

## Determining the Wholesale Market Price for Electricity

At the heart of Alberta's electric system is the AESO's System Coordination Centre (SCC), which is staffed 24 hours a day, seven days a week by a team of skilled system controllers. The SCC plays a central role in managing the real-time operation of Alberta's electric system and facilitating the operation of Alberta's wholesale electricity market.

A fundamental principle of the electricity system is that supply and demand must be perfectly matched at all times. The Energy Management System (EMS) is used by system controllers to maintain this balance. EMS continually collects data from every generator connected to the electric system, enabling the system controller to monitor the status of the provincial electric system and to dispatch the supply of electricity to meet demand as required.

The SCC is also home to a second critical information system, the Energy Trading System (ETS). The wholesale electricity market in Alberta operates much like a stock exchange, matching offers from market participants who wish to sell electricity with bids from market participants who wish to buy it.

### HOW IS THE SUPPLY AND DEMAND FOR ELECTRICITY MANAGED?

Market participants who wish to buy or sell electricity submit several supply offers and demand bids into the market every hour, 24 hours a day.

These supply offers and demand bids are sorted from the lowest to highest price for each hour of the day into a list called a "merit order." The system controller uses the merit order to dispatch electricity, starting at the lowest price supply offers and moving up to the highest priced supply offers. In this way, the AESO ensures that Alberta's overall electricity needs are met by the lowest cost option whenever possible.

Typically, the demand for electricity is high in the morning as Albertans prepare to start their day and declines slightly to a steady level throughout the day. A second increase occurs in the early evening hours as Albertans return from work or school, placing more demand on the system through the use of home appliances and lighting. Demand then decreases to a lower level throughout the night. Demand shifts with the season as well, as cold weather increases the demand for electricity required to run our heaters, furnaces and lighting. The system controllers constantly monitor these fluctuations in demand, matching them with supply by dispatching offers from the merit order.

## **HOW IS THE POOL PRICE SET?**

Every minute, the last group of generation offers submitted from the market is dispatched by the system controller and this then sets the System Marginal Price (SMP). Each hour, the pool price is calculated by averaging all 60 of these one-minute SMPs. The pool price is then posted to the AESO website and is used in financial settlement to calculate payments to suppliers and charges to wholesale consumers.

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