

Existing Capability Working Panel

Final terms of reference

Purpose of the ECWP

1. The work envisaged for the ECWP is a high priority work stream, which aims to establish the existing load management capability in New Zealand and determine how that capability can be preserved and used to its full potential.
2. Load management, for the purposes of the ECWP, is defined as all load controlled by signals from existing central transmitters but excluding consumer discretionary load determined in real time ('Load Management').

Scope of the ECWP

3. The scope of the ECWP should be consistent with the tasks and purpose set out below. However, it is possible that during the course of the project, the ECWP will identify peripheral issues. If the issues identified do not substantially work toward the ECWP's purpose and are therefore outside the ECWP's scope, they should be referred back to the Retail Market Advisory Group (RMAG), with a recommendation about the further work required.

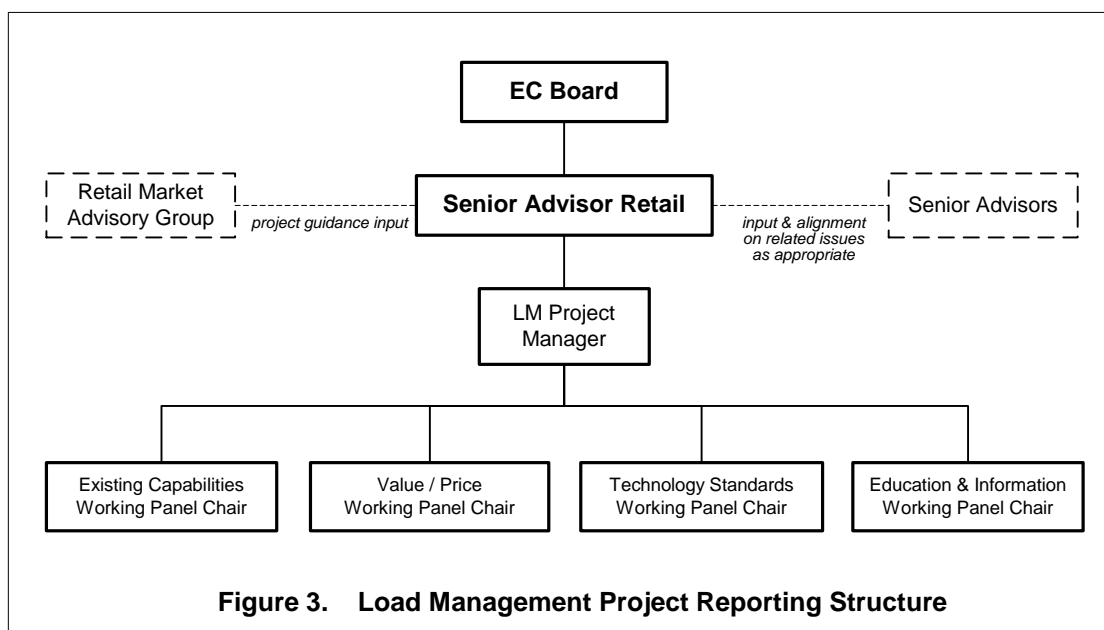
Responsibility of members

4. The ECWP members have been selected for their particular expertise and accordingly:
 - a. Members are to act in the interests of the electricity industry, including consumers;
 - b. Members have a duty to prepare for meetings;
 - c. Members do not represent their own organisations; and
 - d. Any views expressed by members are not to be taken as being those of their employer or nominating organisation.

Reporting arrangements

5. The ECWP will report back to the Board with clear recommendations and options for immediate or medium term actions to be taken. The ECWP will also report to the load management and metering technology project manager, who in turn, will report to the RMAG at agreed milestones. The RMAG will also receive routine reports via the monthly retail work stream update
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7. The milestones for reporting to the RMAG will be at the completion of each of the phases identified in the project plan or as otherwise determined by the Senior Advisor Retail.

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Initial tasks of the ECWP

8. The initial tasks of the ECWP are to:
 - a. Confirm the appropriateness of the terms of reference, requesting approval from the Board for any changes;
 - b. Develop a project plan detailing deliverables, milestones and timetables for implementation. Once developed, this should be referred to the Project Manager for comment and presented to the Board for approval; and
 - c. Develop a project budget and cost benefit framework for evaluating the project expenditure.

Project plan

9. The following tasks will be included in the ECWP project plan. The ECWP will:
 - a. Review existing Load Management systems in New Zealand. Collect all relevant physical information.
 - b. Identify any current and pending issues with existing Load Management systems. Determine the costs of maintaining and upgrading Load Management systems, signalling reliability/interference, and the percentage of currently “unreachable” (stranded) receivers to total receivers. Determine trends in any of these factors. Determine owners’ intentions for their systems and levels of non-depreciated investment.
 - c. Estimate the amount of Managed Load in megawatts for each distributor’s existing tariff option or channel grouping and in total. This work will assess the megawatt levels of Managed Load via existing systems and the on going sustainability of these levels. It will also determine factors likely to erode existing Load Management levels and explore ways this erosion can be offset or avoided completely.

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- d. Estimate possible future achievable Load Management based on existing systems. This work will involve determining possible new applications and loads associated with these applications for the existing ripple signals, for example, the viability of using ripple systems for signalling to smart thermostats and/or air conditioner control equipment

Achieving potential

- e. Gain retailers' estimates of new Manageable Load in their customer bases. As for distributors, this would include using existing Load Management systems and the potential if the load systems are maintained.
- f. Review the performance of existing Load Management systems, establish a list of potential improvements for the systems and establish a cost benefit framework for assessing these potential improvements.

Outcomes

- g. Establish whether retailers and distributors are investing, or intend to invest, in maintaining existing Load Management equipment and if not, why not.
 - h. Report on the ownership of injection equipment, relays and who has the operating rights.
 - i. Determine whether to introduce additional reporting requirements to measure the ongoing effectiveness of existing and future Load Management systems. This reporting needs to include the types and sizes of Managed Load, along with the status and condition of the Load Management system.
 - j. Present a comprehensive picture of Load Management systems and capabilities in each geographic region. This needs to take into account the number of working receivers and non-working (or otherwise stranded) receivers.
 - k. Report on owners' intentions for their current systems, particularly their views on maintaining and/or extending their systems. Compare the view of both transmitter and receiver owners where these are not the same in a geographic area. Determine what owners of both transmitter and receivers would need to see in place to have confidence continuing to invest in their systems going forward.
 - l. Report on the tariff signals sent by distributors in their areas (including how Transpower tariff signals are passed on) and how the different retailers are choosing to pass these tariffs on to end users.
 - m. Report on whether distributor and retailer equipment owners believe there is a free rider issue and what their strategy is with regard to the issue in their area.
- ### *Value/pricing*
- n. Gather information in order to develop the concept of Load Management as an "end user property right" which can be assigned to the party of their

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choosing. Study various assignment mechanisms to formalise the recognition of this property right.

- o. Gather information in order to develop methodologies and options for how the costs and the benefits of Load Management should be allocated between the various parties.