DRAFT

NYISO Management Committee Meeting Minutes June 12, 2018 10:00 a.m. – 1:00 p.m.

1. Introductions, Meeting Objectives, and Chairman's Report

The chair of the Management Committee (MC), Ms. Erin Hogan (NYS Utility Intervention Unit), called the meeting to order at 10:00 a.m. by welcoming the members of the MC. A quorum was determined.

2. FERC Update

Ms. Kathleen Schnorf (FERC Office of Energy Market Regulation), provided an update on the FERC activities noting that all statements today from FERC attendees are their own and they don't speak for the Commission or the individual Commissioners. She expressed her appreciation to stakeholders for including FERC in the annual Joint Board of Directors and MC meeting, adding that the roundtable discussions provide great context and insight for FERC.

Ms. Schnorf provided the following update:

This year, four new commissioners, including a new chairman, have joined Commissioner Cheryl A. LaFleur at FERC. Chairman Kevin J. McIntyre has said his priority is to protect and promote the resiliency of the bulk power system. He has spoken about the importance of the view of the pipeline certificate process. Commissioner Neil Chatterjee has said his priorities are streamlining project review processes to improve review timelines, better aligning electric transmission investments incentives, maintaining grid reliability and a focus on cyber threats. The Commission has already taken active steps toward addressing many of these priorities.

Another major development at the Commission over the past year was the July 2017 DC Circuit court ruling on NRG Power Marketing v. FERC. The DC Circuit determined that the Commission exceeded its authority under section 205 of the Federal Power Act (FPA) when it conditionally accepted PJM's proposed tariff revisions. The court indicated that FERC can reject, accept or suggest minor changes to tariffs. The court added that the power to specify significant, substantive changes removes commission from the essentially passive role envisioned by FPA section 205. As longer and more complicated cases come before the Commission, the NRG ruling presents new and different challenge as how the Commission deals with these cases. One seemingly simple strategy when dealing with future cases is communication between FERC and NYISO on the front end of filing. In Ms. Schnorf's opinion there is great communication between FERC and NYISO. The NRG case is something that FERC Staff keeps in mind on a daily basis while processing cases. With every analysis or recommendation, we make, we now always ask ourselves how NRG may be implicated and if our recommendations fit within the new NRG framework.

Ms. Nicole Buell (FERC - Office of Energy Market Regulation) provided the following highlights on two of the Chairman's and Commission's current priority efforts:

Pipeline Review Initiative (Docket No. PL18-1-000)

At our December 2017 Commission meeting, Chairman McIntyre announced that the Commission would begin a review of 1999 Policy Statement on Certification of New Interstate Natural Gas Pipeline Facilities, which dictates how the Commission evaluates applications for natural gas pipelines and ultimately acts on them. The Chairman noted that "much has changed in the energy world since

1999, and it is incumbent upon us to take another look at the way in which we assess the value and the viability of our pipeline application process. At the April Commission meeting, in an action backed by all five commissioners, the Commission officially launched the review with the issuance a Notice of Inquiry (NOI) proceeding. The NOI seeks input from industry and the public on whether the Commission can make specific policy changes to improve the efficiency of its review for new and expanded pipelines. It specifically is looking at 4 broad categories:

- 1. The demonstration of need for a project
- 2. The exercise of eminent domain and landowner interests
- 3. The evaluation of alternatives and environmental effects broadly including consideration of greenhouse gases, upstream and downstream impacts
- 4. The efficiency of the Commission's review process, specifically in relation to EO 13807, which encourages agencies to make timely decisions with the goal of completing all federal environmental reviews and authorization decisions for major infrastructure projects within 2 years

Commission Staff is expecting a large volume of comments in this docket, which are coming in already, many from landowners. We did receive a request to extend the deadline for comments, which was granted so comments are due by July 24. While the Commission is reviewing the record in this proceeding, we would like to reiterate that the Commission is continuing to process filings as we always have and any changes to Commission policies will be announced and prospective.

Another Commission priority, which has been a highlighted point of discussion this week, is that of resilience. Last fall the Department of Energy requested the Commission develop a final rule that would compensate resources for their resilience services. Having considered the proposal, on January 8 of this year, the Commission terminated the DOE proceeding finding that the record had not satisfied the statuary requirements to demonstrate that the RTO/ISO tariffs were unjust and unreasonable. Nevertheless, the Commission acknowledged that the record had shed light on resilience more generally and that reinforcing the resilience of the bulk power system is an important issue that warrants further attention. The Commission initiated a new proceeding in Docket No. AD18-7-000, which is intended to continue investigation of these related issues. Specifically, the Commission has requested comments to explore:

- A common understanding among the Commission, industry, and others of what resilience of the bulk power system means and requires
- Understand how each RTO/ISO assesses resilience in its geographic footprint how risks are identified, what these risks are, and how they are modeled for and addressed
- What attributes of the bulk power system contribute to resilience?
- Whether additional Commission action regarding resilience is required at this time

The Commission has received numerous comments in this docket and appreciate all the contributions to proceeding and our evaluation process. We do continue to encourage those with information, commentary, studies, or insight to continue to submit such information to us as appropriate. The Commission is reviewing all of the information filed to date and using that to determine what action, if any, is required of the Commission to ensure the continued resilience of the electric system

Ms. Becky Robinson (FERC Office of Energy Policies) thanked NYISO for the warm welcome and provided the following update:

Interplay between State Policies and Wholesale Markets

FERC hosted a technical conference on this in May 2017 during the no quorum period. The issue teed up there was that many of the states in ISO-NE, NYISO, and PJM largely rely on the wholesale markets to procure capacity resources however, lately, some states have increasingly begun to support

capacity resources outside of the wholesale markets. This raises a potential conflict with maintaining efficient and competitive wholesale electric markets, (fuel-neutral and least-cost). The technical conference provided a thorough airing of the issues and explored various paths forward that span philosophical outlooks for how capacity markets should treat resources that receive state support –

- on one end of the spectrum, we could do nothing,
- on the other end, we could mitigate all capacity market offers.

Since then, ISO-New England submitted CASPR (Competitive Auctions with Sponsored Policy Resources), which the Commission accepted and which is currently pending rehearing so we can't discuss the merits. But briefly, the CASPR proposal was a type of "Accommodate" approach — where the goals are (1) to allow state supported resources to participate in the capacity market, but (2) put a structure in place that maintains the competitive market prices that would have resulted absent the state support. PJM has also filed two proposals for the Commission to consider, which are currently pending at the Commission, and which we have to act on by June 29th. Those two proposals are: (1) Capacity Re-pricing — which is another type of "accommodate" solution, and (2) "MOPR-Ex" — which would expand the minimum offer price rule to apply not just to new but also existing resources, while also proposing some exemptions to that rule.

And as we discussed here yesterday, New York is working on carbon pricing -- reflect and achieve the state policy goals in the market rather than just "accommodate" them as in the NE and PJM proposals.

Distributed Energy Resources (DER)

In the November, 2016 Notice of Proposed Rulemaking on Storage, the Commission also proposed to allow DER aggregators to participate directly in the organized wholesale markets, and to require RTOs to establish market rules on how that would work. In February of this year, the Commission issued a Final Rule on Storage, but called for a Technical Conference on the DER proposal to get more information both on how aggregations can participate in wholesale markets, as well as just on DER impacts on the bulk power system. So in April we had a two day technical conference covering a wide variety of related issues:

- How geographically broad can aggregations be, and how would dispatch and settlement work if the aggregations span multiple pricing nodes
- How we can ensure that if DER aggregations provide services at both the wholesale and retail levels, that we aren't double counting services or capabilities
- One panel featured a dialogue between FERC Commissioners and state regulators.
- Through the conversations on those last two points, the notion of an "opt-out lite" emerged –
 where if a state has concerns about DERs participating at both retail and wholesale, maybe the
 model is that a state regulator would be able to say that if a DER participates at wholesale, that's
 it. We sought comment on that.
- How coordination among the various parties will work, both in initially setting up an aggregation, as well on an on-going basis in real time. The distribution utility has more visibility into DERs than the ISO, and also the utility is responsible for safety and operations on its distribution system, but there is a concern from DER aggregators about the utility being a gatekeeper.

One key takeaway that we heard is that regions want flexibility in implementation. Most believe DERs are coming, but that is happening much faster in some parts of the country. Comments following the technical conference are due June 26.

Mr. Clarence Bell (FERC Office of Energy Policies) provided the following updates:

Storage Final Rule, Order No. 841

This rule requires that RTOs/ISOs establish a participation model consisting of market rules that ensure:

- Electric storage resources are eligible to provide all capacity, energy, and ancillary services they
 are technically capable of providing.
- RTO/ISO tariffs account for physical and operational characteristics of electric storage resources.
- Electric storage resources are able to be dispatched and set the wholesale market clearing price as both a wholesale seller and wholesale buyer.
- RTO/ISO tariffs establish a minimum size requirement for electric storage resources not to exceed 100 kW.

The rule also requires that the sale of energy from the organized wholesale electric markets to an electric storage resource that the resource then resells back to those markets be at the wholesale LMP.

Interconnection Final Rule, Order No. 845

This rule reforms generator interconnection procedures & agreements for generators larger than 20 MW:

- Improve certainty for interconnection customers
 - o Provide potential cost and time efficiencies to interconnection customers.
 - o Promote informed interconnection decisions
- Improve interconnection customers' ability to assess potential generation projects, and
 - Mitigate factors that lead to submission of interconnection requests for generation projects that have little chance of reaching commercial operation.
 - o Enhance the interconnection process.
 - o Bring new generation online faster
 - o Mitigate the construction of unnecessary upgrades.
 - o Addresses systemic inefficiencies, including those caused or exacerbated by changing market forces and by the emergence of new technologies.

Price Formation Rulemakings

These rulemakings focus on getting prices that reflect the true marginal cost of production and recognize the importance of sending the right price signal to incentivize performance. Getting the energy price right matters both to short-term incentives to make sure generators actually follow dispatch instructions both up and down in real-time. And it matters long-term to incentivize investment in resources that can respond to those prices and system needs.

Five-Minute Settlement & Shortage Pricing Rule June 2016, Order No. 825

Rule aligned dispatch intervals with settlement to make them both every 5 minutes.

Offer Cap Rule. November 2016, Order No. 831

Increased the cap from \$1,000 to \$2,000 for the purpose of calculating LMP. This change was needed because in events like the polar vortex, the offer cap constrained some resources' offers below cost.

Transparency Rule April 2018, Order No. 844

Increased reporting on uplift payments and operator actions. This helps better identify significant, persistent, and concentrated uplift payments and allow market participants to ask questions about the prevalence and causes of this uplift, and consider whether there are opportunities to propose rule changes to better incorporate such uplift into prices.

Pricing for Fast-Start Resources Federal Power Act Section 206 proceedings in 3 RTOs initiated December 2017

Allows special pricing treatment to let fast-start resources set price, rather than simply having their costs covered through uplift.

This rule requires new generating facilities to provide primary frequency response as a condition of interconnection. This includes a functioning governor or equivalent controls that provide frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the generating facility's real power output in the direction needed to correct frequency deviations. It addresses the potential reliability impact of the evolving generation resource mix, with declining amounts of traditional synchronous generating facilities that historically have provided primary frequency response and increasing penetrations of non-synchronous generation, including wind generating facilities that historically have not been a significant source of primary frequency response.

3. 2018 Summer Capacity Report Assessment

Mr. Wes Yeomans (NYISO) reviewed the Operations Report included with the meeting material.

4. 2018 Master Plan - Wholesale Markets for the Grid of the Future

Mr. Mike DeSocio (NYISO) provided an update (presentation included with meeting material). The Master Plan, which provides one cohesive strategic vision for NYISO's market design.

Mr. Dave Clarke (LIPA) stated that LIPA support efforts on RTC-RTD convergence improvements recognizing that it is a lot of work.

Mr. Aaron Breidenbaugh (Luthin Associates) asked if any of the items slated to be removed from the Master Plan are high on Potomac's Economics list of recommended projects? Mr. Pallas LeeVanSchaick (Potomac Economics), prefaced by saying that the strategic plan effort is a good one and provides a lot of benefits, and that the priorities are good and very much in line with what the MMU thinks should be focus areas for the NYISO. Mr. LeeVanSchaick noted that there are a few market design efforts on the list that he thinks could be possibly be deployed in a more compressed timeframe. Mr. LeeVanSchaick stated that removing projects off the Master Plan due to cost estimate estimates makes sense to him. He also noted that the RTC-RTD convergence would be a significant lift and there are other things that would provide more value in the short term. The one thing he would like the NYISO to reconsider is transmission shortage pricing constraint; this would not be hard to implement and would get significant benefits and would take pressure away from RTC-RTD.

Mr. Stu Caplan (Troutman Sanders) stated that the NYISO and MMU could provide more meaningful dialog to stakeholders using whatever metrics are relevant, such as increases in market efficiencies and outcomes, and not something such as reducing rates which is not always sending the right signals. He suggested that updating stakeholders should be included in the strategic plan.

Mr. Mark Younger (Hudson Energy Economics) noted his support for moving carbon pricing as quickly as possible. He shared Mr. LeeVanSchaick's concern on the unreasonably long length of time it will take to complete projects on the Master Plan; adding that he doesn't understand why so many of these are listed as taking 4 years to complete. Two of the most important ones should be very easy to do – more granular reserves and transmission shortage pricing. With respect to granular reserves, the requirements are fairly well defined as operating rules. Mr. Younger stated that the NYISO should tell stakeholders how long it would take to do a project, and let them decide which ones could be started next year, year after etc. He added that would be a much more useful Master Plan then working on many things at once and going slower.

Mr. DeSocio stated that this will be addressed more tomorrow, adding that the suggestion to take on less projects and move faster is good feedback.

Ms. Doreen Saia (Entergy) stated that a consistent theme she heard yesterday after the roundtable discussions was a focus on the reserves mechanism as a tool to manage and address resilience. Ms. Saia echoed Mr. Younger's concern and said she also doesn't understand how it can take so long to work on that initiative. Ms. Saia said pointed out that one of the key pieces that was discussed yesterday was the need to move forward a little faster on this, as is it something that, incrementally, could be done relatively easily. She asked the NYISO to take this into consideration and possibly look into doing this in phases. She stressed the need to make some advancements in this area as it will be important.

Mr. DeSocio stated that all feedback will be taken into account as we think about any changes to master plan and how it could better accommodate moving faster.

5. New Business

Ms. Hogan thanked the Member Relations team for organizing the 2-day event.

The meeting adjourned at 12:00