

## Fulcrum3D Wind Forecasting for the NEM LESSONS LEARNT REPORT #1

### Funding Agreement Details

<b>Recipient Name</b>	Fulcrum3D
<b>Project Commencement Date</b>	12 March 2019
<b>Project Completion Date</b>	31 August 2020
<b>Project Partners / Participants / Sub-contractors</b>	<i>Pacific Hydro</i>
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<b>Reporting Period</b>	April to October 2019

## LESSONS LEARNT

### Key Lesson/s

1. Connection to the MP5F API took longer than expected because:
  - Formal communications with AEMO must be via the DUID participant and not with independent forecasters. The participants have not necessarily followed the MP5F development as closely as the forecasters and are having to learn it now.
  - The API connection protocol appears to have changed since we set up the Kidston API.
2. The Taralga model continues to be particularly interesting because of the terrain complexity.
3. Early analysis indicates that higher dimensional models of SCADA data alone perform better than AWEFS. Early data from the upstream Clements Gap Sodar gives confidence that upstream sensing will improve this further.

### Implications for Future Projects

This project still has 11 months to run but at this stage it seems that future projects could consider:

- How to assist the development of even more accurate forecasting.
- How accurate forecasting can further assist renewables integration and whether this benefit is greater than the forecasting cost. Should the market incentivise forecasting if it delivers significant benefits?

### Knowledge Gaps Identified

1. Confusion around the procedure for connecting to the MP5F API. We support the suggestion of published worked examples outlining how to connect.
2. Dealing with extreme wind speed events is non-trivial.