

# 5-Minute Transaction Scheduling

## Project Kick-Off

---

**Ashley Ferrer**

Market Design Specialist, Energy Market Design

**ICAPWG/MIWG**

January 30, 2020

# Agenda

- Background
- Project Scope
- Next Steps

# Background

# Background: External Transaction Scheduling

- **Day-Ahead Market transaction bids are evaluated by SCUC on an hourly basis**
- **In the Real-Time Market, Real-Time Commitment (RTC) determines schedules for hourly transactions once per hour and intra-hourly transactions once every 15 minutes**
  - Real-Time Dispatch (RTD) treats the transactions scheduled from RTC as fixed interchange and does not re-evaluate any transactions

# Real-time Transaction Scheduling with External Control Areas

| Control Area | Proxy Bus Name             | Scheduling Bid Type Option | 15-Minute Transaction Scheduling | 60-Minute Transaction Scheduling |
|--------------|----------------------------|----------------------------|----------------------------------|----------------------------------|
| Hydro Quebec | Chateauguay-Import/Export  | LBMP                       | X                                | X                                |
| Hydro Quebec | Wheel                      | LBMP                       |                                  | X                                |
| Hydro Quebec | Cedars                     | LBMP                       |                                  | X                                |
| ISO-NE       | Sandy Pond – A/C Interface | CTS                        | X                                |                                  |
| ISO-NE       | Cross Sound Cable          | LBMP                       |                                  | X                                |
| ISO-NE       | Northport Norwalk 1385     | LBMP                       |                                  | X                                |
| Ontario      | Bruce – A/C Interface      | LBMP                       |                                  | X                                |
| PJM          | Keystone – A/C Interface   | CTS & LBMP                 | X                                |                                  |
| PJM          | Neptune                    | CTS & LBMP                 | X                                |                                  |
| PJM          | VFT                        | CTS & LBMP                 | X                                |                                  |
| PJM          | HTP                        | CTS & LBMP                 | X                                |                                  |

# Project Scope

# 5-Minute Transaction Scheduling

- The project will study the potential and feasibility for external transactions with external control areas (e.g., HQ, PJM, ISO-NE, IESO) to be scheduled on a 5-minute basis.
- This project will deliver a report that considers a proposed mechanism to enhance the real-time interchange scheduling processes by allowing the economic scheduling of interchange across interties nominally every 5-minutes.

# Expected Benefits

- **More frequent transaction scheduling is a market enhancement which will contribute to NYISO's ability to meet future grid challenges expected to arise with high levels of intermittent renewable and distributed energy resources while satisfying reliability needs**
  - As more intermittent resources are integrated into the bulk power system, net load variability is expected to increase
  - To address these future challenges, more frequent transaction scheduling could:
    - Provide pricing and investment signals necessary to reflect system needs and to incent resources capable of resolving those needs
    - Expand the set of resources available to balance the system
    - Expand the capability of neighboring systems to efficiently provide additional power during times of shortages and provide a quicker response rate to real-time events
- **Additionally, more frequent transaction scheduling could:**
  - Improve convergence between prices in RTC and RTD
    - 5-minute interchange scheduling could provide RTD with additional scheduling flexibility
    - Even increasing 60-minute interchange scheduling frequency to every 15-minutes could improve convergence as binding RTC schedules would be established closer to real-time
  - Offer increased flexibility to the market optimization software



# Next Steps

# Timeline

## ■ Q1 2020

- Perform initial research
- Begin discussion with stakeholders

## ■ Q2 2020

- Continue stakeholder discussions
- Present completed study to stakeholders

# Our mission, in collaboration with our 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 policymakers, stakeholders and investors in the power system



# Questions?