

# Market Renewal FACT SHEET

## Operating Reserve Reference Price

#7

The single schedule market (SSM) is one initiative in the Market Renewal's Energy work stream. The IESO already manages Operating Reserves (OR) products in the current two schedule market. The operation of OR markets will change under an SSM and may be allowed to vary regionally rather than having a single provincial price.

### What is it?

Operating Reserves are standby capacity that can be used to respond to short-term changes in system generating requirements. The IESO procures three types of OR<sup>1</sup>:

- 10-minute spinning (10S) – provided by units that are already online and can respond within 10 minutes
- 10-minute non-spinning (10N) – provided by online or offline units that can respond within 10 minutes
- 30-minute reserves (30R) – provided by online or offline units that can respond within 30 minutes

The energy and OR markets are co-optimized by the IESO. The two are scheduled at the same time so that any lost profits associated with being scheduled to produce less energy to allow operating reserve to be provided are included in the clearing price of operating reserve. In the IESO's current two schedule market, each type of OR has a single market price similar to the Market Clearing Price for energy.

In an SSM, OR prices can vary by region.<sup>2</sup> An important difference between LMPs and OR prices in a single schedule market is that LMPs can vary at each point on the system while OR prices only vary regionally. In each OR region, there are three separate OR prices for each of the

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<sup>1</sup> The three OR products are listed in order of quality meaning that 10S can be provided by a smaller set of resources than 10N which can be provided by smaller set of resources than 30R. As a result, OR prices are highest for 10S and lowest for 30R.

<sup>2</sup> The regions are defined by determining where transmission constraints may threaten reliability unless there is local OR procured.

three types of reserves. Each price is composed of two components, OR Reference Price and OR Congestion Price.<sup>3</sup>

The OR Reference Price represents the cost of adding 1 MW of a specific reserve (i.e., 10S, 10N, or 30R) to the province wide reserve requirement. This, combined with the OR Congestion Price, results in a regional OR Price.

### **Why is it important?**

OR is generally needed when a generator or transmission line is down unexpectedly. The IESO must meet requirements for each type of reserve to maintain reliability for the system while transmission constraints may impact the ability to transmit reserves from one area to another. Like the Energy Reference Price, the OR Reference Price for each OR product is needed to calculate the regional OR prices for each type of OR.

### **More information**

For more information, please see the Market Renewal Fact Sheets on Energy Reference Price (#2) and Operating Reserve Price - Congestion Component (#8).

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<sup>3</sup> OR Price = OR Reference Price + OR Congestion Price