11 April 2024

Electricity Authority
Level 7
AON Centre
1 Willis Street Wellington

Via email: fsr@ea.govt.nz

Manawa Energy's Submission: The future operation of New Zealand's power system

Introduction

Manawa Energy (**Manawa**) welcomes the opportunity to provide a submission to the Electricity Authority (**Authority**) on *The future operation of New Zealand's power system* consultation paper (**Consultation Paper**).

Manawa is an independent power producer with a proven track record of investing in local and grid scale renewable generation. Its strategic plan for future investment aligns with the achievement of New Zealand's decarbonisation and electrification objectives.

Manawa operates a diverse portfolio of 44 power stations across 25 hydro-electric power schemes, supplying around 5% of New Zealand's electricity needs.

Submission

Manawa agrees with the Authority's assessment of the changes that will have a significant impact on system operation requirements at both the transmission and distribution level.

Manawa agrees that real or close to real time co-ordination of the system on both transmission and distribution networks will become more complex as:

- more variable and intermittent generation and load resources connect to the power system:
- electricity flows become bi-directional; and
- the system is balanced by a greater variety of resources.

Many of the current system operation arrangements in the Code date back to the Multilateral Agreement of Common Quality agreed by a pan industry arrangement in the late 1990s and so a review is timely.

The Authority is seeking feedback on four possible intervention areas. These are addressed below.

Need for additional system co-ordination

The Authority is interested in stakeholder views on whether there needs to be any changes to the system operation roles and responsibilities across the network including in relation to distribution networks. The

Consultation Paper notes that some distributors are already describing their services in terms of the distribution system operator (DSO) nomenclature. This suggests the need for additional system co-ordination is already here.

Manawa agrees that it is timely to review whether:

- the Transmission System Operator's (TSO) principal performance obligations need to be revised to better reflect modern technologies, needs and practices; and
- system operational functions and obligations should be extended deeper into the network (closer to the end user/lower voltage systems).

Manawa is cautious about:

- allowing DSO functions to develop organically so there becomes a patchwork of different approaches across every network region (and very high costs to serve); and
- using the existing ownership arrangements as a starting point for defining a DSO's functions (NZ is unlikely to be able to resource 29 DSOs and one TSO).

Adequacy of existing system operation requirements

A related issue is whether the tools, currently used to support system operation, need to be reviewed, such as:

- asset owner performance obligations and the procurement of ancillary services in the manner prescribed in the Code; and
- the new processes and policies being incrementally adopted by distributor.

Manawa agrees that:

- real time pricing and the operation of fast start flexible response could create congestion issues for distributors requiring additional tools to manage their systems in real time; and
- more generally, there will be an increasing need to consider distribution and transmission systems as a whole with each system responding to events in the other.

Manawa is cautious about:

- unregulated DSO functions which could lead to policies which prioritise one group of industry participants e.g. solutions that favour prosumers over mid-scale distributed generation that benefit a wider group of consumers (examples of which are already being seen in distributor's congestion management policies) should be avoided; and
- overloading the Code with a lot of detail and process which could be replaced by a more simplified accountability framework e.g. operating guidelines that are approved by the Authority on behalf of industry participant as meeting regulated principles.

It is also critical that, in addition to reviewing the system operator requirements, the Authority considers the appropriateness of existing network owner requirements. As distribution and transmission networks expand, regulators need to rethink whether taking an aggregate or "whole of network" approach to setting quality standards remains appropriate. Without updated standards, there may be

little incentives for network owners to contract for services (from aggregators and flexibility traders) that meet modern consumers reliability expectations.

Need for more co-ordination of network planning

Manawa agrees that given the scale of the forecast network spend in the next two decades every effort must be taken to ensure that this spend is as efficient as possible. This means that consideration needs to be given to assessing whether individual network plans sufficiently take into account the factors affecting the entire supply chain including:

- co-ordination of network plans at transmission and distribution levels and across regions/distribution networks; and
- efficiently use existing resources to their fullest potential e.g. coordinating distributed generation within distribution networks.

To simplify and assist this process it may be necessary for a Government agency to set out a proposed pathway to net zero, similar to Transpower's 'Net Zero Grid Pathways' roadmap. The scale of the spend required to effect the energy transition means New Zealand cannot afford to ignore any cost savings that might be available from the early identification of synergies in its large infrastructure projects.

Conflicts of interests associated with network ownership, operation and planning

There are clear conflicts of interest in having network owners make unscrutinised decisions in relation to network operations, planning and investment. To be clear, Manawa is not concerned about ownership structures *per se* but rather the need to have fit for purpose regulatory arrangements to guard against overbuild, poor connection terms, inadequate service levels, discriminatory access and self-dealing. It follows there should be a requirement (at a minimum) for distributors performing system operator functions (on their own networks or as part of a regional system operator appointment) to undertake their system operation activities distinctly and separately from their role as a network owner. To fully ensure the necessary impartiality it may be that the role needs to be entirely independent.

Concluding remarks

It is critically important for the industry to avoid the overbuild of networks and find a pragmatic workable solution for intermittency.

Demand side management and new forms of distributed energy resources have a significant role in addressing these issues. Manawa sees increased consumer participation in the supply of energy and reliability services as part of New Zealand's energy future and supports an enabling regulatory system. However, consumer participation should not be pursued for its own sake but only where it is efficient to do so. It is also important to maximise the use of existing resources for a long as possible to lower overall costs to the consumer.

If you have any questions regarding the content of this submission, please contact Grace Burtin, Regulatory Manager.