



Coordinating without the ConEd/ PSEG Wheel

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KCC

Agenda

- **Background**
- **Joint PJM/NYISO Presentation**
- **M2M PAR Coordination**
- **Timeline/ Next Steps**
- **Appendices:**
 - *Appendix I: Current Process*

Background

Purpose

- **The purpose of today's meeting is to:**
 - *Review concepts presented at the joint PJM/NYISO stakeholder meeting that took place on August 15, 2016*
 - *Seek stakeholder feedback on these concepts*

Background

- **ConEd has announced that it will be terminating the 1,000 MW long-term firm point-to-point transmission service agreement (commonly referred to as the ConEd PSEG wheel) with PSEG, effective May 1st, 2017**
 - *The NYISO has been working with PJM to develop alternative designs for modeling the ABC and JK interfaces upon expiration of the wheel*
- **The NYISO and PJM must determine how to provide open access transmission service between the two areas, and how to best utilize the ABC and JK interfaces**

Critical Factors for a Near-Term Solution

- **Supports reliable operation of the transmission system**
- **Can be facilitated with current Phase Angle Regulator (PAR) technology that exists at the ABC and JK interfaces**
- **Can be implemented in both PJM and NYISO market models by May 1st, 2017**
- **Provides for open access and utilization of the facilities to serve the public interest and provide benefit to consumers**
- **Preserves competitive market behaviors**
- **Does not hinder use of the facilities to respond to emergencies in real-time**

Joint PJM/NYISO Presentation

Joint PJM/NYISO Presentation

- PJM/NYISO proposed an Operational Base Flow (OBF) concept at the [August 15, 2016](#) joint meeting
- The OBF would be based on a natural system state determined by NYISO and PJM EMS and PSS/e study applications
- PJM power flow results have identified delivery limitations when exporting to the NYISO on the JK interface
 - *Forcing flow from 230 kV system to the 345 kV system*
 - *PAR tap adjustments exhausted prior to achieving desired flow*
 - *High voltage during light load periods and low interface flows will also be a concern/ consideration*
- NYISO power flow results have also identified delivery limitations when exporting to PJM on the ABC interface using N-1-1 analysis on the NYISO system
- The NYISO and PJM are each conducting their own studies regarding the OBF concept
 - *Study results will be available for the September 16th joint NYISO/PJM meeting*

Interchange Percentages

- **Considering a combination of two concepts:**
 - ***Account for an Operational Base Flow (OBF) as a starting point***
 - ***Apply an interchange percentage distribution:***
 - **5018: 32%**
 - **JK: 15%**
 - **ABC: 21%**
 - **Western Ties: 32%**

M2M PAR Coordination

M2M PAR Coordination Flowgates

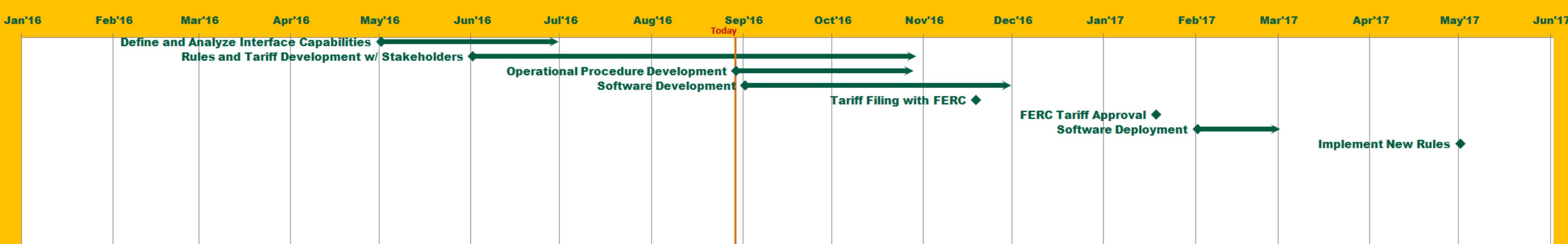
- **The NYISO and PJM will be evaluating transmission constraints to include in M2M PAR Coordination**
 - *The evaluation of transmission constraints will be done under the current flowgate qualification procedure as defined in the Joint Operating Agreement (JOA)**

*See OATT section 35.23, Attachment CC, Schedule D – Market-to-Market Coordination Process

Timeline/ Next Steps

Timeline

Coordinating without ConEd/PSEG Wheel



Date	Task
5/1/2016	Define and Analyze Interface Capabilities
6/1/2016	Rules and Tariff Development w/ Stakeholders
8/29/2016	Operational Procedure Development
9/1/2016	Software Development
11/18/2016	Tariff Filing with FERC
1/18/2017	FERC Tariff Approval
February 2017	Software Deployment
5/1/2017	Implement New Rules

Next Steps

- **September 16th Joint NYISO/PJM Meeting**
 - *Continue proposal discussion*
- **September 29th MIWG**
 - *Discuss draft tariff language*
- **October BIC/MC**
 - *Vote on draft tariff language*
- **November**
 - *Seek Board Approval*
 - *File with FERC*
- **May 1, 2017 Implementation**

Appendix I: Current Process

Current Process

- **Currently, interchange between NY and PJM is expected to flow according to the pre-set distribution of 61% over 5018, and 39% over the Western ties**
 - *This distribution is explicitly modeled in the NYISO's Day Ahead and Real Time markets*
 - *Interchange is also automatically distributed from 5018 to the ABC and JK lines when the PARs on the transmission lines between New York and New Jersey are unable to maintain the desired flow (i.e., when flows across the 5018 are at limits)*
- **When a market participant submits an economic offer to schedule energy between PJM and NY, NYISO economically evaluates the offer against:**
 - *Offers from internal NY generators*
 - *Import/export offers at other proxy buses, and*
 - *Price sensitive load offers*
- **The congestion impacts of proposed imports and exports on the NY transmission system are considered in the NYISO's market evaluation and are reflected in the LBMPs at the Keystone proxy bus**

M2M Coordination

- Key steps in M2M PAR Coordination are outlined below
 - *A complete description of these rules is included in Section 35.23 of the NYISO's OATT*

RT Target Flow Calculated for each PAR

- Derived in part based on the static interchange percentage distributions modeled in the market software



Cost of Congestion

- RT cost of congestion at each PAR Controlled line is the sum of the products of the PAR's shift factor on the shadow price of each active constraint



TAP signals

- The software will indicate to Ops the direction in which tap moves would be beneficial to minimize regional congestion by redistributing flows across the various AC interfaces between NY and PJM



RTO-to-RTO settlements

- Settlements between NYISO and PJM may occur when any over/under deliveries on the PAR controlled lines are increasing congestion in one region (compared to target flows)

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefit to consumers by:

- *Maintaining and enhancing regional reliability*
- *Operating open, fair and competitive wholesale electricity markets*
- *Planning the power system for the future*
- *Providing factual information to policy makers, stakeholders and investors in the power system*

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