

RC_2017_02: Implementation of 30-Minute Balancing Gate Closure

Market Advisory Committee Meeting 1 May 2017

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Reasons for change of Balancing Gate Closure (2h → max 30min)

- Forecasting errors (load and intermittent generation) between 2h Gate Closure* and Dispatch (14/01/2017 – 10/04/2017):

Maximum deviations between Forecast Load and Dispatch:

- The Load was underestimated by up to 294MW; and
- Overestimated by up to 428MW.

The average deviation was +51.1MW over all Trading Interval in which the Load was higher than the forecast and -70.7MW over all Trading Interval in which the Load was lower than the forecast.

* The last available Load and Price forecast before Gate Closure is determined 2.5h before actual dispatch. This is the most accurate data Participants can use to determine their Balancing Submissions.

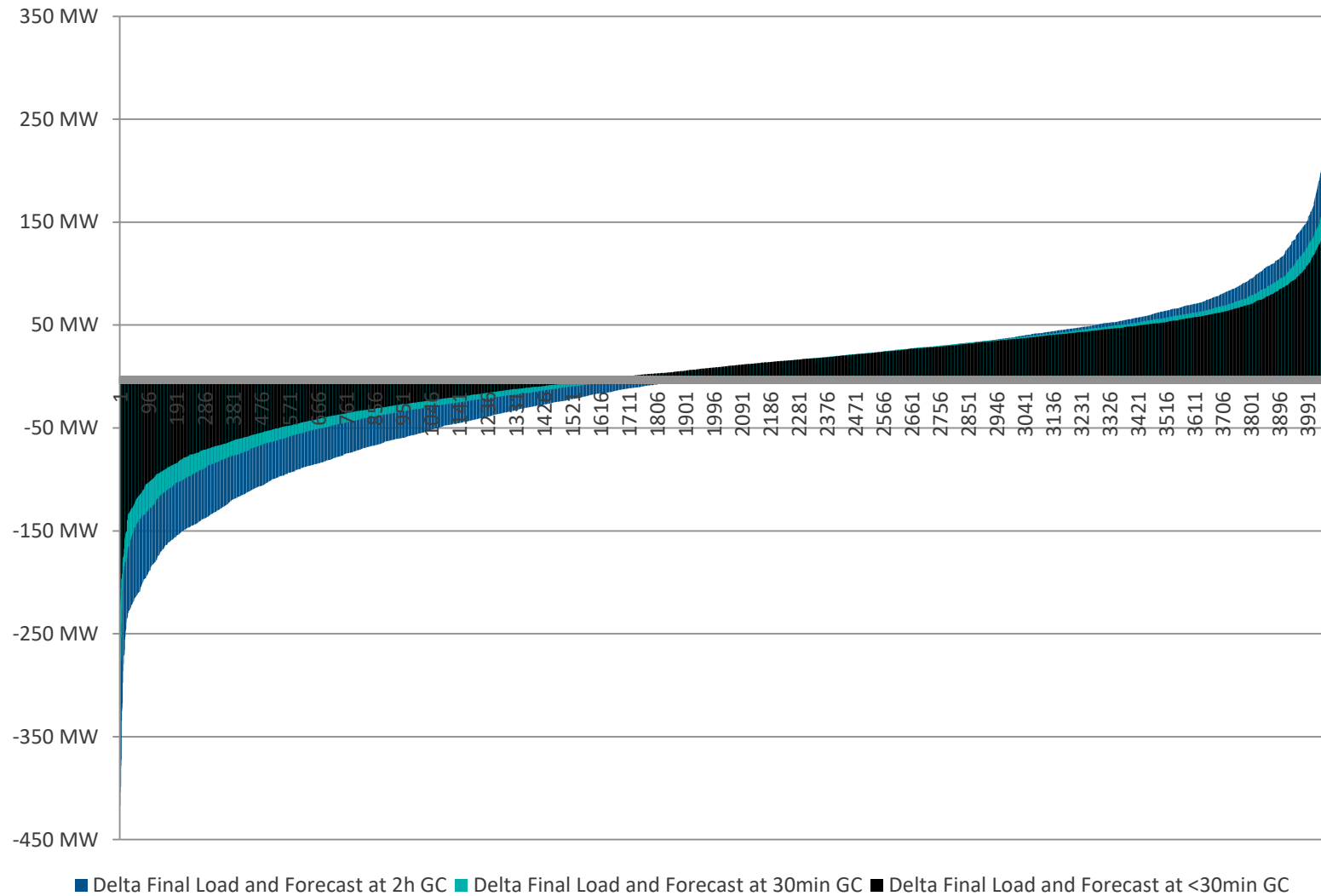
Analysis: Varying Gate Closure durations and impact on Load and Balancing Price forecasts

The analysis supporting this rule change compares the accuracy of the Load and Balancing Price forecasts compared with the final Load and Balancing Price.

From an operational point of view this means:

- 2h GC: The most accurate data available is determined 2.5h before dispatch;
- 30min GC: The most accurate data available is determined 1h before dispatch; and
- <30min GC: The most accurate data available is determined 30mins before dispatch.

Delta Final Load vs. Load Forecast at 2h, 30min and <30min Gate Closure for period 14/01/17 -10/04/2017



neg. value = Load was lower than Forecast
pos. value = Load was higher than Forecast

	2h GC	30min GC	<30min GC
neg. Average	-70.7	-48.9	-40.6
pos. Average	51.1	42.7	38.1
MIN	-427.6	-294.8	-252.5
MAX	294.2	225.7	192.9

Effect of Forecasting Error on Balancing Price

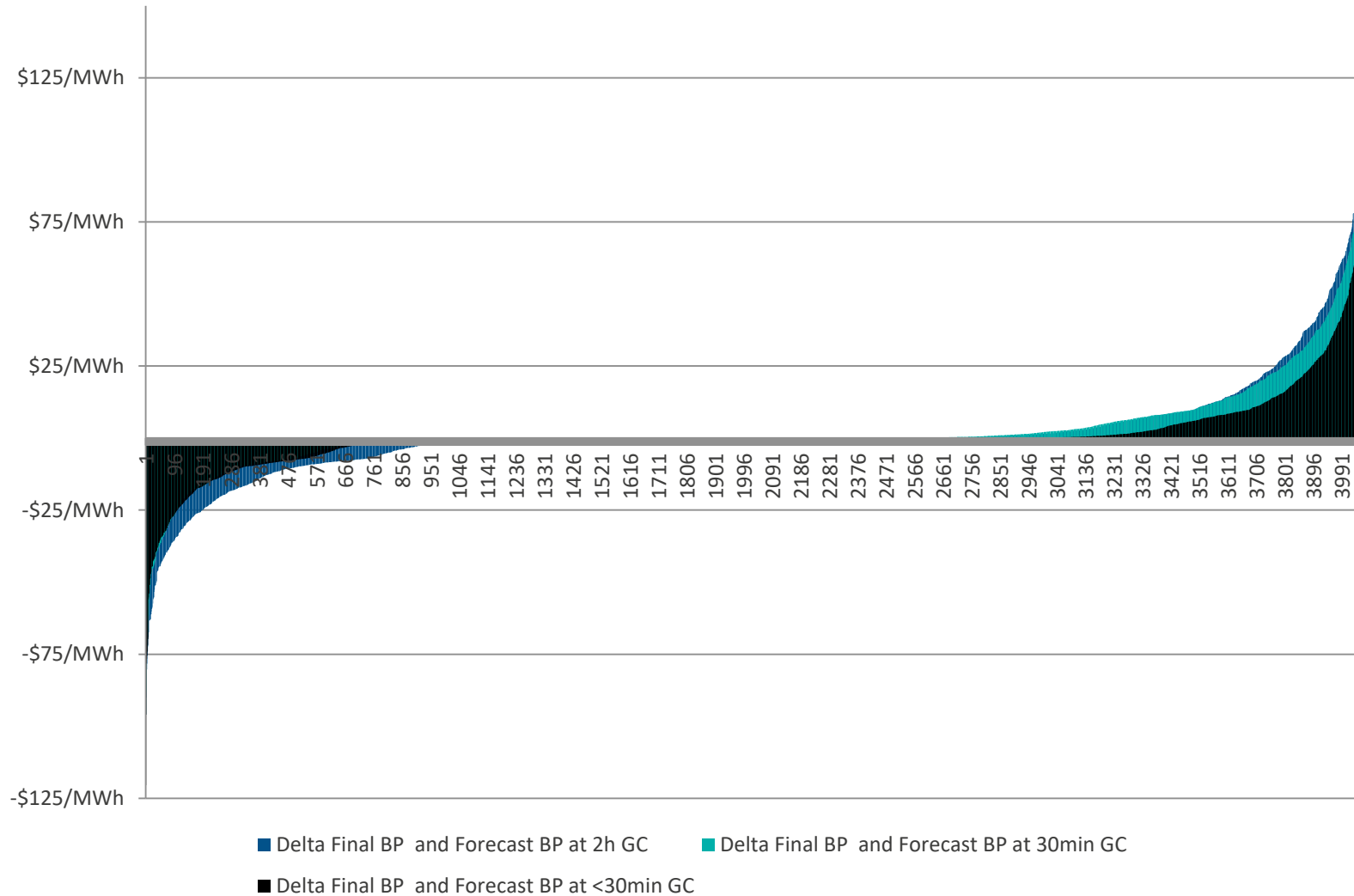
- Changes in Balancing Price caused by Forecasting errors between 2h Gate Closure and Dispatch (14/01/2017 – 10/04/2017):

Maximum deviations between Forecast and Final Balancing Price:

- The Final Price was up to \$148/MWh higher than the forecast; and
- up to \$107/MWh lower than the forecast.

The average deviation was +\$15.9/MWh over all Trading Interval in which the Final Balancing Price was higher than the forecast and -\$12.5/MWh over all Trading Interval in which the Final Balancing Price was lower than the forecast.

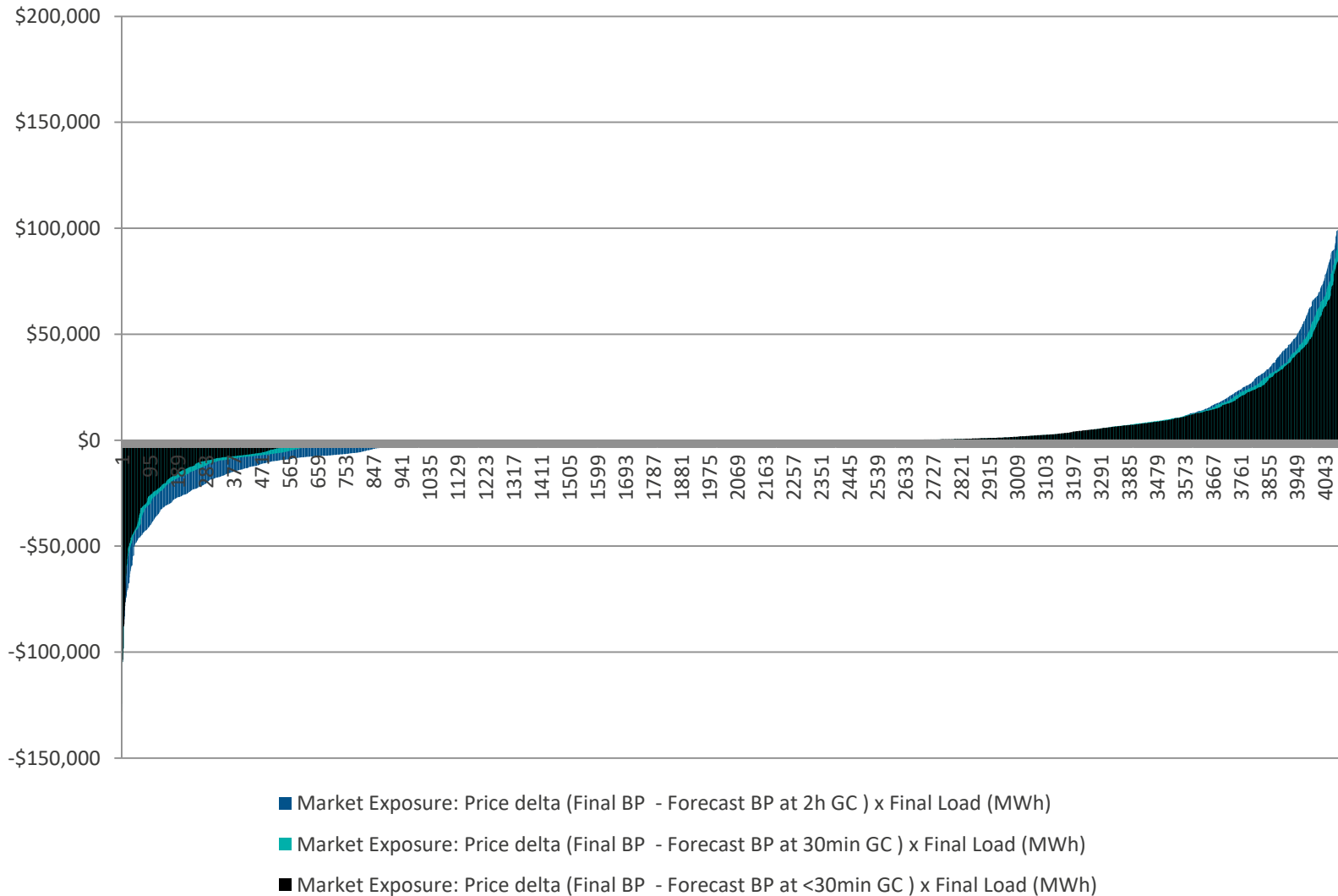
Delta Final BP vs. Forecast BP at 2h, 30min and <30min Gate Closure for period 14/01/17 -10/04/2017



neg. value = Final BP was lower than Forecast BP
pos. value = Final BP was higher than Forecast BP

	2h GC	30min GC	<30min GC
neg. Average	-12.5	-10.3	9.9
pos. Average	15.9	13.9	12.9
MIN	-107.3	-96.0	120.4
MAX	147.8	147.8	147.8

Comparison of Market Impact 2h, 30min and <30min Gate Closure for period 14/01/17 -10/04/2017



Assumption:
Gross Settlement of dispatched energy via Balancing Market

neg. value = Settlement amount is lower due to forecasting error
pos. value = Settlement amount is higher due to forecasting error

Comparison of Market Impact 2h, 30min and <30min Gate Closure for period 14/01/17 -10/04/2017

86 Days	2h GC	30min GC	<30min GC	Delta 2h & 30min GC
Total Gross Settlement Reduction	-17,093,153	-11,126,584	-9,639,732	5,966,569
Total Gross Settlement Increase	27,692,218	25,656,592	24,156,230	2,035,626
Average Reduction per Interval	-13,544	-11,494	-11,093	2,050
Average Increase per Interval	19,668	16,879	15,475	2,788
Extrapolated to 12 months	2h GC	30min GC	<30min GC	Delta 2h & 30min GC
Total Gross Settlement Reduction	-72,546,523	-47,223,293	-40,912,816	25,323,229
Total Gross Settlement Increase	117,530,924	108,891,348	102,523,533	8,639,576

Assumption:
Gross Settlement of
dispatched energy via
Balancing Market

neg. value =
Settlement amount is
lower due to
forecasting error
pos. value =
Settlement amount is
higher due to
forecasting error