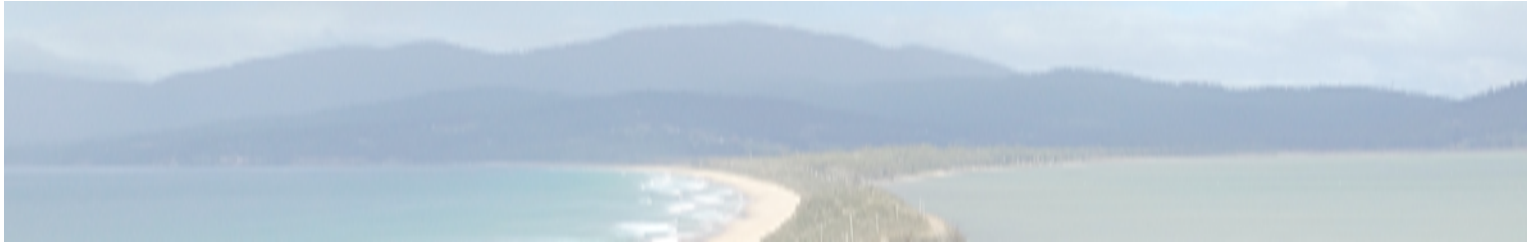


# Progress report for Milestone 4: Intended for a general audience

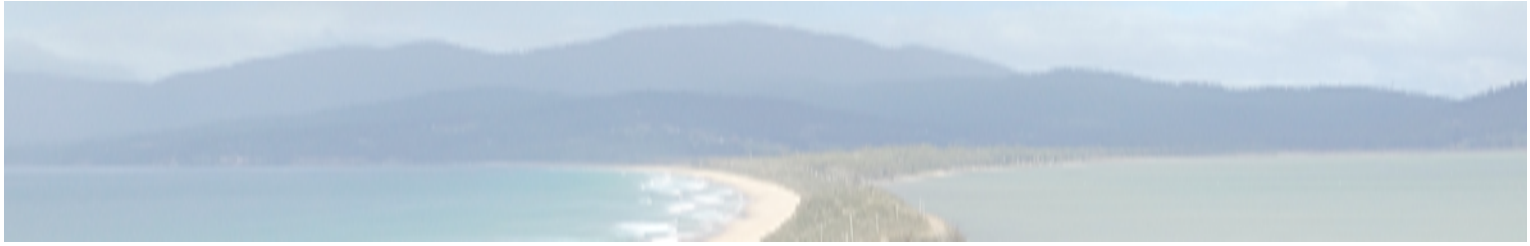
The most significant milestone for the project in the last 6 months is that the ANU's Network Aware Coordination technology (NAC) has now being successfully used to coordinate all available island batteries to reduce load during a "controlled" (i.e. artificial) island peak period. Having achieved this outcome, the team is now proceeding to trials of NAC for the first major (genuine) peak period. Over the course of the project, the NAC will be tested on both genuine peaks periods (up to 7 periods), and artificial peaks to ensure that the project team can gather all the necessary data to test the NAC properly.

The project team has also made good progress on developing other important parts of the project such as working out the different payment types that we will trial (in order to understand participants' preferences) and the social science research which aims to understand how trial participants are relating to the CONSORT technology.

A key component to trialing how NAC works in the 'real world' is understanding how best to compensate prosumers for their battery discharge. In terms of exploring different payment types, the project team has decided to explore two payments: the Energy Reserve payment and an Energy Use payment. Under the Energy Reserve payment, CONSORT pays customers based on how much of a customer's battery capacity we expect to use, and are advised in advance of the peak event. In this sense, the customer is being paid to set aside their battery for potential use by the network. The second payment type, the Energy Use payment is based on how much energy is actually used from the battery to provide the network with support, and customers are advised after the event. We are interested to see what trial participants prefer in terms of being paid for their battery to support the network.

The team also undertook some technical analysis to see how the batteries performed without the NAC (ie as a baseload). We found that the baseline network support functioned well (although with some minor issues). We successfully reduced the island load on all occasions, once some fine tuning was completed. We did confirm what we already suspected: that the manual dispatch method (ie a TasNetworks operator asking the batteries to be dispatched manually) is inefficient mostly due to the fact that in this method there is no load forecasting. The NAC platform will improve this performance, by predicting when the peak will occur and how large it will be, thereby producing the best response from the available batteries. Importantly, we found that the communications from 'the network' to the batteries were generally reliable. On average 86-90% of systems responded to events.

The social science team have completed all the pre-installation interviews and all (minus 4) post-installation interviews. The data collected so far has been extensive and extremely rich,



thanks to the active and thoughtful inputs of trial participants. We have uncovered many important themes to further analyse. In our technical report we focus on four thematic areas: 1) Installation processes; 2) The support effect of the trial (‘social bug fixing’); 3 Reliability; and 4) The role of householder emotions. Analysis of the social science findings is ongoing and work is also currently underway to prepare for the next round of social science data collection (focus groups, energy diary and interviews).

Over the next 6 months we will continue to test the NAC on real peaks. Participants will get to see what different payments look like and there will be further social science activities to continue to understand how participants are responding to the technology.