Supply Adequacy & Market Supply Cushion Metadata

Report Category: Current

METADATA

Supply Adequacy

Data Description

This report provides information about short term supply adequacy in Alberta. Supply adequacy evaluates the ability of the system to serve in-province demand. In general, supply adequacy increases as generation capability increases, and decreases as system load increases. The Supply Adequacy report forecasts the short-term ability of the AESO to maintain reserve margins and includes forecasts of available out-of-market actions allowed during a Grid Alert. The Supply Adequacy forecast report is required by Section 202.6 subsection 2 of the AESO rules.

Please refer to Information Document, ID 2012-006R, Short term Adequacy and Supply Shortfall, for more information.

Data Attribute/Dimension				
List of Attributes	**Data/Types**	**Description**	**Units**	**Comments**
Date	Date & Day	Row for each of current Day + Next 6 (Days)	mm/dd/yyyy day	
Hour Ending (HE) - Column	Integer / String	Column for each hour-ending HE1- HE24, plus HE2X on day of time change from MDT to MST.	Integer (1-24), String (2X)	

Business Rules/ Retrieval

- This is classified as a critical report and is required to be investigated immediately (day or night) if report is not accurate/available.
- Value of 0-4 for each data cell (see legend below for meaning of values)
- Colour coding of each data cell based on cell value (see the legend below for meaning of colours)

Legend:

4 = greater than 400 MW of supply available
3 = 200 to 400 MW of supply available
2 = 0 to 200 MW of supply available
1 = unable to maintain 6% reserve requirements
0 = unable to maintain 3% reserve requirements.

Ownership/Custodian

- info@aeso.ca

Availability

- The information is updated approximately every five minutes for the current hour and for the next 71 hours, for a total of 72 hours. It is updated once per hour for the remainder of the 7-day report.
- Available in HTML

Data Quality

- Unique – Yes
- Accurate - Yes
- Complete - Yes
- Consistent - Yes
- Timeliness - Yes

References

- Section 202.2 of the ISO rules, Short-Term Adequacy and Supply Shortfall
- Information Document Adequacy, supply shortfall and Energy Emergency Alerts ID#2012-006R - https://www.aeso.ca/assets/Information-Documents/2012-006R-Adequacy-and-Supply-Shortfall-2022-12-20.pdf

Legal

- Relevant to regulatory constraints: Yes
- Section 202.2 of the ISO rules, Short-Term Adequacy and Supply Shortfall.

Market Supply Cushion

Data Description

This report provides a forecast for the short-term Market Supply Cushion in Alberta. The hourly supply cushion represents the energy in the merit order that remains available for dispatch after system load is served. Large supply cushions may contribute to reliability because more energy remains available to respond to unplanned outages or increases in load. More available supply (eg. generation, net imports) increases the supply cushion, while higher load or unplanned outages will lower it. Supply Cushion falls to zero when all available energy in the merit order has been dispatched to run.

The Market Supply Cushion report is provided for informational purposes only.

Data Attribute/Dimension				
List of Attributes	**Data/Types**	**Description**	**Units**	**Comments**
Date	Date & Day	Row for each of current Day + Next 6 (Days)	mm/dd/yyyy day	
Hour Ending (HE) - Column	Integer / String	Column for each hour-ending HE1- HE24, plus HE2X on day of time change from MDT to MST.	Integer (1-24), String (2X)	

Methodology

The Market Supply Cushion uses a subset of the variables used in the Supply Adequacy report. As a result, it is calculated at the same frequency as the existing report. It also replaces the use of available transfer capability on interties with a forecast of net imports/exports. Below is the methodology used to calculate the Market Supply Cushion report:

(a) available capability from all source assets, excluding wind and solar aggregated facilities and import assets, in Alberta with a maximum capability equal to or greater than 5 MW with an initial start-up time less than or equal to one hour or with a submitted start time at or before the period being assessed;

plus

(b) estimated output from wind and solar aggregated facilities;

plus

(c) estimated on-site generation that supplies behind-the-fence load;

minus

(d) minimum of forecasted net interchange or zero, where imports are a negative value and exports are priced at $999.99 and curtailed at the top of the merit order;

minus

(e) the hourly forecast of Alberta Internal Load;

minus

(f) the AESO's estimated contingency reserve requirement that will be supplied by generators;

minus

(g) estimated constrained down generation.

Business Rules/ Retrieval

- Value of 0-6 for each data cell (see the legend below for meaning of values)
- Colour coding of each data cell based on cell value (see the legend below for meaning of colours)

Legend:

6	= above 1000 MW of market supply cushion
5	= above 800 MW up to 1000 MW of market supply cushion
4	= above 600 MW up to 800 MW of market supply cushion
3	= above 400 MW up to 600 MW of market supply cushion
2	= above 200 MW up to 400 MW of market supply cushion
1	= above 0 MW up to 200 MW of market supply cushion
0	= 0 MW or less of market supply cushion

Ownership/Custodian

manalysis@aeso.ca

Data Quality

- Unique – Yes
- Accurate - Yes
- Complete - Yes
- Consistent - Yes
- Timeliness - Yes

Availability

- The information is updated approximately every five minutes for the current hour and for the next 71 hours, for a total of 72 hours. It is updated once per hour for the remainder of the 7-day report.
- Available in HTML

Legal

- Relevant to regulatory constraints: No