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Electricity Authority
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Reviewing risk management options for electricity retailers – Issues Paper

Meridian appreciates the opportunity to provide comment on the Electricity Authority's issues paper on risk management options for those participants in the retail electricity market.

Meridian supports this work and acknowledges its importance to ensuring that the power system functions in the interests of all consumers. The transition towards a more renewable power system brings with it new demand on and sources of risk management; we think detailed consideration of these effects is valuable work. In particular, it is critical that we have a robust evidence base with regard to the availability of risk management products.

This submission covers:

- The importance of continued investment in firming and flexible assets that can assist with risk management;
- Comment on the range of parties currently capable of providing risk management capacity;
- The need for any intervention to be clearly evidenced and unintended consequences to be considered; and
- Further opportunities to support risk management.

In summary, Meridian's key views are that:

- Investment in further assets underpinning the supply of risk management products is critical as we grow the electricity system to meet the country's energy needs. Meridian's modelling indicates 200 MW of new flexible capacity is needed each year for the next 25 years – 5 GW in total;
- New risk management capacity is already in the process of being developed and will continue to be developed as long as appropriate incentives for investment remain in place;

- Interventions aimed, for example, at encouraging further liquidity of super-peak products need to be carefully considered given the possibility of disincentivising investment and/or resulting in additional costs for consumers.

Investment is needed to underpin the supply of risk management products

Meridian agrees with the Authority that the market needs to continue to incentivise investment to underpin the supply of risk management products.¹ We see continued investment in risk management assets like generation, batteries and demand response as the fundamental solution to the issues traversed in the Issues Paper. We agree with the Authority that exploring ways to ensure such investments are able to efficiently recoup their costs will be the best way to progress that solution. This should be done in a technology-agnostic way so that the market is allowed to solve these issues most efficiently.

Like MDAG, we believe the shift to a renewables-based system will strengthen competition in some areas. MDAG cited the expected widespread deployment of chemical batteries as likely to increase competition in the provision of short-duration flexibility (a day or less) and for some ancillary services in the spot market.² Other investments offering flexible capacity over different timescales will also increasingly provide different forms of system security and risk management through the energy transition, including:

- further demand response of different scales and durations;
- gas and biofuel peakers;
- greater capacity for hydro flex as a result of increasing renewable spill;³ and
- retrofitting or reconfiguring existing hydro schemes to provide additional capacity and flexibility of different scales and durations.

Meridian has undertaken work to scope and understand the scale of investment in flexible capacity that New Zealand requires over the coming decades. Meridian's modelling suggests that on average approximately 200 MW of new flexible capacity (across a variety of different durations) will be needed each year over the next 25 years, or 5 GW of new flexible capacity in total.

¹ As per the Authority's criterion at paragraph 5.5 of Chapter 8

² MDAG *Final Recommendations Paper* at p 158.

³ We note that MDAG predicts a fourfold increase in renewable spill between 2020 and 2035 as a result of increasing renewable penetration. See MDAG *Issues Discussion Paper* (February 2022) at p 45.

A range of parties are capable of providing risk management capacity

In discussing the scarcity of super-peak type cover, the Authority comments on which participants can be expected to respond to requests for super-peaks.⁴ Meridian notes the following:⁵

- The super-peak product designed by the Standardised Flexibility Product Co-Design Group (**SFP Group**) is at predictable times each day, so any generation which can be profiled on an intra-day basis should be able to participate in backing that product.
- While long term hydro storage receives a lot of focus, essentially all hydro (including hydro owned by Manawa, for example) has the ability to flex at a day-night scale (and in many cases, at a week scale as well). This flex is observable from dispatch history (see Table 1 below). Depending on the product design, all or most hydro generation could be used to back super-peak products.

Table 1: Hydro capacity range by system and participant

Average Hydro Generation Capacity Range																						
max-min range by day: Jul-2019 to Jun-2024																						
company >>	Contact	Genesis						Mercury		Manawa Hydro			Meridian		Other		Total					
scheme >>	Clutha	Tekapo	TFD	Waikaremoana		Waikato		SiHydro	NiHydro			Waitaki	Manapouri	Misc		Hydro						
nameplate >>	752MW	190MW	360MW	138MW		1,095MW		222MW	225MW			1,553MW	800MW		67MW	5,401MW						
day of week	daily range		daily range		daily range		daily range		daily range		daily range		daily range		daily range							
Mon	333	44%	48	25%	155	43%	28	20%	519	47%	49	22%	80	36%	529	34%	152	19%	5	8%	1,900	35%
Tue	328	44%	42	22%	151	42%	28	20%	503	46%	43	19%	79	35%	521	34%	154	19%	6	8%	1,854	34%
Wed	321	43%	38	20%	146	41%	28	20%	479	44%	41	18%	75	33%	525	34%	156	19%	5	8%	1,814	34%
Thu	323	43%	38	20%	143	40%	26	19%	468	43%	39	18%	74	33%	523	34%	156	19%	5	8%	1,795	33%
Fri	308	41%	36	19%	127	35%	24	17%	442	40%	38	17%	71	32%	516	33%	154	19%	6	9%	1,723	32%
Sat	288	38%	35	19%	127	35%	19	14%	372	34%	33	15%	60	27%	321	21%	121	15%	5	8%	1,381	26%
Sun	311	41%	41	22%	141	39%	24	17%	420	38%	38	17%	69	30%	375	24%	112	14%	5	8%	1,537	28%
weekly	316	42%	40	21%	141	39%	25	18%	458	42%	40	18%	73	32%	473	30%	144	18%	5	8%	1,715	32%
% share	18.4%		2.3%		8.2%		1.5%		26.7%		2.3%		4.2%		27.6%		8.4%		0.3%		100%	

- We disagree that Nova's capacity is too small to be considered, and we note that it is 200 MW rather than 100 MW.⁶ In any event, most OTC contracts trade at volumes much lower than 100 MW, and we query why a threshold of 100 MW capacity would be applied when considering potential suppliers.
- In addition to Tekapo A and B which can be used to back super-peak products, Genesis also have the Tongariro Scheme which was expressly designed for peaking (Tokaanu can provide 240 MW); the Waikaremoana scheme (140 MW); and Huntly 6 which is a gas peaker. The Rankines and Huntly 5 can also have their generation sculpted to support the sale of super-peaks.

⁴ See para 4.9 of Chapter 5.

⁵ These comments primarily contemplate super-peak products. However, it is important not to lose sight of other options. For example, caps are used extensively in Australia and other international power markets and Meridian anticipates that they will see more uptake as the New Zealand market gains more experience pricing them. Swaptions (a cap on a swap) are already regularly used in the New Zealand market. There may be differences in the participants who could be expected to respond to these different options.

⁶ With particular reference to fn 11 on p 8 of Chapter 5. Nova has 100 MW at each of McKee and Junction Road.

- The capacity of peaking plant to back super-peak products is reduced if transmission is constrained. The HVDC is an obvious example and can act as a bottleneck on the ability of South Island generation to underwrite super-peak products at Otahuhu.
- Other forms of flexibility could also back super-peak products, including demand response, batteries (including syndicated batteries), and retail shaping (through time-of-use tariffs and/or mass market demand response). In relation to batteries the Authority suggests that investment decisions are more complicated than for ordinary generation.⁷ Meridian disagrees. A number of participants either already have invested or are contemplating investing in batteries, and there is no reason why non-integrated retailers cannot develop this capability (as they have for demand response). The Authority contemplates batteries becoming economic for non-integrated retailers in the future,⁸ but would be unwise to discount the feasibility of non-integrated retailers investing in batteries now.
- Balance sheet strategies can also be used – there are a number of financial traders or intermediaries who can provide super-peak cover using their balance sheets.

In Meridian's view, the range of ways to underpin risk management contracts, the portfolios of existing market participants, and various strategies available to potential market entrants suggest that the Authority should not start with a narrow subset of current participants when considering the case for any future interventions.

The case for any intervention needs to be clearly evidenced and unintended consequences should be considered

As the Authority notes, many participants are at varying stages of exploring or employing various risk management options, including many of the options mentioned above. To the extent such investments proceed, they will help to increase the amount of risk management available to the market as a whole. Any additional steps the Authority takes to encourage or support the development of risk management through the hedge market should not inadvertently reduce the incentives for market participants to pursue these options. In particular, the Authority should be wary about undermining incentives (including the incentives of non-integrated retailers themselves) to invest directly in generation or provide innovative products such as demand response.

In the context of a market which is actively innovating and exploring new risk management options, the Authority should also take due care to ensure that any future interventions pursued are based on clear and compelling evidence. A number of statements in the Authority's issues paper suggest

⁷ Chapter 4, paragraph 5.42(f).

⁸ Chapter 4, paragraph 6.11(a).

that the case is still to be made for further intervention. For example, on a number of issues, the Authority appears to conclude that there are no problems evident:

- *“Our analysis suggests that prices offered for baseload and peak contracts are competitive”*
- *“We found no evidence to suggest that there is any discrimination in the pricing of contracts”*
- *“We have not seen any evidence to suggest that coordinated market power is being exercised”*
- *“We do not consider that vertical integration is problematic or anticompetitive per se”.*

In other areas, it is clear that the Authority has not been able to reach firm conclusions:

- *“Offer prices for superpeak contracts could be consistent with a lack of competition, or simply reflect scarcity”*
- *“The evidence we have seen to date does not clearly prove either perspective [scarcity being the driver of gentailers not pricing RFPs versus being a convenient excuse], so we consider it is important to contemplate both perspectives in any policy response”.*
- *“We cannot definitively conclude that super-peak prices are competitive as we haven’t been able to include premia that we know exist, but can’t quantify, such as liquidity premiums.”*

We note in respect of the last example that the Authority already appears to be aware of the various premia that should properly form part of an offer price,⁹ and the potential for historical shape factors to be an imperfect predictor of the appropriate level of such premia;¹⁰ but has deliberately excluded such premia and / or some form of update to them from its modelling. The Authority quite appropriately acknowledges that this approach means its estimate of the competitive price for super peak products is likely an underestimate. We suggest it also means that the Authority’s inability to definitively conclude that currently observed super-peak prices are competitive is of limited value in assessing the case for intervention.

Meridian’s view is that policy interventions should not be made on the basis of inconclusive evidence. The risk of unintended consequences or unnecessary costs in the evolving market for flexibility services is too great. Policy interventions should be based on sound evidence, a clear problem definition and a robust consideration of the costs and benefits. We strongly encourage

⁹ See Chapter 5 at paragraph 2.7, where uncertainty as to future super-peak ratios; uncertainty as to future scarcity, volatility, illiquidity; constraints on ability to sell baseload are all mentioned. See also the premia considered in Appendix A of the Authority’s paper.

¹⁰ See Appendix A at paragraph 4.7.

the Authority to keep these issues in mind as it progresses the next phases of its risk management programme.

Further opportunities to support risk management

MDAG has recommended a suite of options and provided guidance relevant to the issues of price discovery of and access to shaped forward contracts (i.e. recommendations 2, 8, and 9, all of which Meridian supports).¹¹ Meridian considers that these MDAG recommendations are the best means to support forward price discovery and sustainable, appropriate, and efficient levels of access to shaped forward contracts. We therefore support the development of those options, rigorous testing of the costs and benefits, and implementation where the benefits outweigh the costs. We note specifically that:

- while changes have already been implemented in respect of recommendation 2 (hedge disclosure), further enhancements should be contemplated if outcomes remain sub-optimal, and
- recommendation 9 (contract process disclosure rules) could be broader than framed by MDAG (or the Voluntary Code of Conduct) and could cover all OTC engagement between participants and address matters such as how requests should be made, record keeping, response times and response requirements.

Meridian notes that the SFP Group has now released its design of a new standardised super-peak product, and that it will be available from January 2025. Meridian supports this work and is also open to exploring the costs and benefits of super-peak products being listed on the ASX.

We also note that there may be ways to take better advantage of the risk management capabilities of existing assets. Meridian has undertaken substantial work to optimise the ability of its current assets to flex and provide risk management. Some of this has not, as yet, resulted in additional capacity e.g. because the System Operator has declined approvals out of concern to ensure that security is maintained even in relatively rare and unlikely scenarios. Meridian is however continuing work on this. We query whether, in this and other areas, the System Operator's historic technical and security standards and requirements need to evolve to better facilitate and support investment in new flexibility.

A key area where we believe the risk management capabilities of existing assets could be better deployed for the good of the wider market is through enabling better and more certain access to

¹¹ Recommendation 2: Improve transparency of hedge information (especially non-base load) covering offers, bids and agreed prices; Recommendation 8: Develop standardised flexibility products; Recommendation 9: Develop rules requiring disclosure of process steps by parties negotiating OTC contracts

contingent storage. Access to contingent storage is currently subject to a large extent to System Operator discretion. This is due to permanent infeasibilities that seem to have been inadvertently built into the Security of Supply Forecasting and Information Policy. While the System Operator decided to exercise its discretion to allow access over Winter 2024 it has since re-instated the infeasibilities. This means access to contingent storage is presently too uncertain to sustain the underwriting of hedges. We have written to both the Authority and the System Operator in respect of this particular opportunity.

There may also be indirect ways of boosting the liquidity of hedges by utilising upstream opportunities for more efficient use of resources. For example, improvements to the FTR market could allow participants with physical supply to more efficiently manage their own basis risk, which in turn may enable or decrease the cost of forward selling South Island capacity in the North Island. Because the FTR market has a limited volume, tailoring products to manage the basis risks most in demand could result in more efficient use of the loss and constraint excess. Solutions could involve:

- introducing peak / super-peak FTRs which could mean less loss and constraint excesses being tied up with off-peak FTRs that are not in demand.
- FTR products that only hedge price separation due to constraints (and not losses as well).

Finally, there are a variety of other opportunities to remove existing barriers to both physical and demand flexibility investments. We note in particular that new frameworks for demand response might provide better *ex ante* certainty of the level of payment (noting the existing dispatchable demand mechanism has not attracted high levels of participation).

This submission is not confidential and can be published in its entirety.

We would be happy to discuss our views with the Authority at any time.

Nā māua noa, nā

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