

Pre-Dispatch estimates related to the FCFP

10:30-11:30 AM AEDT
4 Sep 2023



We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture.

We pay respect to their Elders past, present and emerging.

Agenda

1. Welcome and introductions
2. Workshop purpose
3. Background
 - The FPP process
 - Reg FCAS estimates currently provided
4. Estimating FPP outcomes through persistence forecasting
5. Discussion

1. Welcome and introductions

2. Workshop purpose

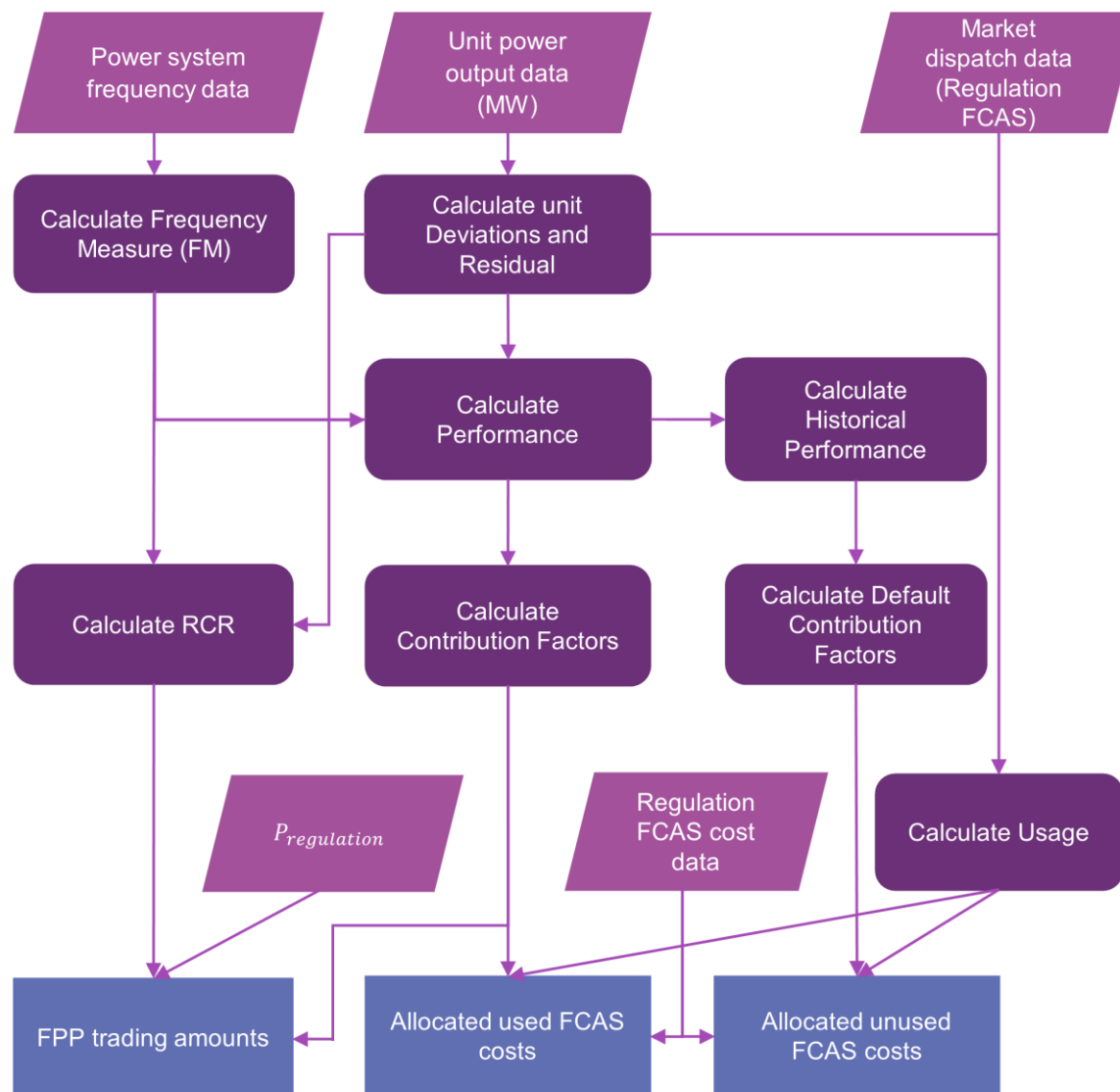
Workshop purpose

To explore the value to participants of AEMO estimating FPP outcomes in the pre-dispatch and P5 minute timeframe.

3. Background

- FPP process
- Current forecasts of Reg FCAS

Reminder: High-level FCFP process



Current P5min and Pre-Dispatch (PD) information

AEMO currently publishes:

- P5min information every five minutes, for each trading interval in the next hour; and
- PD information every half hour, on the half hour, for each 30-minute period up to and including the last 30-minute period of the last trading day for which bid band prices have closed.

Current Reg FCAS information published in PD timeframes

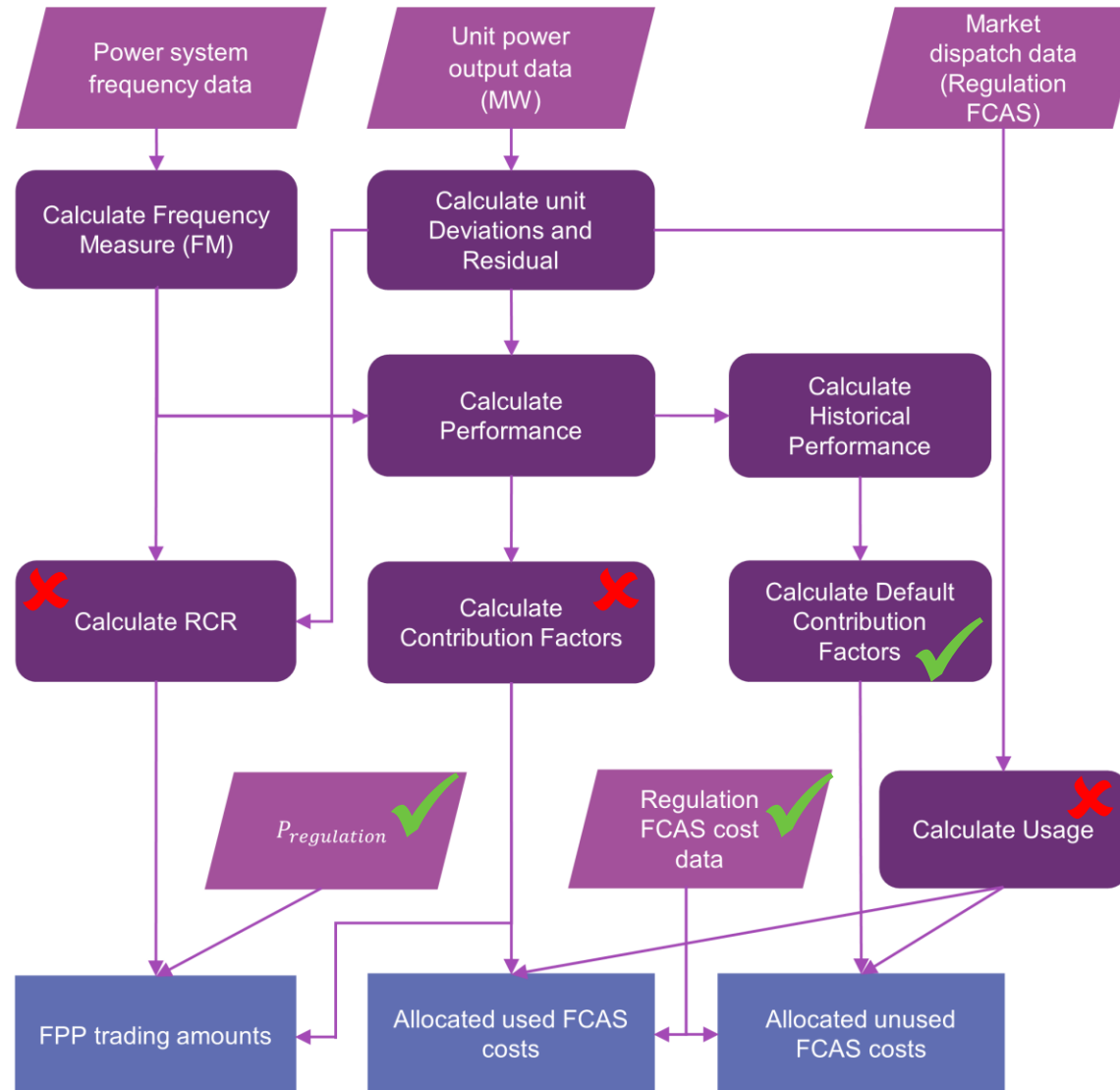
- Two tables: PREDISPATCH_FCAS_REQ and P5MIN_FCAS_REQUIREMENT
- These tables include the estimated cost (adjusted cost), price (marginal value), CMPF, CRMPF, and constraint recovery rates for each Reg FCAS constraint.
- Recovery rates for CMPF are in \$ per 1 MPF of 1 and for the CRMPF are in \$ per 1 MWh of residual load.
- No data particular to each participant is published.

4. Estimating FPP outcomes through persistence forecasts

Potential benefits of PD FPP estimates

- Assessing exposure to potential liabilities related to FPPs.
- Identifying potential financial benefits from providing helpful frequency response.
- Enabling adjustments to market offers based on predicted cost/benefit from FPP.

Available inputs



Limitations in achieving accurate PD estimates

- FPP calculations, including RCR, Performance, and Usage, require 4-second unit deviation data (unpredictable).
- The Performance and RCR depend on the Frequency Measure, thus 4-second frequency deviations (unpredictable).
- FPPs are determined with respect to each (binding) Reg FCAS requirement based on the Reg FCAS price of the requirement.

Proposed method

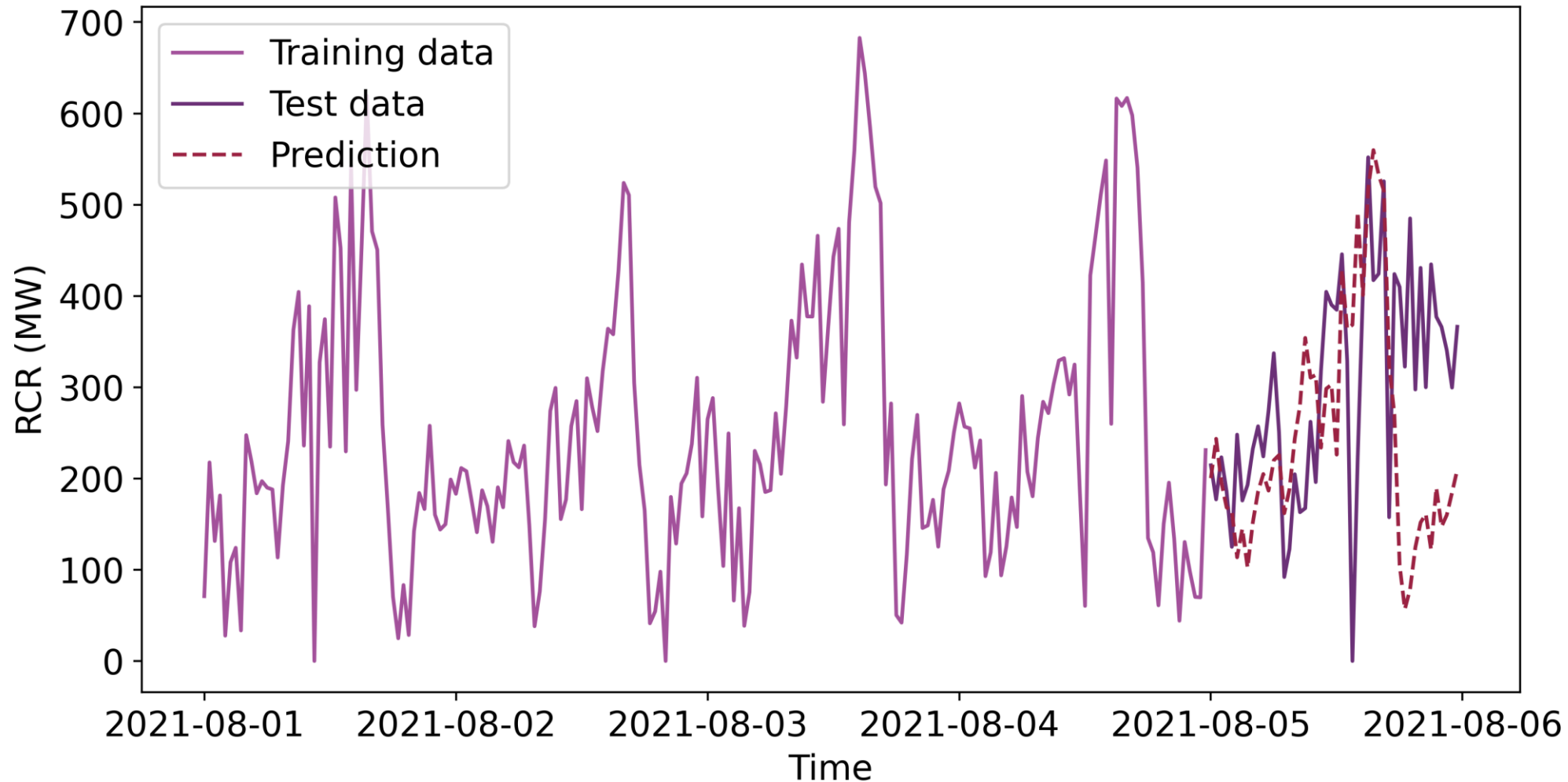
P5min:

Estimate the RCR, Usage, and Performance values based on their average of past 12 trading intervals using a simple mean method

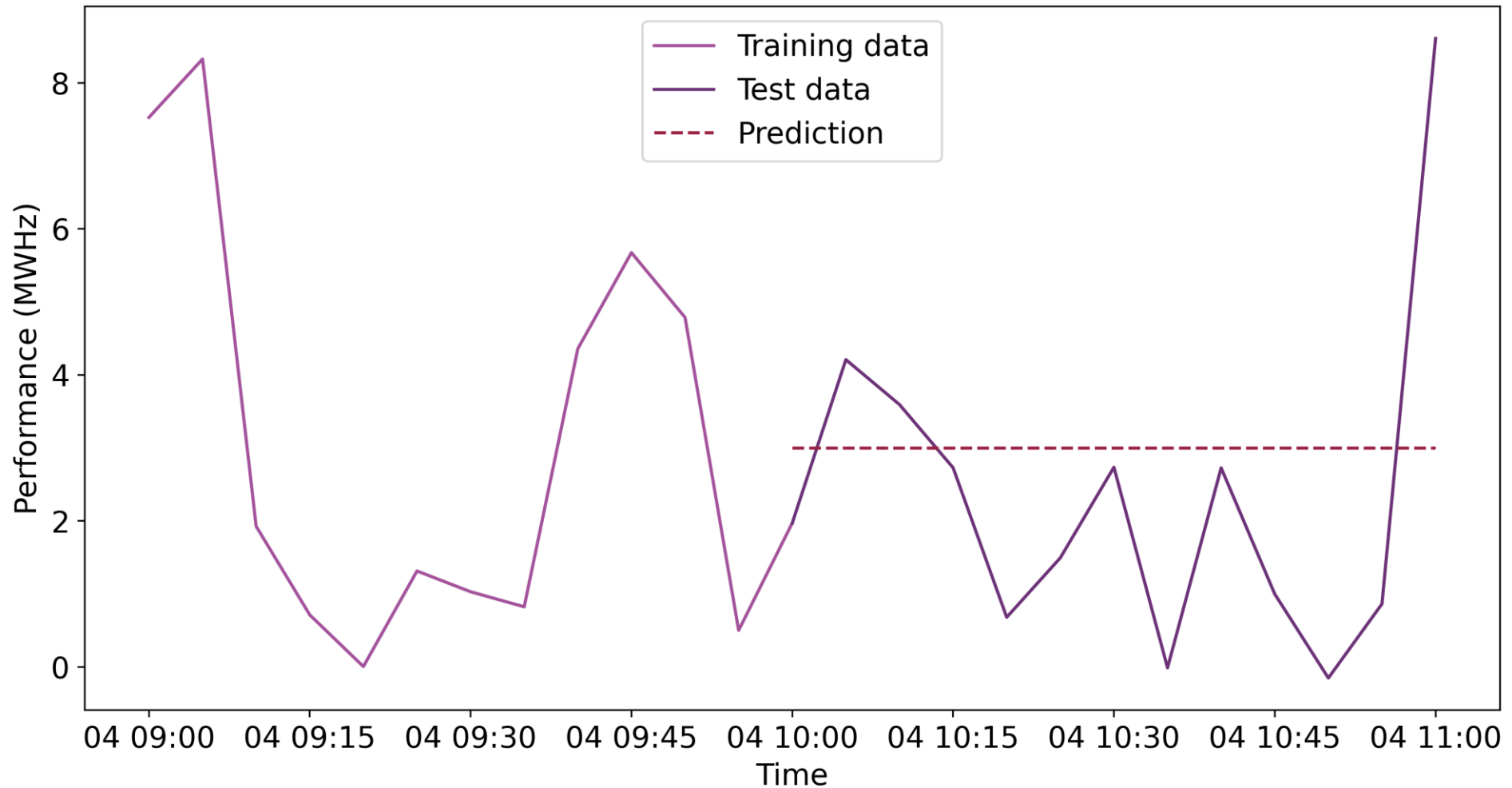
Pre-Dispatch:

Estimate the RCR, Usage, and Performance values based on their average of the past 7 days using a daily mean method

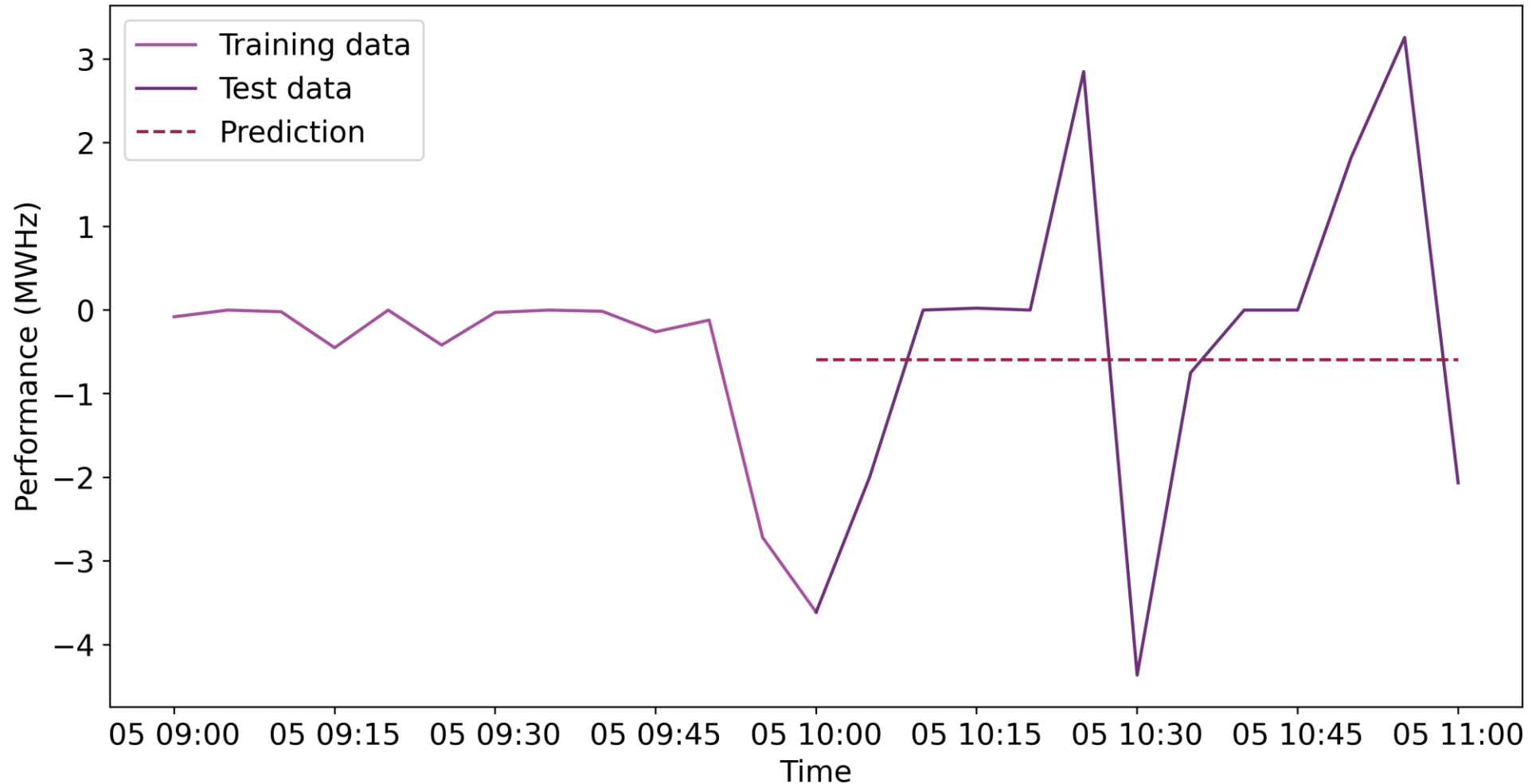
Proposed method: PD example of a Mainland Raise requirement



Proposed method: P5min example of a thermal plant's Performance



Proposed method: P5min example of a wind farm's Performance



Limitations of the method

- Estimates will not be particularly accurate.
- RCR and Usage estimations is higher than those of Performance.
- Performance values are the inherently unpredictable due to the uncertain nature of deviations and frequency.
- Accuracy would be significantly compromised if the conditions of lookahead horizon is different to the historical data.

5. Discussion

What would the value be to participants of AEMO estimating FPP outcomes in the pre-dispatch and P5 minute timeframe, as outlined?

Are there other ways that similar estimates could be produced?



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For more information visit

aemo.com.au