

Attachment I

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Simplified, Illustrative Example of How the NYISO's Proposed OATT Section 41 Rules and the NYISO's Existing Tariff Would Implement MTF Reservations in the NYISO's Day-Ahead and Real-Time Markets

To demonstrate how the rules in proposed Section 41 of the NYISO's OATT will interact with its existing Tariff rules, the NYISO offers the following illustrative example. The example was developed with assistance from CHPE and OATI, which answered the NYISO's questions about how the MTF Provider OASIS will be implemented in practice. It represents the parties' current understanding of how the OASIS will be implemented. There may be minor differences between the examples below and the final implementation of the MTF Provider OASIS.

Simplifying Assumptions

This example is focused on illustrating how the NYISO's proposed rules will work. In order to illustrate a broad range of possibilities in a relatively brief example, some participants take actions that are not economically optimal.

This example addresses one hour (HB 15) of a Day-Ahead Market (DAM) and Real-Time Market (RTM) day. The day occurs in the summer. Temperatures are warm in New York and New England, but not extreme.

The Initial MTF Reservation Holder has not resold any of the 1,250 MW of MTF Reservations it holds prior to the start of the NYISO's DAM. This example focuses on voluntary and default releases of MTF Reservations in the NYISO's RTM.

There are three Eligible Customers that are interested in acquiring MTF Reservations in order to receive the Locational Based Marginal Price ("LBMP") the NYISO is paying for Energy Imports delivered to the Proxy Generator Bus associated with the MTF, which represents an electrical location in New York City. All of the Eligible Customers have executed service agreements with the MTF Provider that are consistent with the Service Agreement in Section 41.19 of the NYISO's proposed OATT rules. The MTF Provider has established credit limits for each of the Eligible Customers.

- The then-current credit limits the MTF Provider approved for Eligible Customer #1 and Eligible Customer #3 (consistent with proposed Section 41.22 of the OATT and its posted MTF Provider Business Practices) are sufficient to cover all MTF Reservations these two Eligible Customers will seek to acquire in this example.
- Eligible Customer #2's then-current credit limit is only sufficient to acquire 25 MW of HB15 MTF Reservations at the \$60/MW Default Release price. For illustrative purposes,

Eligible Customer #2 is going to make a mistake and submit an offer to acquire a quantity of MTF Reservations that exceeds its then-current credit limit on the MTF.

Day-Ahead Market

The Initial MTF Reservation Holder submits a DAM Bid to the NYISO to Import 1,000 MW of Energy on the MTF. The MTF Reservation Holder Bids 800 MW at a low price (P1) and 200 MW at a higher price (P2). In order to illustrate how Default Release MTF Reservations are implemented, the Initial MTF Reservation Holder does not submit Bids for its remaining 250 MW of MTF Reservations in the DAM.

The e-Tag for the Initial MTF Reservation Holder's Import transaction is available and its Bids are timely submitted by 4:45 a.m. The NYISO checks the information on the Initial MTF Reservation Holder's e-Tags against the MTF Reservations posted on the MTF Provider's OASIS and confirms the Initial MTF Reservation Holder possesses sufficient MTF Reservations to support its 1,000 MW of DAM Bids. The NYISO programmatically notifies the MTF Provider that the MTF Reservation Holder submitted 1,000 MW of Bids on the MTF in the DAM.

The Initial MTF Reservation Holder's Bids are economically evaluated by the NYISO and, when the DAM posts at approximately 10:30 a.m., the Initial MTF Reservation Holder receives an 800 MW Import schedule in the DAM. The 200 MW of Bids submitted at P2 were not scheduled, and 250 MW of available MTF Reservations were not Bid into the DAM.

Voluntary Release and Default Release

The Initial MTF Reservation Holder has until noon the day before the RTM day to decide what it wants to do about the 450 MW of HB 15 MTF Reservations that are not supporting its DAM scheduled Import on the MTF.

For the 250 MW of HB15 MTF Reservations that were **not Bid** in the DAM, the Initial MTF Reservation Holder's options are:

- By noon on the day before the RTM day, submit a RTM Bid to the NYISO for HB 15 (in which case the MTF Reservations will be used to support the Initial MTF Reservation Holder's RTM Bid consistent with proposed OATT Section 41.18.8); or
- By noon on the day before the RTM day, post a voluntary release of its HB 15 MTF Reservation on the MTF Provider OASIS at a price that the Initial MTF Reservation Holder selects (*see* proposed OATT Section 41.8.6(e)); or
- Do nothing and allow the unused MTF Reservations to be Default Released by the MTF Provider by 12:30 p.m. on the day before the RTM day, consistent with proposed OATT Section 41.18.8.

For purposes of this illustrative example, the Initial MTF Reservation Holder does nothing and allows the 250 MW of HB 15 MTF Reservations to become Default Release MTF Reservations that are posted by the MTF Provider at 12:30 p.m., at a pre-determined, posted price of \$60/MW for acquisition by Eligible Customers.

For the 200 MW of HB 15 MTF Reservations that were **Bid, but not scheduled** in the DAM, the Initial MTF Reservation Holder's options are:

- No later than 85 minutes before the start of HB 15, submit a RTM Bid to the NYISO (in which case the MTF Reservations will be used to support the Initial MTF Reservation Holder's RTM Bid); or
- By noon on the day before the operating day, post a voluntary release of its MTF Reservation on the MTF Provider OASIS at a price that the Initial MTF Reservation Holder selects (*see* proposed OATT Section 41.8.6(e)); or
- Do nothing. Because the Initial MTF Reservation Holder already offered the MW associated with these MTF Reservations in the DAM, it is not obligated to also offer them into the RTM and these MTF Reservations would not be Default Released. The NYISO's Market Monitoring Department is prepared to monitor this behavior.

The Initial MTF Reservation Holder elects to use some of the remaining MTF Reservations to submit RTM Bids, and elects to post voluntary releases of its MTF Reservations for the remainder:

- The Initial MTF Reservation Holder timely (no later than 85 minutes before the start of HB 15) provides e-Tags and submits 100 MW of HB 15 RTM Bids on the MTF to the NYISO at a price the Initial MTF Reservation Holder expects will be economic; and
- By noon on the day before the operating day, the Initial MTF Reservation Holder posts 100 MW of HB 15 MTF Reservations for voluntary release at a price of \$70/MWh on the MTF Provider OASIS.

The NYISO will not economically evaluate the RTM Bids the Initial MTF Reservation Holder submitted for possible scheduling until RTM close, which occurs 75 minutes before the start of the real-time scheduling hour (HB 15).¹

¹ The NYISO uses the 10 minutes between required Bid submission (85 minutes before the hour) and hourly market close (75 minutes before the hour) to validate the MTF Reservation, using information included on the e-Tag and MTF Reservation information from the MTF Provider's OASIS.

Submission of Offers by Eligible Customers in Response to Voluntary and Default Releases

The discussion in this section is largely governed by proposed OATT Sections 41.18.7 and 41.18.8 of the OATT.

As explained above, by noon the Initial MTF Reservation Holder posts 100 MW of HB 15 MTF Reservations that it voluntarily offers to release at a price of \$70/MW. All Eligible Customers can see that the MTF Reservations are available to be acquired at the same time. The posted price at which the voluntarily released MTF Reservations are offered is the same for all customers, no customer-specific discounts are allowed.

The three interested Eligible Customers are aware that HB 15 Default Release MTF Reservations may be posted at 12:30 p.m., and they know that if Default Release MTF Reservations are available, the price of those reservations will be \$60/MW. So, they all wait until 12:30 to see if there will be Default Release MTF Reservations before they submit offers.

At 12:30 the MTF Provider posts 250 MW of HB15 Default Release MTF Reservations at a price of \$60/MW.

Eligible Customer #1 is the first to post an offer to acquire 200 MW of HB 15 Default Release MTF Reservations at the posted \$60/MW price. The MTF Provider programmatically confirms that Eligible Customer #1 satisfies all requirements and grants it the requested 200 MW of HB 15 Default Release MTF Reservations.

Eligible Customer #1's time-stamped offer and its acquisition of 200 MW of HB 15 Default Release MTF Reservations at a price of \$60/MW are programmatically posted on the MTF Provider OASIS on the same page where the Default Release is posted. The time-stamped offer and grant of the MTF Reservations to Eligible Customer #1 can be seen by all Eligible Customers.

Seconds later, Eligible Customer #2 submits an offer to acquire 40 MW of HB 15 Default Release MTF Reservations at the posted \$60/MW price. Because Eligible Customer #2 only has sufficient credit remaining to acquire 25 MWh of the Default Release MTF Reservations, the MTF Provider rejects Eligible Customer #2's offer, providing the reason "insufficient credit," or using similar language.

Eligible Customer #2's time-stamped offer, \$60/MW offer price, and the reason why it was rejected by the MTF Provider are programmatically posted on the MTF Provider OASIS on the same page where the Default Release is posted. Eligible Customer #2's time-stamped offer, offer price, and reason why the offer was rejected can be seen by all Eligible Customers.

There are no rules that prevent Eligible Customer #2 from reviewing the reason its offer was rejected, and submitting a new offer to acquire 25 MW (or fewer) of HB 15 Default Release MTF Reservations if it is still interested in acquiring HB 15 MTF Reservations. Eligible

Customer #2 could alternatively seek to acquire a lesser quantity of HB 15 MTF Reservations that were voluntarily released by the Initial MTF Reservation Holder at a posted \$70/MW price.

Seconds after Eligible Customer #2 submitted its offer, Eligible Customer #3 submits an offer to acquire 75 MWh of HB 15 Default Release MTF Reservations at the posted \$60/MW price. Because there are only 50 MW of HB15 MTF Reservations still available, the MTF Provider rejects Eligible Customer #3's offer, providing the reason "insufficient MTF Reservations available," or using similar language.

There are no rules that prevent Eligible Customer #3 from reviewing the reason its offer was rejected, and submitting a new offer to acquire 50 MW (or fewer) of HB 15 Default Release MTF Reservations. If Eligible Customer #3 wants to acquire more than 50 MW of HB 15 MTF Reservations, it will have to pay the \$70/MW price to acquire at least some of the MTF Reservations the Initial MTF Reservation Holder voluntarily released.

If Eligible Customer #2 and Eligible Customer #3 both submit corrected offers to acquire the Default Release MTF Reservations, first-in-time priority will determine how the remaining 50 MW of HB 15 Default Release MTF Reservations are allocated. If there are HB 15 Default Release MTF Reservations and/or voluntarily released MTF Reservations remaining after Eligible Customer #2 and #3 finish submitting their offers, the remaining Default Release MTF Reservations and/or voluntarily released MTF Reservations will continue to be posted and will remain available to be acquired by an Eligible Customer until 95 minutes before the start of HB 15. See proposed OATT Section 41.18.4(e).

85 Minutes Before HB 15

Eligible Customer #1 will have until 85 minutes before the start of HB 15 to complete e-Tags for its Import transaction and submit RTM Bids to the NYISO. The NYISO will programmatically verify that the MTF Reservation ID provided on the e-Tag as legitimate and sufficient to support the Bid MW. Following successful validation, the NYISO will include Eligible Customer #1's Import Bid in the economic evaluation it performs to arrive at a least production cost solution. Eligible Customer 1's Bid may be accepted, or rejected, in whole or in part, by the NYISO based on its economic evaluation. The fact that Eligible Customer #1 has a valid MTF Reservation² does **not** guarantee that its Import to New York will be scheduled on the MTF.³

The Initial MTF Reservation Holder will lose the ability to update its RTM MTF Import transaction Bids (including its accepted DAM Bids that have not been modified) 85 minutes

² Default Release MTF Reservations are given the same priority as all other MTF Reservations. Under the proposed OATT 41 rules, the economic Bids the NYISO evaluates determine priority. See proposed OATT Section 41.3.1.2.

³ The NYISO schedules Import transactions by economically evaluating Import Bids from External areas, without regard to the nature of the scheduling rights (physical or financial) employed in the neighboring Balancing Authority Area. The NYISO's proposed treatment of the MTF is consistent with its general practice.

before the relevant real-time scheduling hour. The NYISO will perform the same verification and economic evaluation process for the Initial MTF Reservation Holder's RTM Bids that it performed for Eligible Customer #1.

Eligible Customer #2 and Eligible Customer #3 will follow the same process for any Default Release MTF Reservations or voluntary release MTF Reservations they acquired at least 95 minutes before the start of HB 15. *See* OATT Section 41.18.6(e).

[End of illustrative example.]