24 May 2024

Sarah Gillies, Chief Executive
Electricity Authority
By email: sarah.gillies@ea.govt.nz

Alison Andrew, Chief Executive
Transpower
By email: alison.andrew@transpower.co.nz

Tēnā korua

Processes to manage winter peak capacity risk and maintain efficient market signals

Like many in the industry, I have been reflecting on the events leading up to and following 10 May 2024, including:

- the Warning Notice issued by Transpower at 1051 on 9 May 2024 that there was a risk of insufficient generation and reserve offers to meet demand and provide N-1 security for a contingent event between 0730 and 0830 the following morning;
- the industry response to the Warning Notice;
- the subsequent public communications from Transpower at 1330 on 9 May 2024;
- the varying response from retailers with their own customer communications; and
- the market outcomes in real time and incentives created by events of this kind.

As it eventuated, the risk was well managed through more generation being made available, industrial demand response (including Meridian contracting for a 20MW reduction at the New Zealand Aluminium Smelter), and mass market demand response. There was no Grid Emergency and wholesale electricity prices over the relevant part of the morning peaked at relatively low levels ($459/MWh at Otahuhu at 0730 compared to $4933/MWh at the same time two days earlier when there was no Warning Notice or associated public communications).

The management of this particular event was no doubt a success, in terms of keeping the lights on. And in real time with the inherent complexity and fluidity of the situation, the actions by all concerned were well meaning and effective. But I am concerned that if the approach to managing this event, particularly as it relates to calling on consumers to voluntarily reduce demand, were to become the norm, the long-term effects may be detrimental to the industry's capability to manage future events and ultimately detrimental to consumers.

In my opinion, there is merit in the Electricity Authority and Transpower initiating a project to consider how industry processes around management of winter peak capacity risks should be formalised in the Code and documents incorporated by reference in the Code. In respect of dry year risk there is highly detailed formalisation of the tools used by the System Operator, how risks are communicated to the public, and the actions that will be triggered if certain risk thresholds are crossed. As far as I can tell, there is nothing equivalent regarding the management of winter peak capacity risks.

Industry process that may benefit from further formalisation or consideration include:

- **The specification and use of the System Operator's low residual generation tools and when low residual situations will be communicated to the industry via Customer Advice Notice (CAN).** On 9 May 2024 a CAN was sent at 0728, in advance of the Warning Notice at 1051. Industry and wider stakeholders would benefit from a greater appreciation of the assumptions made in assessing a low residual situation, why the level of 200MW of residual generation is the standard applied, and the extent of any conservatism in the methodology.

- **When the System Operator will trigger a public conservation campaign.** In my opinion, mass communications to customers to save energy should be a last resort once the industry has had an opportunity to respond to the situation and the risk is deemed to remain unacceptable. Formal rules could define at what point the System Operator will release messaging to the public. Any requirements on retailers to flow communications through to their customers could also be formalised. A cursory look across the retail market tells us that on 10 May 2024, the practice of individual retailers varied considerably. This may be appropriate but if we want the response to be predictable it would seem greater consistency at least deserves consideration.

- **How efficient price signals and incentives should be maintained during a winter peak capacity event.** To the extent 'free' mass market demand response is relied upon, that will dampen wholesale prices and weaken incentives to invest in peaking, last resort generation, and dispatchable demand response. Lower than expected wholesale prices during events like this could also make it more challenging for high priced generation and demand response to commit ahead of time, meaning perversely increased risk of scarcity in the long term. Reduced incentives to invest in and commit peaking, last resort generation, and dispatchable demand response will likely harm consumers. The logic is not dissimilar to the Authority's recent preliminary decision that prices for trading periods on 9 August 2021 "were artificially depressed by demand management, in circumstances where participants would expect higher prices to apply, and this threatens, or may threaten, confidence in the wholesale market." Prices are equally artificially depressed by public requests for demand reduction and consideration of scarcity-like pricing may be necessary to preserve efficient price signals for the long-term benefit of consumers.

- **Whether mass market consumers should be recompensed in some way for conservation efforts during a winter peak event**, similar to the way in which consumers are recompensed during an official conservation campaign, due to seasonal scarcity. While many retailers are developing products to incentivise consumer load shifting, there are limited offerings in the market to date. The application of consumer compensation could maintain consumer willingness to assist in these events as well as go some way towards preserving adequate investment and commitment incentives in events where wholesale prices are suppressed by voluntary mass market demand response. Retailers would be incentivised to contract with generators or providers of demand response and seek investment in and commitment of resources that will help to mitigate the risk of peak capacity issues.

- **The North Island Winter Capacity Margin security standard set out in clause 7.3 of the Code could be reviewed**. The security standards have not been reviewed since 2017, at which time the Authority said it would not propose any changes but that it would review the standards again within five years. To our knowledge that review has not occurred. It is notable that the draft 2024 Security of Supply Assessment was published by Transpower three days prior to the events of 10 May 2024 and states that the North Island Winter Capacity Margin is currently met and with existing and already committed generation is expected to be met until 2027. I understand that standard represents what the Authority considers an efficient level of reliability with the cost benefit analysis determining that up to 22 hours per annum of energy or reserve shortfall (as a result of capacity shortage) is economic before additional investment in peaking generation is warranted. Such standards do not seem well aligned with the real world expectation of zero hours

of energy or reserve shortfall. This could be explored in any review of the standard and to the extent a higher standard is applied, the costs of this to consumers should be made clear.

In my opinion, this work should be a priority for both the Authority and Transpower.

I look forward to hearing from you.

Yours sincerely

Neal Barclay

Chief Executive