

RTO Daily Reports Explained

Regional Transmission Organizations (RTO) post on the Internet voluminous data about their energy markets on a daily, hourly and 5 minute basis. FERC has developed one-page daily reports to get a picture of yesterday's prices and loads in the RTO energy markets. (PJM's chart is for the day before yesterday.) The following explains what is included in daily reports for CAISO, MISO, PJM, NYISO, ISO-NE.

Day-Ahead Market

In a day-ahead market, suppliers bid to be committed to produce electricity for the next day. Load serving entities submit their load projections for the next day. The day-ahead market software uses this information and electric system constraints to produce a least-cost generating unit commitment. Suppliers generally receive the bulk of their energy market revenues from the day-ahead market.

An hourly summary of the day-ahead market results is presented in tabular and graphical form on the top half of the RTO Daily Report. The light green shaded area and the bottom row of the table show day-ahead forecasted load or the load that cleared in the day-ahead model. The colored lines and the other rows in the table show hourly day-ahead prices for selected zones or hubs. Separation between the colored lines indicates transmission congestion between zones or hubs.

The "1" column header in the table means hour ending 1 AM. The reporting day starts with the hour between midnight and 1 AM and ends with "24" which is the hour between 11 PM and midnight. The price cells in the table are color coded: light blue for prices less than and equal to zero, yellow for prices greater than or equal to \$100/MWh and pink for prices greater than or equal to \$200/MWh. An average daily price and average on-peak price is provided for each zone or hub to the right of the table.

Real-Time Market

In a real-time market, suppliers bid to provide energy for the next hour. The real-time market software produces a least-cost economic dispatch of generation to fill incremental needs for the next hour relative to the quantity scheduled in the day-ahead market.

An hourly summary of the real-time market results is presented in tabular and graphical form on the bottom half of the RTO Daily Report. The dotted black line shows the RTO's load forecast around the time for bidding into the day-ahead market. The tan shaded area shows the actual system load. The difference between the actual load and the load forecast is provided in the last row of the table. When actual load exceeds the forecast, the system may not have enough committed supply, which can lead to higher prices.

The colored lines and the other rows in the table show hourly day-ahead prices for selected zones or hubs. Separation between the colored lines indicates transmission congestion between zones or hubs.