

IESO Response – DR3 Triggers

(Action Item from the April 3, 2014 Demand Response Public Session)



At the April 3, 2014 Demand Response Public Session, participants asked:

Can you provide the rationale of how the IESO has the authority to bring DR3 into the market under current market rules? *The IESO is creating a resource that represents what is already operating in the market via the DR3 program. The trigger process is a component of the OPA contracts. The IESO and the OPA are working on a document to make those steps clear and will enhance transparency of DR3 activations.*

Attached for market participant reference is the procedure for dispatch of DR3 resources under revised dispatch triggers effective June 1, 2014.

DR3 Procedure

Demand Response 3 Resources in IESO Market Tools

DR3 resources will be modelled as virtual generators in the IESO market tools to allow for economic, regional dispatch of the DR3 program. DR3 Projects will be aggregated into seven (7) resources within six (6) regions, according to their Designated Settlement Area, to allow for regional activation and “Early” and “Late” participation window timeframes.

Table 1: Aggregated DR3 Resources

IESO Resource Name	Designated Settlement Area(s)	Availability Window
DR3_TORONTO_EARLY	All	12:00 p.m. to 6:00 p.m. E.P.T. throughout the year
DR3_OTTAWA_LATE	Ottawa	4:00 p.m. to 9:00 p.m. E.P.T. (October 1 to May 31) 12:00 p.m. to 9:00 p.m. E.P.T. (June 1 to September 30)
DR3_TORONTO_LATE	East, Essa, Toronto	same as above
DR3_SOUTHWEST_LATE	Georgian Bay, South Central,	same as above

	South West, Bruce	
DR3_WEST_LATE	Long Point, West	same as above
DR3_NIAGARA_LATE	Niagara	same as above
DR3_NORTHEAST_LATE	North East, North West	same as above

The MW quantity associated with these resources will be based on the total monthly Contracted MW of the aggregated Projects in each region and the price will be set to the active price trigger established by the OPA.

Any written notice of a Planned Non-Performance Event received by the IESO for a given Settlement Account will be reflected in the MW quantity for the impacted resource for the day to which the Planned Non-Performance Event relates.

Standby Notifications and Confirmations

The IESO market tools will determine pre-dispatch schedules and shadow prices for each resource in Table 1 above.

A Fixed Standby Notification will be sent to all of the Participants with Projects within the Designated Settlement Areas represented by a resource whose shadow price exceeds the price trigger established by the OPA for at least 4 consecutive hours during the Hours of Availability. Pre-dispatch shadow prices are public, updated with each run of pre-dispatch and are published at <http://reports.ieso.ca/public/PredispShadowPrices>.

A Standby Notification may also be issued when a resource has not met the price trigger requirements under the following conditions:

- If it is expected that DR3 resources will be required for reliability purposes to avoid entering an Emergency or High Risk Operating State, or facilitate the return of the IESO-controlled grid to a Normal Operating State. The conditions of such a reliability-based Standby Notification are described in the Emergency Operating State Control Action List in Appendix E of Market Manual 7.4 at http://ieso.ca/Documents/systemOps/so_GridOpPolicies.pdf. If the condition is expected to persist for longer than four hours, an Open Standby Notification will be issued. If the condition is expected to persist for four hours or less, a Fixed Standby Notification will be issued.
- If, on a local or regional part of the integrated power system and under non-emergency and non High Risk conditions, there are operating problems (such as equipment overloads and voltage decline or instability) and, in the opinion of the IESO, other corrective actions available to the IESO may not be appropriate or sufficient. If the condition is expected to persist for longer than four hours, an Open Standby Notification will be issued. If the condition is expected to persist for four hours or less, a Fixed Standby Notification will be issued.

In addition to the Standby Notifications sent to DR3 Participants, notification decisions will be communicated to the marketplace through a System Status Report (SSR). SSRs can be found at <http://reports.ieso.ca/public/SSR/>.

The IESO will process the Day Ahead and Day at Hand Confirmations for the settlement accounts and incorporate any reductions into the MW quantity associated with the impacted resource in the IESO market tools.

If no Standby Notifications have been sent by the timelines specified in the DR3 Program Rules, the IESO will remove the resources from consideration in the pre-dispatch runs for the remainder of that day.

Day Ahead

Day Ahead Standby Notifications will be issued to Participants where the notification criteria described above have been met for the next day in either the HE (Hour Ending) 16¹ or HE 17 pre-dispatch runs.

Confirmation of Confirmed MW from DR3 Participants will be due by 18:00 EST for Day Ahead Standby Notifications.

Day at Hand

Day at Hand Standby Notifications will be issued to Participants where the notification criteria described above for Day Ahead have been met for the current day in any of the HE 1 to 7 pre-dispatch runs.

Confirmation of Confirmed MW by DR3 Participants will be due by 8:00 EST for Day at Hand Standby Notifications.

Activation Notices

In order to receive an Activation Notice, a DR3 Participant must have received a Standby Notification according to the timelines specified in the DR3 Program Rules in either the Day Ahead or Day at Hand timeframe.

For each run of pre-dispatch that precedes a potential Activation Period by at least 3 hours, the IESO will assess the scheduling of DR3 resources by the IESO market tools. If, in that 3-hour ahead pre-dispatch run, DR3 resources have not met the Activation criteria, DR3 resources will be removed from the IESO market tools.

Example

If, in the pre-dispatch run in HE 10, the shadow price of any DR3 resource is less than \$200/MWh in HE 13, that DR3 resource will be removed from the IESO market tools for HE 13 to avoid scheduling in future

¹ HE 16 refers to the hour ending at 16:00 EST.

runs of pre-dispatch.

This rolling assessment of the 3-hour ahead pre-dispatch runs will be conducted until an Activation Notice is sent or the timelines in the DR3 Program Rules can no longer be met, at which time DR3 resources will be removed from the IESO market tools for the remainder of the Hours of Availability for that day.

An Activation Notice will be sent to all of the Participants with Projects within the Designated Settlement Areas represented by a resource whose shadow price exceeds the price trigger established by the OPA for at least 4 consecutive hours during the Hours of Availability. If a DR3 resource is scheduled for more than 4 consecutive hours, then the best 4 hours, based on system need and determined by the IESO, will be chosen for Activation.

An Activation Notice may also be issued when a resource has not met the price trigger requirements under the following conditions:

- If it is expected that DR3 resources will be required for reliability purposes to avoid entering an Emergency or High Risk Operating State, or facilitate the return of the IESO-controlled grid to a Normal Operating State. The conditions of such a reliability-based Standby Notification are described in the Emergency Operating State Control Action List in Appendix E of Market Manual 7.4 at http://ieso.ca/Documents/systemOps/so_GridOpPolicies.pdf.
- If, on a local or regional part of the integrated power system and under non-emergency and non High Risk conditions, there are operating problems (such as equipment overloads and voltage decline or instability) and, in the opinion of the IESO, other corrective actions available to the IESO may not be appropriate or sufficient.

When a DR3 Participant has received an Open Standby Notification and has provided a Confirmation that it is able to deliver Confirmed MW that exceeds its Monthly Contracted MW and/or to Curtail for Confirmed Hours that exceed 4 consecutive hours but that are within the Hours of Availability, the Activation Notice may reflect both the Confirmed MW and Confirmed Hours.

Once Activated, the DR3 resources will be removed from the IESO market tools and the IESO will reduce the demand forecast for the Activation period by the quantity of DR3 activated. In addition to the Activation Notices sent to DR3 Participants, Activation decisions will be communicated to the marketplace through a System Status Report (SSR). SSRs can be found at <http://reports.ieso.ca/public/SSR/>.