO (19.5 million); and ISO-NE (14.7 million). <http://www.isorto.org/About/Members/allmembers>.

off-shore wind), limits on the amount of carbon-dioxide and other pollutants emitted by power plants in the state, and so forth.



I have noted the variation in states' policies (regarding resource adequacy, renewable energy standards, and other factors affecting electricity market outcomes) mostly to illustrate the variation that exists within and across FERC-regulated RTOs with regard to states' aspirations about the mix of resources (e.g., energy efficiency, renewable energy, solar-renewable energy, low-carbon electricity supply, generating resources with and/or access to on-site fuel supply, and so forth) they want to rely upon for meeting retail electricity consumers' demand.

Few if any of the people who currently sit in state decision-making positions (e.g., in state legislatures, in the Governor's office, on state regulatory commissions) with responsibility for such electric-industry matters were in those positions at the time the transmission utilities in their state decided whether to join an RTO and whether (and if so, how) to restructure their electric industries.

For better or worse in the U.S. Constitutional democracy, there is no reason to expect that states will honor allegiance to the design of FERC-regulated wholesale capacity markets any more than to their own policy objectives that affect electric system elements and outcomes and that satisfy other local objectives including local resource requirements or impacts (e.g., water, land use, air emissions), local economic development objectives (e.g., local jobs, local tax revenues, local access to certain types of energy resources), and so forth. Additionally, although many states rely on market-based mechanisms to determine which specific resources may provide electric energy services, there is no reason to expect that state decision makers will make determinations that singularly focus on *economic efficiency* and the continued viability of wholesale capacity-market designs ahead of other all objectives.

Laudably over the years, the Commission has embraced market-based principles in reviewing RTOs'/ISOs' proposed market rules. In so doing across the many RTOs over which it has jurisdiction, the Commission has exercised its authority under the Federal Power Act in ways that take into consideration the varied market designs and technical provisions of RTOs, the differences in stakeholders' views about the efficiencies and equities of adopting and executing various market provisions, and the policy preferences of states with respect to many of the issues I have noted above.

In my own professional career – in which I was a state public utility regulator at a time when market-based processes were beginning to emerge as attractive and workable alternatives to some aspects of traditional utility regulation, then a federal energy-policy official assessing the prospects for restructuring of the electric industry, and finally an observer of and consultant on state and federal policies to support efficient, reliable and environmentally acceptable markets for electricity to American consumers – I have sought wherever possible to advocate for market-based regulatory principles, procedures and outcomes.

I continue to use that lens in thinking about the long-term sustainability of currently designed wholesale-capacity markets in PJM, New York and New England in light of anticipated future conditions in the electricity markets. These significant changes are driven by economic conditions affecting energy technologies and fuel markets, consumer preferences, state policies, federal policies, and other powerful forces. As I stated before the Commission in 2013 when it held a technical conference on centralized capacity markets in RTOs and ISOs,

the changing resource mix in the Northeast will pose different reliability and operational challenges in the future. In my view, however, we don't need to wait for the future to see that changes [in RTO markets] are needed. Already, the nation's abundant supply of natural gas has created pressures in the market even as it has also produced significant value for consumers and the economy. Already, public policies have introduced substantial efficiencies and clean energy resources into the market, creating significant benefits but also introducing new kinds of

challenges for the overall system. Already, we see increased extreme weather events testing the ability of grid operators, power suppliers and delivery companies to maintain and restore electric service at levels consistent with consumer expectations. Already, we see that in a market that depends upon the flow of private capital and diversity in the asset mix, some suppliers of capacity resources (including demand-response and nuclear generation) have recently decided that the markets are not producing financial outcomes consistent with the requirements of private capital markets. ...

While today's focus is on centralized capacity markets, they are part of a larger fabric. That larger context is one where we continuously expect our electric industry to solve a complex 'simultaneous equation' in which the countless decisions of myriad actors need to produce a reliable, efficient and increasingly clean supply of electricity for the region.

At the moment, we've not on track to solve that 'simultaneous equation' in a sustainable way, at least in New York and New England, two regions with which I am quite familiar. I say that 'we're not on track' without meaning to criticize those regions or the specific stakeholders in them for their aspirations for competitive markets, for clean energy outcomes, or for the provision of reliable electricity supply. In fact, I stand firmly in support of all of those objectives. Rather, I want to point out that in order to accomplish the things that policy makers, consumers, investors, asset owners, power suppliers, grid operators, utilities, and others hope to achieve through their electricity markets, something has to give.

The 'simultaneous equation' challenge results naturally from countless situations where each party acts to advance his or her own particular interests. This is the classic presumption of the "genius" of markets, of course. But this approach, combined with the particular character of wholesale *electricity* markets in the Northeast RTOs (with their mix of competition among market participants to provide an essential service; RTO stakeholder processes resembling legislative processes where negotiations sometimes have to split the differences; and states' exercising their authority to advance their individual state-centric aspirations) can lead to unintended consequences, externalities of one form or another, and situations where the sum of the parts end up undermining the health of the system as a whole.

Something has to change for the numbers to support a sustainable, healthy and vibrant electric industry capable of meeting system operators' technical necessities, consumers' implicit needs, policy makers' explicit demands, and

investors' inherent requirements. That entire equation must be satisfied, or the system isn't sustainable.

I remain concerned that the current centralized wholesale capacity markets in PJM, NYISO and ISO-NE will not be sustainable, from an economic, financial and political point of view and in light of states' policies and preferences. I expect to see many more long-term contracts, on top of the many bilateral power supply contracts that already exist among market participants. I expect to see the electric systems in those regions increasingly comprised of supply-side and demand-side resources with high capital cost and low variable costs, which affect not only energy market prices and operations but also financing instruments needed for entry of new resources. In my opinion, all of these factors will affect the continuing viability of the current designs of these three RTOs' forward capacity markets.

So, where does this lead me? For better or for worse, I believe that the RTOs, their market participants and other affected stakeholders – however much they may agree with it or not – will need to take into consideration the possibility that individual states in their region may ultimately opt out of relying upon those RTOs for resource-adequacy and resource-mix issues. It is not inevitable that any or all states will do so, but I believe it is increasingly likely that one or more will. State policies are already nibbling away at these wholesale capacity markets and may ultimately make a more formal decision to opt out of them.

With this in mind, I encourage these RTOs to consider and negotiate capacity-market modifications that anticipate the potential for states to opt out of capacity markets and that allow for continued operational and economic efficiency of the other wholesale electric markets. Negotiating for workable options for the states could avoid what might otherwise be the demise of current centralized capacity markets through a thousand bites.