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Submissions
Market Development Advisory Group
Electricity Authority

By email: MDAG@ea.govt.nz

MDAG review of the high standard of trading conduct provisions

Meridian appreciates the opportunity to provide feedback to the Market Development Advisory Group (**MDAG**) on their review of the high standard of trading conduct (**HSOTC**) provisions in Part 13 of the Electricity Industry Participation Code 2010 (**Code**).

Executive summary

Meridian considers the current HSOTC provisions to be unworkable and agrees that there is a need for change. Meridian tentatively supports MDAG's proposed option of a counterfactual test so that offers must be consistent with offers that the generator or ancillary service agent would have made where no generator or ancillary service agent could exercise significant market power. That tentative support is conditional on:

- Several changes being made to the drafting. Most importantly, Meridian does not support the "purpose statement" that is proposed to accompany the test. We think the "purpose statement" increases uncertainty, misapplies the Authority's statutory objective, contains several errors or omissions, and risks significant unintended consequences. Meridian's suggested drafting of the proposed new trading conduct provisions is attached as Appendix A of this submission; and
- A full cost benefit analysis of the proposal as part of consultation by the Authority. We believe the cost benefit analysis prepared by MDAG is inadequate, for the

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reasons given below, and that regulatory change of this potential significance should be consulted on by the Authority, rather than fast-tracked via an advisory group.

We also note in Appendix B of this submission several errors made by the MDAG in discussing the events of 2 June 2016. It is concerning that so much of the MDAG paper is dedicated to this event when there have been several alleged breaches of the HSOTC provisions. The way the 2 June 2016 decisions have been misrepresented and seemingly misunderstood by the MDAG is more concerning still.

The remainder of this submission sets out Meridian's detailed comments on the MDAG discussion paper and is structured under the following headings:

- Problems identified with the current HSOTC provisions;
- The policy framework within which the MDAG proposal must operate;
- Evaluation of the MDAG proposal;
- Narrowing the scope of application for the proposed rule; and
- Procedural matters regarding advisory groups and further consultation.

In addition, Appendix C of this submission is a legal opinion from Russell McVeagh on the interpretation of the MDAG proposal and how it could be improved, consistent with relevant legislation and case law. Appendix D is a report from Sapere Research Group on the unintended consequences that might result from the MDAG proposal, particularly because of the potential for the proposal to erode the price discovery function of the market and replace it with a form of discretionary price control regulation. Sapere explains why this could result in various costs that have not been considered by the MDAG. The Sapere report also notes where economic theory appears to have been misread or misapplied in the MDAG paper. We consider there to be real risk that the harms identified by Sapere will eventuate, particularly if the "purpose statement" accompanying the MDAG proposal is retained.

Meridian looks forward to further engagement with the MDAG over cross submissions and with the Authority once a recommendation is delivered by the MDAG.

Problems identified with the current HSOTC provisions

The MDAG paper identifies seven interrelated problems with the current HSOTC rules. Meridian agrees that there are significant problems with the current provisions.

The current provisions include a rule (clause 13.5A) and a series of safe harbours (clause 13.5B). The rule itself is that "each generator and ancillary service agent must ensure that its conduct in relation to offers and reserve offers is consistent with a high standard of trading conduct." This rule is too vague to be useful or easily understood by participants in terms of drawing a line between conduct that is and is not acceptable. It is not based on any established body of decisions or precedent which has considered what type of trading conduct is of a 'high' standard and what type of trading conduct is not of such standard. There are to Meridian's knowledge no market rules framed in this way either in New Zealand or overseas. There are no guidelines from the Authority indicating its view as to how this phrase is to be interpreted and, in the several years since it was introduced, the Authority has not taken substantive enforcement action in respect of any alleged breaches of the rule. This means no cases have been referred by the Authority to the Rulings Panel and there are no decisions in respect of the rule.

One would assume, as a starting point, that the interpretation of the rule would need to be consistent with the Authority's statutory objective and the underlying concept of workable competition, which the Authority has rightly interpreted as relevant to the competition limb of its objective.[1] However, beyond that there is very little certainty regarding what trading conduct might be considered of a "high standard" and what might fall outside that standard.

Meridian agrees with the MDAG descriptions of the HSOTC provisions as "amorphous", "indirect", and "obtuse", as well as the following statements in the MDAG paper:[2]

> "Workable competition as a benchmark would, no doubt, inform the legal interpretation of HSOTC. However, it is not necessarily the only relevant criterion at law that the courts may use to assess compliance. As noted above, the words "high standard" could include consideration of generally accepted norms and standards of good conduct of a wider nature. The scope of these is not entirely predictable."

Rather than detail the various problems the current lack of certainty creates, this Meridian submission focusses on the MDAG proposal and possible improvements to it. Our starting point is that the current HSOTC provisions are unworkable. Meridian has been aware of the problems with HSOTC provisions for some time and wrote to the Authority on 16 May 2017 to suggest that the Authority move quickly to amend the HSOTC provisions.

[1] https://www.ea.govt.nz/dmsdocument/9494-interpretation-of-the-authoritys-statutory-objective-february-2011
[2] MDAG, paragraph 75.

The policy framework within which the MDAG proposal must operate

The MDAG proposal must be consistent with the statutory framework within which the Authority exercises its function, including its key function of making and amending the Code. It is the Authority's statutory objective to "promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers." The Authority's own interpretation of its statutory objective is instructive, particularly the discussion on the words "*promote competition* … for the *long-term* benefit of consumers" in the extracts below:[3]

> "The Authority interprets *competition* to mean *workable or effective competition …*"
>
> "The Authority interprets *promoting competition* to mean exercising its functions to facilitate or encourage stronger competition. The Authority is not focussed on the conduct of individual participants with respect to competition in the electricity industry as this is the responsibility of the Commerce Commission. Rather the Authority is focussed on improving the arrangements in the electricity industry to promote competition. Promoting competition does not mean achieving a certain level of competition."
>
> "In regard to *long-term benefit*, the Authority considers that its primary focus is to promote dynamic efficiency in the electricity industry, which includes taking into account long-term opportunities and incentives for efficient entry, exit, investment and innovation in the electricity industry, by both suppliers and consumers…"

The Authority expands on its view of workable competition in its market performance review of the high price event of 2 June 2016. According to the Authority "a market is dynamically efficient in a workable competition sense if it tends towards an efficient equilibrium over time."[4] Similarly the Authority states that "workable competition is a dynamic view of markets that encompasses prices deviating from long term equilibrium levels as long as barriers to entry are low so that, in the long term, prices move towards competitive levels."[5]

[3] https://www.ea.govt.nz/dmsdocument/9494-interpretation-of-the-authoritys-statutory-objective-february-2011
[4] https://www.ea.govt.nz/dmsdocument/23044-market-performance-review-high-prices-on-2-june-2016
[5] Ibid.

Meridian agrees that workable competition is the correct interpretation of the Authority's statutory objective. The MDAG paper also seems to agree, stating that "workable competition is clearly the benchmark for competition in New Zealand competition law. It is the Authority's underlying benchmark for competition in the electricity market."[6]

Meridian also agrees with the emphasis above on the concept of workable competition as a dynamic process of rivalry over time. Meridian would be very concerned if any trading conduct rule were adopted that required an assessment against economic costs over a short time period. Any test must acknowledge that spot prices may deviate from long run marginal costs in the short term. Russell McVeagh, in the appended advice, explore this further and note that market participants will almost always possess some degree of market power as perfectly competitive markets are seldom, if ever, encountered, except in textbooks. The crucial question is therefore not whether a firm has market power but whether such power enables that firm to set prices without significant constraint from competitors or consumers. The question for regulators is at what point does a firm have "too much" market power, exercised for "too long" so that competition is no longer workable. It is the point at which "acceptable market power" becomes "too much market power", which is the same as saying the point at which the market becomes "not workably competitive".

Russell McVeagh also note the similarities between the Authority's statutory objective and the purpose of the Commerce Act 1986 (**Commerce Act**), "to promote competition in markets for the long-term benefit of consumers within New Zealand" and explore the commonalities between the misuse of market power prohibition in section 36 of the Commerce Act and trading conduct rules. Both section 36 and the HSOTC provisions (or any replacement thereof) need to grapple with the challenge of striking a balance between:

- limiting the scope for participants with market power to act in a way that undermines the efficient operation of the market; and
- chilling the operation of the market by limiting its ability to operate dynamically as a workably competitive market over time.

In this context, it would be inconsistent with the Authority's objective for it to impose a behavioural prohibition that effectively allows it to step in and penalise a market actor every time it offers above some measure of its economic costs. Limiting offers to economic costs in the short term would have significant long-term implications for dynamic efficiency and investment signals in the market. Meridian considers there to be a high risk of unintended

[6] MDAG, paragraph 190.

consequences from such an approach. A rule that was based on a measure of costs rather than workable competition would not *promote* competition as is required by the Authority's statutory objective but would seek to impose a specific state of competition, meaning the regulation would be a substitute for competition. As noted by Sapere Research Group, requiring offers at each node for each half hour to be based on a generators economic costs would destroy the dynamic price-discovery role of the market and would be akin to Part 4 regulation under the Commerce Act, which applies in "markets where there is little or no competition and little or no likelihood of a substantial increase in competition", i.e. in monopoly situations.

Evaluation of the MDAG proposal

The behavioural standard

As a standalone behavioural standard or test, proposed clause 13.5A(1) and (2) are broadly workable and consistent with the Authority's statutory objective. The behavioural standard in proposed subclauses (1) and (2) would support the efficient operation of the wholesale spot market as it would be a rule capable of being considered and applied ex-ante. This is achieved through a counterfactual test ("consistent with offers the generator would have made where no generator could exercise significant market power"), which draws on established competition law jurisprudence. Meridian would not oppose this formulation per se, provided several important caveats are addressed:

- By definition, market power exists and can only sensibly be assessed in a properly defined market. Therefore, the counterfactual test needs to allow for the proper definition of the market by the Rulings Panel or courts. This would be done on a case-by-case basis both geographically and in terms of the relevant time scale over which market power is to be assessed. There could conceivably be situations when the market might be properly defined as a single node and over a single trading period. At other times the market should properly be defined as a national market and considered over multiple trading periods. Meridian believes that the proposed behavioural standard should therefore be improved by removing the words "in relation to that point of connection to the grid for that trading period". That text should be replaced by a reference to the relevant market. Proposed subclause (1) would then read:

> Where a **generator** submits or revises an **offer** for a **point of connection** to the **grid**, that **offer** must be consistent with **offers** that the **generator** would have made where no **generator** could exercise significant market power in the relevant market ~~in relation to that **point of connection** to the **grid** for that **trading period**~~.

The deleted words "in relation to that point of connection to the grid for that trading period" do not appear to add anything of substance to the proposed test and their deletion would avoid the risk of the market being always defined as a point of connection or specific trading period when that is simply not the case, except perhaps in rare situations. The MDAG presumably does not intend for market power to always be assessed in relation to a market defined as a single point of connection; such an assessment would not encompass the factors that directly shape and constrain rivalry. Similarly allowing the Rulings Panel or courts to decide the relevant period over which a generator or ancillary agent's conduct is to be considered, whether that is a single trading period or a more extended period, would enable proper consideration of the nature of the market power that is alleged to have been exercised.

- Secondly, while the proposed behavioural standard can be considered by a generator ex ante, significant uncertainty would remain for traders in their day-to-day practice. To some extent this may be unavoidable. However, further guidance on the expected application of the counterfactual test would be beneficial to generators and ancillary service agents. Costly litigation to resolve uncertainty is not helpful and if the MDAG or Authority thinks there are examples of behaviour that would be clearly prohibited then it would be good to know. Meridian suggests that the Authority develop and publish various real-world examples to work through how the behavioural prohibition would be applied and the sorts of things the Rulings Panel or courts would likely consider.

- Finally, by far the most significant caveat on Meridian's support for the counterfactual test is the need to avoid the unnecessary ambiguity, uncertainty, and likely unintended consequences caused by the remainder of the proposal, namely the "purpose statement" in proposed subclause (3). Our concerns and recommendations on this point are set out in detail below.

The "purpose statement"

Rather than an orthodox purpose statement, proposed subclause (3) in fact suggests the application of an entirely different test to that set out in subclause (1) – a test in which offers must not exceed economic costs by too much or for too long.

As noted above, competition is something to be *promoted* by the Authority, not a behavioural standard to be applied to individual participants' behaviour. Parts of the MDAG discussion paper suggest, to the contrary, that the "purpose statement" in proposed subclause (3) is an operative part of the test. It seems that the MDAG may be of the view that rather than, or as well as a counterfactual test, generators and ancillary service agents would need to make offers that are closely tied to their operating costs. This would not be consistent with the Authority's statutory objective and would be in direct contradiction to the primary test proposed in subclauses (1) and (2). The result would be to constrain generators and ancillary service agents to a far greater degree than they would be constrained if operating in a market with no significant market power and would result instead in something like the price regulation to which monopoly businesses are subject under Part 4 of the Commerce Act. The heavy reliance in the MDAG paper on the *Wellington Airport* case is telling as that case concerns price regulation for a natural monopoly rather than the misuse of market power provisions that are suitable for use in a workably competitive market.

If the proposed "purpose statement" coloured the interpretation of subclause (1) that was applied by the Rulings Panel and courts, Meridian considers there to be a high risk of adverse and unintended consequences. Many of these unintended consequences are discussed in the appended report by Sapere Research Group. From Meridian's perspective:

- In a world where generators must be able to justify their offers by reference to their economic costs (regardless of how that is defined), investment incentives would become a product of the precedents set by the Rulings Panel and court indicating how to calculate the economic costs of generation and construct offers. This would be something like the regulatory regime that applies to monopoly businesses except rather than detailed input methodologies and price paths with defined rates of return, generators would learn after the fact what was acceptable, via a process of reading between the lines of decided cases and application to their own circumstances in an iterative process as cases are tested by the Rulings Panel and courts. In this context, there would be a very real risk of weaker investment signals and reduced security of supply in the longer term.

- There is a risk that trading would cease to be an active process of rivalry and price discovery. Instead generators and ancillary service agents would be required to construct offers based on some measure of economic costs and would likely set-and-forget those offers, with the only adjustments over time being for variation in fuel costs. The offers made in forward schedules could be ignored as generators would not be allowed to respond to offers from others and there would be no process of rivalry ahead of gate closure. It is far from clear that this way of operating would deliver more efficient outcomes for consumers in the long term.

- With offers fixed to economic costs you would expect certain generation plants to be more consistently the marginal plant on the grid. That marginal plant would be dispatched up or down with demand variations. There is a risk that less flexible plant would become marginal more often because of the challenges involved in assessing the economic cost of being required to flex. Factoring in the economic costs of needing to change set points would create a catch-22 as factoring in those costs might mean the plant is no longer marginal, however once no longer marginal the plant would not need to factor in those costs, making it potentially marginal again. It is far from clear how this might work given the difficulties of forecasting and gate closure rules.

- Over time, one would expect the methodology for the calculation of fuel and other costs to become increasingly prescribed further diminishing the benefits provided by the current market. For example, the modelling of water values might become standardised. This would undermine one of the core benefits of the market is that it allows for different views of such value. The water value component of economic costs would have to be highly dynamic to factor in the opportunity cost of using water over various time horizons: between peak and off-peak; between day and night; between weekend and weekday; seasonally; and to manage scarcity. For example, hydro generators would need to be allowed some mechanism to withhold generation or price generation to not clear for the purpose of replenishing short-term storage in head ponds on a river chain that is not otherwise hydrologically balanced. There is a lot of scope for the creation of inefficiencies if an enforcement body over-simplified the calculation of water values or through standardisation limited the flexibility of hydro generation. Such standardisation of offers based on economic costs could therefore have consequences for the transition to a low-emissions economy and the aspirational goal of 100 percent renewable electricity generation in a normal

hydrological year. The need for system flexibility will only increase as more intermittency and volatility enters the spot market.

In addition to the risks noted above, there are a number of errors in the drafting of the proposed "purpose statement" in subclause 13.5A(3). The "purpose statement" appears to be focused exclusively on the *prices* of offers or reserve offers. However, offers are comprised of both prices and volumes. By ignoring volumes, the "purpose statement" seems to suggest that withholding generation is outside the purpose of the proposed prohibition, even though significant market power could equally be exercised by withholding generation to influence market clearing prices.

A further error is that the "purpose statement" appears to be focused exclusively on prices that *exceed* economic costs. In fact, significant market power could equally be exercised by offer prices that are too *low* for too long, i.e. by predatory pricing.

These errors or omissions are examples of the difficulties that arise in attempting to narrowly summarise and codify the full range of the economic concepts and jurisprudence behind the proposed counterfactual test. Rather than risk the errors and unintended consequences noted above, Meridian strongly suggests that the proposed "purpose statement" be deleted in its entirety. There is absolutely no need for the Code to abbreviate the Authority's statutory objective, or the detailed economic concepts and jurisprudence that will inform the test – all of which are better to be inferred by decision-makers based on their own consideration of the relevant authorities. In its current state the "purpose statement" does not assist with interpretation of the counterfactual test, quite the opposite – it creates ambiguity and uncertainty and suggests that something other than an orthodox interpretation of the counterfactual test might be required.[7]

Narrowing the scope of application for the proposed rule

The MDAG paper asks whether there is merit in narrowing the scope of the proposed rule's application to either gross or net pivotal situations. Meridian does not think the test should be confined to gross or net pivotal situations. It is extremely challenging to identify when generators are gross or net pivotal. This is certainly not something that traders can do in

[7] The advice from Russell McVeagh appended to this submission suggests potential improvements to the "purpose statement" in proposed subclause 13.5A(3). These suggestions would go some way to reduce the risk of unintended consequences and to correct errors in the "purpose statement" but are a distant second place option. From Meridian's perspective, the best outcome for the market and consumers would be to simply delete subclause 13.5A(3).

real time, and even after the fact with ample time and access to data it is challenging. Pivotal analysis is highly sensitive to the modelling assumptions that must be made.

As an example, in 2013, the Wholesale Advisory Group (the predecessor of the MDAG) estimated the extent to which the four largest generators were both gross and net pivotal over a three-year period from January 2009 to December 2011. The WAG estimated that one or more generators were gross pivotal nationally in 5.6 percent of trading periods, in the North Island in 21 percent of trading periods, and in the South Island in 76 percent of trading periods.[8] Soon after, in early 2014, the Authority carried out the same exercise to estimate the frequency of pivotal periods over the same three-year period. However, the results were very different because of different assumptions about the operation of the HVDC. In this case the Authority estimated that one or more generators would have been gross pivotal in about 5 percent of trading periods in the North Island and nationally and in around 9 percent of trading periods in the South Island.[9] Several years later, the Authority's analysis now supplied for the MDAG paper estimates that in 2010 one or more generators would have been gross pivotal 57 percent of the time in the North Island and 100 percent of the time in the South Island. Estimates of the frequency of net pivotal situations have also varied significantly over the years. For example, compare the net pivotal analysis in the MDAG paper with previous Authority analysis from 2014.[10] The two deliver very different estimates, including for the same years of data.

In addition to the above variability in the modelling, we believe we have identified a flaw in the Authority's pivotal analysis for the MDAG paper. We believe the methodology over estimates the number of periods that parties are pivotal in an island because of the way the Reserve Management Tool deals with net free reserves when there is a change in HVDC flows. We would be happy to discuss this further with the Authority.

The variation in estimates noted above, and the obvious modelling challenges, mean that there would be considerable uncertainty if the proposed rule was only applied in pivotal situations (regardless of whether gross or net). Generators would not be able to determine in real time when a generator was pivotal and therefore when the rules applied. It is likely that generators, or at least all large generators, would simply assume the rules applied at all

[8] https://www.ea.govt.nz/dmsdocument/15049-discussion-paper-pricing-in-pivotal-supplier-situations, from page 79.
[9] https://www.ea.govt.nz/dmsdocument/17525-improving-the-efficiency-of-prices-in-pivotal-supplier-situations
[10] https://www.ea.govt.nz/dmsdocument/19165-electricity-market-performance-2014-year-in-review

times. Meridian therefore sees no merit in narrowing the scope of the rules eventually adopted.

Procedural matters

A more robust cost benefit analysis is required for such significant reform

As noted in the appended report from Sapere Research Group, the MDAG has failed to adequately assess the costs and benefits of its proposal. The MDAG says that costs "are expected to be negligible because direct costs are near-zero and we expect no increase in indirect costs". The term "indirect costs" is used by the MDAG to describe efficient behaviour deterred by the proposed Code. The MDAG is, in effect, asserting that its proposal can be introduced without deterring any efficient behaviour. The MDAG explains that it holds this belief "because the proposed Code uses a standard that is more tightly linked to the relevant economic principles than the existing Code, and for this reason we expect more deterrence of 'bad' behaviour and less deterrence of 'good' behaviour".

For MDAG's claim to be true, investigations by the Authority and decisions by the Rulings Panel would need to always result in more efficient market prices than would result from price discovery in the market, and all generators would need to be confident ex ante how the rules would be applied in any given situation so that they could act accordingly. Such a claim assumes perfect decision making by enforcement bodies and perfect foresight from generators. If the Authority were able to always calculate the efficient offer price for each generator and to set those prices without fear or favour, competition in the wholesale market would be largely redundant.

According to Sapere, the MDAG's mistake is that it does not assess how its proposals might distort price discovery (distortion is unavoidable if a regulator is to alter market prices). Such an assessment is necessary so that the economic cost of these distortions can be compared against the benefits expected. The MDAG also does not assess whether significant market power has been exercised, or is a problem, in the wholesale electricity market and therefore the potential benefits of its proposal are unknown. Attempts by the MDAG to quantify costs and benefits are based on theoretical assumptions about pricing in pivotal situations with an assumed frequency of pivotal supplier situations, not based on real evidence that significant market power has been exercised and has cost consumers in the long term.

The role of advisory groups and need for further consultation

Paragraphs 10 and 11 of the MDAG paper state that the Authority may choose "to proceed directly to change the Code, without undertaking its own consultation, if it is satisfied on reasonable grounds that there has been adequate prior consultation, such as by an advisory group." The MDAG paper includes legal drafting for the preferred Code amendment, an assessment of the preferred option against section 15 of the Act, and the elements of the regulatory statement required under section 39(2) of the Act. This is purportedly "not intended to pre-empt or predetermine the Authority's own consideration of the matter, but simply positions the Authority to better minimise duplication of effort as appropriate."

The idea that the Authority could jump from an MDAG discussion paper to final Code changes without further consultation is troubling in the case of fundamental wholesale market changes that could have a significant impact on the operation of the market and long-term costs to consumers. Surely the Authority has a responsibility to articulate, publish and consult on its own views on the issues with the HSOTC provisions and its own preferred way forward rather than effectively delegate decision making functions to an advisory group. Meridian encourages the Authority to take a cautious approach and read section 39(3) of the Act narrowly. The obligations on *the Authority* to publicise a draft of the proposed amendment; prepare and publicise a regulatory statement; and consult on the proposed amendment and the regulatory statement should not be lightly put to one side. The rest of section 39(3) indicates where this might be appropriate, for example in instances where an amendment is technical, non-controversial, and has wide support. This is not such a case.

The Authority's own Consultation Charter reflects this more cautious approach and states:[11]

> "The Authority has given advisory groups responsibility for (among other things) … deciding the content of discussion papers on matters identified in their terms of reference and workplan (noting that the Authority is responsible under the Act for consulting with interested parties on Code amendment proposals in accordance with the consultation requirements of section 39 of the Act, and that any stakeholder feedback sought by advisory groups on discussion papers canvassing issues and options for developing the Code and/or market-facilitation measures is not consultation required under the Act (hence the deliberate use of 'discussion papers' as opposed to 'consultation papers'))."

[11] https://www.ea.govt.nz/about-us/strategic-planning-and-reporting/foundation-documents/.

We note, consistent with the above, that the MDAG paper is labelled a “discussion paper” and also includes a statement on the cover that the “paper has been prepared for the purpose of the Market Development Advisory Group. Content should not be interpreted as representing the views or policy of the Electricity Authority”. It is very difficult in these circumstances how the Authority could jump directly to a Code change following the MDAG discussion paper.

Meridian urges the Authority to follow due process and carry out its own consultation and analysis in respect of this potential change to the Code. Not doing so would contradict the intent of the Act as well as the Authority’s own foundation documents. It would also risk over-inflating the importance of advisory group membership and drive the industry participants that are fortunate enough to be represented on advisory groups towards more partisan participation.

Please contact me if you have any queries regarding this submission.

Yours sincerely

Sam Fleming
Regulatory Counsel

Appendix A Proposed drafting changes

13.5A Conduct in relation to generators' offers and ancillary service agents' reserve offers

(1) Where a **generator** submits or revises an **offer** for a **point of connection** to the **grid**, that **offer** must be consistent with **offers** that the **generator** would have made where no **generator** could exercise significant market power in the relevant market ~~in relation to that **point of connection** to the **grid** for that **trading period**~~.

(2) Where an **ancillary service agent** submits or revises a **reserve offer** for a **point of connection** to the **grid** (including an **interruptible load group GXP**), that **offer** must be consistent with **reserve offers** that the **ancillary service agent** would have made where no **ancillary service agent** could exercise significant market power in the relevant market ~~in relation to that **point of connection** to the **grid** for that **trading period**~~.

[Subclause (3) would be deleted.]

Appendix B Errors made by the MDAG in respect of 2 June 2016

Mischaracterisation of 2 June 2016 decisions

Part B of the MDAG paper covers the questions the Authority tasked the MDAG with addressing, the scope and scale of the issues, and the origins and rationale for the HSOTC provisions in the Code. However, Part B also contains a lengthy section on the high price event of 2 June 2016. That section contains several errors which need to be corrected. Meridian would like the MDAG, Authority, and other participants to proceed on a shared understanding of what occurred in the 2 June 2016 event, particularly if that is seen as in any way instructive when considering the issues and the amendments now proposed.

The MDAG paper states that:[12]

> "The Authority held that it [Meridian] was in breach and outside the clause 13.5B safe harbours. However, the Authority decided not to lay a formal complaint with the Rulings Panel but issue a letter of warning to Meridian."

Also, at paragraphs 48 and 49 and the heading between those two paragraphs, the MDAG paper repeats statements to the effect that the Authority made a decision finding Meridian in breach of the HSOTC provisions. This is incorrect. In fact, the only Authority decisions made in respect of the events of 2 June 2016 were:

- a decision that there was no undesirable trading situation under Part 5 of the Code; and
- a decision, under regulation 23(3)(a) of the Electricity Industry (Enforcement) Regulations 2010, to discontinue the investigation into the breach of the HSOTC provisions.

The Authority itself has no statutory role to make decisions regarding whether a participant has breached the Code. That responsibility is given by Parliament to the Rulings Panel (with rights of appeal to the courts). The only decision-making functions the Authority has under the Electricity Industry Act 2010 and Enforcement Regulations in respect of breaches of the Code (aside obviously from its principal role of making the Code in the first place), are to decide whether to commence an investigation into alleged breaches of the Code and appoint

[12] MDAG, paragraph 47

an investigator to try and effect settlement. If settlement is not reached, then the investigator will report a recommendation to the Authority and Regulation 23(3) provides that:[13]

> As soon as practicable after receiving the report, the Authority must decide whether to—
> (a) discontinue the investigation, in which case regulation 28 applies; or
> (b) lay a formal complaint with the Rulings Panel against the industry participant *allegedly* in breach, in which case regulation 30 applies.

Those are the only two options available and in the case of 2 June 2016 the Authority chose the former. Discontinuing the investigation was consistent with the advice of the investigator. The fact that the Authority decided to also send Meridian a letter expressing its opinion does not amount to a finding of a Code breach and carries no legal weight as the Authority has no statutory function or responsibility when it comes to deciding whether the Code has been breached. That role is given by the Act to the Rulings Panel.[14] This is not a narrow matter of semantics. There is sound constitutional principle behind this in that those who make laws or in this case Code should not also have the responsibility of interpreting those laws or Code or making decisions on whether they have been breached. In the absence of a Rulings Panel decision this means that in respect of the events of 2 June 2016 there is only an allegation of a Code breach and an Authority decision to discontinue its investigation into that breach. There is no finding. This may not be commonly understood because of the Authority's success in settling disputes on an agreed basis without recourse to the Rulings Panel.

Meridian did not and does not agree with the Authority's comments in respect of 2 June 2016 and made a public media release at the time saying as much. Because the Authority chose to discontinue that case Meridian was deprived of the ability to put any arguments to the Rulings Panel and in those circumstances it is not only wrong of the MDAG to describe the Authority's comments as a finding or holding of Code breach, it is also prejudicial to Meridian.

There have been several different enforcement actions

MDAG is also mistaken in saying that:[15]

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[13] http://www.legislation.govt.nz/regulation/public/2010/0362/latest/DLM3285357.html#DLM3285357
[14] Section 25 of the Act.
[15] MDAG, paragraph 45. We note that this statement is directly contradicted by a more correct statement at paragraph 67.a. acknowledging three enforcement actions to date (there have in fact been four).

> "To date, there has been only one substantive enforcement action under the HSOTC – namely, the high price event of 2 June 2016".

The decision to discontinue the investigation into the events of 2 June 2016 was not the only time that a breach of the HSOTC provisions has been alleged. Those other cases are no less 'substantive' than the 2 June 2016 case. Mercury was alleged to have breached the HSOTC provisions on 8 December 2016 when North Island reserves were pulled from the market in a 'trial' that resulted in high final prices for energy and reserves in the North Island.[16] Again, in this case the Authority decided to discontinue the investigation. There are also two current investigations underway. Firstly, in respect of Genesis offers at Tekapo A on several occasions during a period of islanded operation between 6 and 9 August 2018. Secondly, in respect of Contact and Meridian, where it is alleged that offers over $5/MWh breached the HSOTC provisions during a period of hydro spill. Both investigations are ongoing and again, if settlement is not reached, the Authority will need to decide whether to discontinue each investigation or refer the alleged breach to the Rulings Panel for a decision and remedy. No avenue exists for the Authority to decide there has been a breach of the Code.

Mischaracterisation of Meridian's position on the adequacy of hedge products

At paragraph 51 the MDAG indicates that it is Meridian's position that the range of financial products available is sufficient to manage the risk of price separation. This is not correct.

To be clear, Meridian's position is that risk management products available in the hedge market, including those in the financial transmission rights ("FTR"), Australian Securities Exchange ("ASX"), and Over the Counter ("OTC") markets are not always sufficient in their range and scope to cover locational price risks of the kinds faced by generators, particularly infrequently-occurring, short-duration events like those of 2 June 2016. The ASX and FTR markets provide homogeneous baseload products that cover months or quarters at a time at set locations. The majority of nodes are not covered and neither market provides a product that is well suited to cover unplanned outages or derating of transmission lines. The OTC market is generally more flexible, provided that risks are forecast ahead of time and a willing counterparty can be found (something that may be challenging – for example trying to find a counterparty for a risk product to manage the risk of an export constraint out of Southland).

[16] https://www.ea.govt.nz/dmsdocument/22784-31-october-2017-mercury-nz-limited

All hedge markets come with their own costs and risks that can make them expensive risk management tools relative to the use of generation as a natural hedge. Which is another way of saying that a rule prohibiting generator offers that attempt to manage basis risk may not benefit consumers in the long term once hedging costs are factored in, as well as potential effects on retail competition if integrated firms compete less for customers outside the grid regions where their generation is located. If it is the MDAG's or Authority's intention to prohibit such conduct then it should say so explicitly in the Code rather than via broadly drafted conduct provisions and undertake a full cost benefit analysis on whether this would be in the best interests of consumers.

Appendix C **Russell McVeagh advice**

Appendix D **Sapere Research Group report**

Russell McVeagh

1 May 2020

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MDAG REVIEW OF "HIGH STANDARD OF TRADING CONDUCT" PROVISIONS

INTRODUCTION

1. We have had the opportunity to review the Market Development Advisory Group's ("**MDAG**") Discussion Paper *"High Standard of Trading Conduct" Provisions: A Review by the Market Development Advisory Group* (25 February 2020) ("**Discussion Paper**").

2. In particular, we have considered the MDAG's proposal, as set out at paragraph 115 of the Discussion Paper, to delete the existing clauses 13.5A and 13.5B and the definition of "pivotal" in the Code and to replace those provisions with a new cl 13.5A (the "**MDAG Proposal**").

3. This opinion sets out our views on the robustness of the legal justification for, and effect of, the MDAG Proposal.

EXECUTIVE SUMMARY

The policy framework

4. It is the Electricity Authority's ("**Authority**") statutory objective "to promote competition in, …and the efficient operation of, the electricity industry for the long term benefit of consumers"[1]. This is similar to the purpose of the Commerce Act 1986 ("**Commerce Act**"), "to promote competition in markets for the long-term

[1] Electricity Industry Act 2010, s15. The Authority is also prohibited from making amendments to the Code that are not necessary or desirable to promote the objects of competition in the electricity industry, reliable supply of electricity to consumers, efficient operation of the electricity industry, or performance of the Authority's functions (s32(1)(a)).

benefit of consumers within New Zealand"[2], and would be interpreted by the courts in a similar way. In the context of the Commerce Act, the courts have found that as an economic statute its interpretation is coloured by the underlying economic concepts that inform the Act's objectives.[3]

5. The purpose of the High Standard of Trading Conduct ("**HSOTC**") prohibition, according to MDAG, is to improve confidence in the efficiency of prices when competitive pressures are weak.[4] In this respect, MDAG has viewed it as having an aligned economic objective to the misuse of market power prohibition in s36 of the Commerce Act. Like s36, which has recently undergone its own reform process in Australia (and is in the process of being reformed in New Zealand), the HSOTC prohibition is challenged, in that it must strike a balance between limiting the scope for participants with market power to undermine the efficient operation of the market, without chilling the operation of the market by limiting its ability to operate as a workably competitive market.

6. In all real world workably competitive markets, market participants will almost always possess some element of "market power", being the ability to raise market prices above economic cost. The question for regulators is, therefore, at what point does a firm have "too much" market power, exercised for "too long" so that competition is no longer workable. It is the point at which "acceptable market power" becomes "significant market power", which is the same as saying the point at which the market becomes "not workably competitive". Determination of workable competition in this context has been described as "a matter of professional judgment not analytical certainty".[5]

7. In this context, it would be inconsistent with the Authority's mandate for it to impose a behavioural prohibition that penalises a market participant every time the market participant offered above some measure of its (long and/or short run) costs, as may be suggested in the Discussion Paper and purpose statement at 13.5A(3). In particular, the benchmark against which that assessment is undertaken is not economic costs (as suggested in cl 13A(3)(a)), but a state of workable competition in which market power is relatively frequently exercised, but not by too much or for too long.

8. On the other hand, it would not be inconsistent with the Authority's mandate for it to impose a regulation that properly restricts the exercise of market power by too much or for too long. In that context, market power is the ability to act without material constraint in a "market", properly defined, not just at a particular moment of time or at a node (unless the circumstances of the market result in there being material constraints from electricity generated at other nodes, for example, in the case of islanding). Any narrower interpretation would be inconsistent with the Authority's statutory objective, which is to support the efficient operation of the

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[2] Commerce Act, s1A.

[3] *Commerce Commission v Telecom Corp of New Zealand Ltd* [2010] NZSC 111, [2011] 1 NZLR 577 at [23] and [35].

[4] Market Development Advisory Group Discussion Paper *"High Standard of Trading Conduct" Provisions: A Review by the Market Development Advisory Group* (25 February 2020) at ii.

[5] Steve Isser, "What is Workable Competition, Anyway (And Why Should We Care?) (4 December 2016) at p 10.

market as the primary price discovery mechanism (as Sapere expands on in its report).

The proposed HSOTC prohibition

9. As a standalone regulation, the proposed prohibition in cl 13.5A(1) is broadly workable and consistent with the Authority's objective, provided some minor suggested amendments are made by way of clarification.

   (a) At its essence the prohibition achieves the objective to support the efficient operation of the market by applying rules that are predictable in their application ex-ante. The prohibition at subclause (1) achieves this by applying a counterfactual test ("consistent with offers the generator would have made where no generator could exercise significant market power"), which draws on established competition law jurisprudence;

   (b) We do not see a material difference between the term "significant market power" and "substantial market power", which is the term used in s36 of the Commerce Act. The Authority should use whichever term it prefers. In our view, the courts would look at the language in the context of the economic objective of the statute and the Authority's statutory objective. The courts are likely to focus on the fact the prohibition appropriately signals intervention by the Authority only when there is "too much" market power exercised for "too long". This is as opposed to the standard expectation in workably competitive markets of an acceptable level of market power that may be transient or for other reasons is not able to be exploited for too long or by too much.

   (c) The words "in relation to that point of interconnection to the grid for that trading period" should be removed from the prohibition. By definition, market power exists and is assessed in a properly defined "market". Points of interconnection or brief passages of time are rarely properly defined markets, absent unusual circumstances. If the Authority wishes to provide guidance as to when it will examine use of a pivotal position at a node or in a specific isolated trading period to test if that exercise of market power has breached the prohibition in subclause (1), then it can do so through the use of regulatory guidance documents including safe harbour provisions as useful.

   (d) To further enhance certainty, the Authority should issue guidance on how it intends to apply the prohibition. In particular, that guidance should outline its approach to forming the relevant counterfactual.

The proposed purpose statement

10. In contrast, the inclusion of the "purpose statement" in cl 13.5A(3) introduces legal uncertainty into the provision by suggesting a different set of benchmarks against which offer behaviour should be tested. These benchmarks are drawn from the world of price regulation. As the Authority will be aware, there is a material distinction between the policy approach taken when markets are chosen as the

primary source of price determination (subject to prohibitions on exclusion or exploitation), as compared with monopoly price regulation. In the Commerce Act, if markets set prices, then conduct is regulated by the behavioural prohibitions in Part 2 (including the misuse of market power prohibition in s36). Regulated monopolies' pricing, to set an efficient price where there is no prospect of competition, is determined by Part 4.

11. Part 4 applies only to markets in which there is no competition and no prospect of competition. The jurisprudence relied on by MDAG in its discussion, and the purpose statement in the proposed cl 13.5A(3) reflects the approach taken in the Commerce Act's price control framework, rather than the Part 2 framework which supports the efficient operation of markets. MDAG's heavy reliance in its discussion document on the Wellington Airport case, which is the key authority in relation to the input methodologies process of setting price under Part 4, demonstrates the confusion that is likely to be caused if the purpose statement is included in its current proposed form.

12. In short, if markets are the primary mechanism for determining price, then market power must be allowed to be temporarily exercised from time to time as it is a necessary feature of workably competitive markets. In that context, it is appropriate to rely on models and hypotheticals to inform the empirical analysis as to whether market power was exercised in a way that unfairly and improperly undermined the efficient functioning of the market. But at the same time, in a real world competitive market where market participants are reacting half hourly to their competitors, based on partial and imperfect information, there is a dangerous false scientism in prohibiting all behaviour that fails to pass a retrospective test of what a party's actual and future (including opportunity) costs were at the time the offers were made. That approach risks distorting price signals and limiting incentives to innovate and invest and so undermining the efficient operation of markets, contrary to the Authority's statutory objective. The Authority has recently accepted that:[6]

> … settings that cause prices to fall so consumers are better off in the short run but that undermine profitability and the incentive to invest would not be for the long-term benefit of consumers. That is because such a situation can result in under-investment, reduced competition, higher prices and/or reduced quality of product/service over the long-term.

13. Simply put, it is not (currently) the obligation of each operator that may at times be pivotal in a half hour trading period at a node, to use their pivotal position to best ensure market prices settle at a level that only just covers their (retrospectively assessed) costs in each half hour trading period. Yet that appears to be the intention set out in the purpose statement and wider Discussion Paper. If that were the intention, it would signal a very different policy framework for generators and a very different investment environment for electricity generation in New Zealand (see further commentary set out in the Sapere paper).

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[6] Electricity Authority *Response to feedback on the 2019 cost benefit analysis: Revisions to CBA in the 2019 Issues Paper Transmission pricing review* (April 2020), at [5.13].

14. The purpose statement is also deficient in that it isolates and amplifies the pricing element of offers without any regard to other components of offers – most notably volume. The purpose statement therefore appears incomplete, and at worst could imply that the test is not concerned with the exercise of significant market power through the unjustified withholding of generation or reserve volumes. The economic effect of a pure refusal to supply and a constructive refusal to supply (where capacity is offered but only at an excessively high price) are identical and should be treated the same.

15. Even if MDAG intended the prohibition in cl 13.5A(1) to be a pure pricing prohibition (in which case this should be made clear in the drafting), the purpose statement would appear to limit the application of such a pricing prohibition to prices that are "too much". This suggests that MDAG does not consider it to be problematic for a generator to engage in predatory pricing to eliminate a competing generator. A predatory pricing strategy would equally not be "consistent with offers that [a] generator would have made where no generator could exercise significant market power", yet if one interprets the prohibition in cl 13.5A(1) in light of the purpose statement, such conduct would appear not to be intended to fall within the remit of the prohibition (at least until after the predation strategy has become successful and the predator is able to recoup their short term losses by charging an excessive price). However, by this point the damage has arguably already occurred with the loss of an as-efficient competing generator.

16. To resolve these concerns, we recommend deleting the purpose statement in its entirety, or deleting the purpose statement and replacing it with a guidance note from the Authority, that does not form part of the Code, describing the circumstances in which it would investigate.

17. Alternatively, and this is not our preference, if the purpose statement is retained then some important changes would need to be made to make it workable. The purpose statement would first need to be amended by making it clearer that the key prohibition is that set out in cl 13.5A(1) and the thresholds described in cl 13.5A(3) simply provide a framework for when the Authority may examine whether the prohibition in cl 13.5A(1) has been breached, or to clarify for the avoidance of doubt that the purpose statement merely describes an ideal outcome to be promoted in the long term (consistent with the Authority's objectives), but that it is not intended to set a standard against which the Authority would take punitive enforcement action.

18. In that case, the purpose statement should also be improved by:

    (i) Replacing "or" with "and" in cl 13.5A(3)(a) in the sentence that reads "prices do not exceed… by too much ~~or~~ and for too long";

    (ii) Replacing the word "exceed" with "depart" and adding the word "from" in the sentence that reads "do not ~~exceed~~ depart, by too much or for too long, from"

    (iii) Replacing "associated economic costs" in cl 13.5A(3)(a) with "offers that would be expected in a workably competitive market";

(iv) Deleting in cl 13.5A(3)(b) the final subparagraph that reads "in relation to the point of connection to the grid … of the kind referred to in subparagaphs (1) to (iv)";

(v) Replacing "economic costs" in cl 13.5A(3)(c) with "offers that would be expected in workably competitive markets";

(vi) Deleting "when assessed in relation to short-run costs" in cl 13.5A(3)(c)(i);

(vii) Deleting "when assessed in relation to long-run costs" in cl 13.5A(3)(c)(ii); and

(viii) Adding a new (d), which reads: "in construing the hypothetical workably competitive market the actual existing market is replicated, save for eliminating the significant degree of market power."

19. We would be pleased to expand on any of the above analysis to the extent that is useful for the Authority.

ANALYSIS

The proposed rule

The appropriate goal of the rule

20. The Authority can only promulgate amendments that are consistent with its statutory objectives:

(a) Pursuant to s 15 of the Electricity Industry Act 2010 (the "**EIA 2010**"), the objective of the Authority is to "promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers."

(b) Under s 32(1)(a) of the EIA 2010, the Authority:[7]

> may not promulgate amendments that are inconsistent with the s 15 objectives of the Authority. And it may not promulgate amendments that are not necessary or desirable to promote the objects of competition in the electricity industry, reliable supply of electricity to consumers, efficient operation of the electricity industry, or performance of the Authority's functions.

21. The Authority has previously reached the following conclusions on the scope of its statutory objective:

[7] *Vector Limited v Electricity Authority* [2018] NZCA 543 [30 November 2018] at [42].

(a) "The Authority interprets *competition* to mean *workable or effective competition*",[8] and correspondingly "interprets competition in the electricity industry to mean workable competition in regard to buying and selling electricity and where possible in electricity-related services, such as ancillary services, and transmission and distribution services";[9]

(b) The Authority interprets *competition for the benefit of consumers* to mean the efficiency benefits of competition;[10] and

(c) In terms of the "long-term benefit of consumers", the Authority has noted:[11]

> In reality competition is not necessarily orderly or constant over time. There can be periods when competition declines as competitors exit markets as they discover they are unable to operate profitably, and this can happen in a disorderly manner. There can also be situations when competition appears weak because firms can charge prices above competitive levels until new suppliers enter the market or consumers find ways to reduce demand, either temporarily or permanently…
>
> The Authority therefore interprets the phrase *competition for the long-term benefit of consumers* to mean it should consider the incentives for buyers and sellers to enter and exit the market, barriers to entry and exit, and more generally the contestability of the various markets in the electricity industry.

22. These conclusions are broadly consistent with both jurisprudence and observable parliamentary intent in relation to "competition" under the Commerce Act 1986. In particular, the following relevant concepts emerge from the law and parliamentary intent:

(a) First, competition is "a process rather than a situation", albeit one influenced by the structure of the relevant market.[12]

(b) Second, "workable competition" exists when there is an opportunity for sufficient influences to exist in any one market which must be taken into account by each participant and which constrains its behaviour."[13] The High Court in *Wellington Airport v Commerce Commission* observed that workable competition ultimately refers to a market in which there is an observable tendency towards generating outcomes such as "the earning by

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[8] Electricity Authority, *Interpretation of the Authority's statutory objective* (14 February 2011) at [A15]. (Emphasis in original).

[9] Ibid at [A19].

[10] Ibid. (Emphasis in original).

[11] Ibid at [A26] and [A27]. (Emphasis in original).

[12] *Re Queensland Co-Operative Milling Association Limited and Defiance Holdings Limited* (1976) 25 FLR 169 at [516].

[13] Heydon, *Trade Practices Law* vol 1, (2nd ed), Sydney, Law Book Co, 1989, p 1548, endorsed by: *Auckland Regional Authority v Mutual Rental Cars (Auckland Airport) Ltd* [1987] 2 NZLR 647; (1987) 2 TCLR 141 at p 671; p 166; and *Fisher & Paykel Ltd v CC* [1990] 2 NZLR 731; (1990) 3 NZBLC 101,655 at pp 757-758; at pp 101,678-101,679.

firms of normal rates of returns, and the existence of prices that reflect such normal rates of return, after covering the firms' efficient costs."[14]

(c) Third, workably competitive markets are not the same as perfectly competitive markets. In unregulated, competitive markets – workably competitive markets – firms can and do earn rates of return that are higher or lower than average, and price above their economic costs, in a manner that is not consistent with theoretical perfect competition. The "process" of competition naturally involves the unpredictable and asymmetrical 'jockeying for position' of the firms in the market, and fluctuations in the exact level of competition in the market at any static moment in time are therefore to be expected.[15]

23. Pulling together these threads on workable competition and market power, Isser has noted that:[16]

> Workable competition seems to have become a term for "acceptable market power." Any firm that is not a price taker and faces a downward sloping demand curve has some degree of market power, that is, the ability to raise price above marginal cost. Actors in most, if not all, real world markets have market power, the ability to raise price over the ideal equilibrium price, to some extent. Most firms have the ability to price discriminate. So the question is at what point does a firm (or group of firms) have "too much" market power and competition is no longer workable. Workable competition is often used interchangeably with "effective competition" and in negation to "significant market power" in expert testimony in antitrust cases.

24. It is for this reason that the stated purpose of the Commerce Act (and the objective of the Authority) is to promote competition for the long-term benefit of consumers. This phrase recognises (as the Authority has itself accepted – see paragraph 21(c) above), that short-run price increases are to be expected within the context of a competitive market, such that a longer term view is necessary in order to accurately assess the true state of competition. Discussing the 2001 insertion of the phrase "for the long-term benefit of consumers" into the Commerce Act's purpose statement, the chairman of the Commerce Committee stated (at the second reading of the Commerce Amendment Bill (no 2)):[17]

> We know that sometimes innovation has to come over some period of time, and that that requires some higher short-run-prices. We accept that, provided it is well and closely argued.

[14] *Wellington International Airport Ltd & Ors v Commerce Commission* [2013] NZHC [11 December 2013] at [18].
[15] Ibid, at [19].
[16] Steve Isser, above n 6.
[17] 8 May 2001.

On this basis, short-term competitive effects readily corrected by market processes are unlikely to raise competition concerns,[18] and relatedly, a short-term or transitory ability to raise prices above supply cost will not be enough to constitute the kind of market power with which competition law is concerned. As noted in *Boral v ACCC*:[19]

> In *Queensland Wire*, Mason CJ and Wilson J defined market power as the ability of a firm to raise prices above supply cost without rivals taking away customers **in due time**, supply cost being the minimum cost an efficient firm would incur in producing the product.…

25. The reference to "in due time" indicates that it is only when a price increase can be sustained beyond the short term that it may indicate market power. As noted by Dawson J, the term is "ordinarily to be taken to be a reference to the power to raise prices in a sustainable way".[20] In other words, increasing prices for a transitory period is consistent with the existence of workably effective competition.

26. We note MDAG's comment that "our proposal is not intended to allow the transient exercise of market power".[21] The authorities cited in this opinion, and by MDAG in its Discussion Paper, do not support such a proposition. The proposition is also inconsistent with the balance of the Discussion Paper:

    (a) MDAG correctly acknowledges, both in its discussion and in the draft formulation of its proposed prohibition, that the focus should be on where offers exceed "for too long" the associated economic costs;[22] and

    (b) MDAG further acknowledges that:[23]

    > Efficient economic costs of producing an additional unit of electricity are revealed in a process of competitive price discovery, which is an iterative process characterised by a continual updating of forecast information, with market participants adjusting their offers in response to the new information.

    If MDAG's intention is to prohibit any "transient exercise of market power", which necessitates an examination of all offers in all trading periods, then what is being proposed ceases to be a behavioural standard and becomes price regulation. This undermines the utility of the price discovery process. The analysis by Sapere demonstrates the detriment of substituting the price discovery process for price regulation.

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[18] *Universal Music Australia v Australian Competition & Consumer Commission* [2003] ATPR 41-947 at 47,381 [242], cited with approval by Glazebrook J in *ANZCO Foods Waitara Ltd v AFFCO New Zealand Ltd* [2006] 3 NZLR 351, (2005) 6 NZCPR 448, (2005) 11 TCLR 278, (2005) 2 NZCCLR 759 at [247].

[19] *Boral Besser Masonry Ltd v ACCC* (2003) 215 CLR 374; 77 ALTR 623 (HCA) at [136].

[20] Queensland Wire Industries Pty Ltd v Broken Hill Pty Co Ltd (1989) 107 CLR 177 at 200.

[21] Market Development Advisory Group Discussion Paper, above n 4, at footnote 13 and paras [215] – [216].

[22] See proposed cl 13.5A(3)(a).

[23] Market Development Advisory Group Discussion Paper, above n 4, at [237].

The current drafting of the proposed prohibition

27. The substantive prohibition is set out at the proposed cl 13.5A(1). It provides:

> Where a **generator** submits or revises an **offer** for a **point of connection** to the **grid**, that **offer** must be consistent with **offers** that the **generator** would have made where no **generator** could exercise significant market power in relation to that **point of connection** to the **grid** for that **trading period**. (emphasis in original)

28. In our view, a counterfactual based test as envisaged by the proposed test with some amendment is:

    (a) broadly consistent with the jurisprudence on the concept of workable competition (as outlined above); and therefore

    (b) consistent with the Authority's objectives under s 15 of the EIA 2010.

29. However, the concept of "significant market power" or "substantial market power" cannot exist in a vacuum. It must be assessed in the context of a properly defined market. So the words "in relation to that point of connection to the grid for that trading period" need to be replaced with "in the relevant market". Introducing artificial temporal (ie "for that trading period") or geographical (ie "point of connection to the grid") dimensions to the assessment fundamentally undermines the market power enquiry, as to whether a generator is able to act effectively unconstrained by competition (which then leads to the harms market power can cause). Adding "in the relevant market" better captures the conceptually correct enquiry and retains sufficient flexibility to define a "relevant market" as being a single node or single trading period provided that the fundamental economic conditions support such a finding (see further below).

30. We note that the Authority's use of the word "significant" may create unnecessary complexity, based on a general comment in the *Wellington Airport* case – which was ultimately a case set in the paradigm of a Part 4 regulated market, and not in a workably competitive market. MDAG intends "significant" to indicate some form of market power that is shorter-run than "substantial" market power. In the context of an economic statute and regulation making power, this interesting academic discussion is unlikely to move a Court from the underlying point – that market power only detrimentally affects the operation of a workably competitive market where it can be exercised for a non-transitory period of time, within the context of a properly-defined market. MDAG recognises this when it refers to the "critical point of calibration" being "whether offer prices exceed associated efficient costs "by too much" or "**for too long**"."[24] By definition, this concept of "too long" cannot be transitory or short-term. Any perceived benefit in using "significant" rather than "substantial" (ie to catch short-term market power) falls away at that point.

[24] Market Development Advisory Group Discussion Paper, above n 4, at [115].

31. In any event, given the economic understanding of substantial market power and its inverse relationship to workable competition, we consider that were any case to be ultimately taken to the courts on this issue, they would conclude that there was no economically meaningful difference between the two terms. While this also means we do not strongly object to the use of "significant", what seems clear is that MDAG has not made a sufficiently robust case to depart from the well understood formulation of "substantial market power". The "significant market power" formulation just introduces unnecessary complexity and uncertainty into the prohibition for no conceptually robust or identifiable benefit.

32. We would therefore suggest that the prohibition in cl 13.5A(1) be amended as follows:

> Where a **generator** submits or revises an **offer** for a **point of connection** to the **grid**, that **offer** must be consistent with **offers** that the **generator** would have made where no **generator** could exercise ~~significant~~ substantial market power in the relevant market~~relation to that **point of connection** to the **grid** for that **trading period**~~. (emphasis in original)

Assessing the counterfactual

33. To determine whether market power has been exercised in a way that is inconsistent with workable competition, the test proposed by MDAG contemplates testing the behaviour against how parties would behave in a workably competitive market. This requires construction of a counterfactual.

34. In the *0867* case,[25] the Supreme Court found that an assessment of whether a firm has taken advantage of a substantial degree of market power requires positing a hypothetically workably competitive market, with the same features as the real market, and asking whether the firm with substantial market power would have acted in the same way in that hypothetical market as it acted in the real market, as a matter of commercial judgement.[26]

35. This counterfactual – or, as the Court renamed it, the "comparative approach" – involves asking *whether it would have been profitable* for the firm to have acted in the way that it did if it was subject to competitive constraint, and not whether the firm *could* have acted the way it did.

36. We discuss at **Appendix One** some examples of possible behaviour in electricity markets and how this test would likely be applied in the context of the relevant case law.

The purpose of clause 13.5A

37. The proposed subclause 13.5A(3) sets out the purpose of clause 13.5A. We reproduce this subclause at **Appendix Two** and also set out there our proposed amendments if MDAG is minded to retain a purpose statement. For the reasons

[25] *Commerce Commission v Telecom Corp of New Zealand Ltd* [2010] NZSC 111, [2011] 1 NZLR 577.
[26] Ibid, at [31].

given at paragraph 16 above, our strong preference would be to delete that clause in its entirety.

38. The purpose subclause is outcome-oriented, and draws on the language of regulated markets, rather than workably competitive ones. As we have noted above, competition is a dynamic process, and the goal of competition policy – and by extension, any policy like the Authority's which has workable competition as a goal – is rightly to promote and encourage that process, not to mandate or promote any specific market outcome in and of itself.

39. On that basis, it is not appropriate for subclause (3) to identify outcome-oriented cost-related goals. This is a goal of Part 4 of the Commerce Act, which applies in situations where workable competition is not present,[27] and therefore cannot be relied on to drive efficient market conduct, necessitating an interventionist outcome-oriented policy approach. Section 52A of the Commerce Act states that the purpose of Part 4 is "to promote the long-term benefit of consumers in markets referred to in section 52 [i.e. those in which workable competition does not, and is not likely to, exist] by *promoting outcomes that are consistent with outcomes produced in competitive markets*".[28] Any attempt to replicate a competitive market outcome is necessarily imperfect and a second-best outcome to a competitive market outcome itself. In the absence of market failure of the kind envisaged in s 52 of the Commerce Act, regulators and policy-makers should not mandate market outcomes, as doing so negatively affects the ability of those markets to function properly over time.

40. The academic literature supports the notion that regulated, outcome-oriented regulation is a weak substitute for price discovery through market mechanisms. Indeed, this was the motivation for the institutional design of the electricity market. As noted by Grant Read, it was not expected:

> at least by the designers, that the market would produce spot prices that were particularly "low", for the capacity actually available. As we have seen spot prices must be high enough, on average, to cover the full fixed and variable costs of whatever investments are actually made. But the point is that competition and innovation in a de-regulated investment market was expected to provide a better national portfolio of investment options, implemented at lower development costs, and this was believed to be the key factor in keeping average price levels, including spot prices, lower than they would otherwise need to be to cover the cost of the required level of capacity investment.

41. While recognising that the MDAG's rationale for including subclause (3) in its current form does include an acknowledgement that "perfect competition does not exist and therefore offer prices may never exactly reflect efficient costs", we nevertheless consider that, in focusing strongly on specific cost-related outcomes, subclause (3) insufficiently recognises that:

[27] Specifically, where "there is little or no competition and little or no likelihood of a substantial increase in competition". See Commerce Act 1986, s 52.
[28] Commerce Act 1986, s 52A (emphasis added).

(a) workably competitive markets can still feature disequilibrium-driven short-run price fluctuations materially above (and below) cost, without that indicating the presence of substantial/significant market power; and

(b) substantial/significant market power (and as a corollary, the absence of workable competition) is not demonstrated by a firm's temporary, transient ability to raise prices above (or depress quality below) competitive levels.

42. We see here a risk that the Authority is assuming that a kind of ex-post outcome-focused review of market performance (of the kind seen in Part 4 regulation) is somehow more revealing (or even just equally revealing) of whether a market is workably competitive than normal price discovery mechanisms.

43. This approach could have particularly detrimental effects on innovation and investment decisions In relation to renewables, precisely at the time that more investment in renewables is desired by policy-makers and consumers as New Zealand transitions toward a low emissions economy and the Government is working towards its aspirational goal of 100% renewable electricity generation in a normal hydrological year.

44. Relatedly, we are concerned that the Authority's stated locus of competition – the point of connection to the grid – is an inappropriate area of focus in the context of an unregulated market:

(a) As noted above, the objective of the Authority is not to orchestrate specific market outcomes, and certainly not to orchestrate such outcomes at the very discrete level of a single point of connection.

(b) Rather, the Authority's role as regards the competitive process is to promote [workable] competition in the electricity industry for the long-term benefit of consumers.

(c) Workable competition and significant market power are inversely related, as a workably competitive market is one in which no firm can exercise significant market power.

(d) For the purposes of an assessment of substantial market power – and therefore of the level of workable competition – it is therefore essential to properly define the relevant market.

45. A single point of connection to the grid rarely constitutes a properly defined market within which it is appropriate to:

(a) speculate upon an individual firm's level of "market" power; or

(b) measure the level of workable competition.

46. The NZCC[29] and the courts[30] have previously considered the separate wholesale and retail electricity markets to be national, with the potential to define to separate local/regional electricity retailing markets if there are barriers to other retailers entering the area.[31]

47. This situation may be different where, for instance, a point of connection is islanded from the grid. During its enquiry into the net pivotal status of Genesis Power Ltd at Tekapo A, the Authority identified that:[32]

> When Tekapo A and Albury are islanded from the grid during line maintenance, a generator that is locally net pivotal has the ability and incentive to set high local prices, in this case at about $3000/MWh.

In islanding scenarios, the islanded assets are effectively cut off from the market such that the generator may have the ability and the incentive to price at supra-competitive levels, unconstrained by regular competitive forces.

48. Absent such a scenario, there is no justification based on the promotion of workable competition, for reviewing competitive dynamics or levels of market power at the point of connection, because it will not constitute a properly-defined economic market, and any conclusions drawn from that analysis are unable to be applied reliably to the workable competition standard, which by definition can only be assessed in the context of a market.

49. The proposed prohibition in cl 13.5A(1) can effectively regulate the conduct of a generator who may have the ability and incentive to price at supra-competitive levels when a point of connection is islanded from the grid. The High Court in *Turners & Growers Ltd,* in applying the "comparative approach" endorsed by the Supreme Court in *0867,* provided the following guidance on constructing the counterfactual:[33]

> First, in construing a hypothetical market it is necessary to replicate the actual or existing market, save for eliminating the dominance or substantial degree of market power by:
>
> (a) stripping out or neutralising the features or matters that give rise to, the substantial degree of market power;
>
> (b) denying all aspects of the firm's substantial market power by having constraints in the hypothetical market which neutralise that level of market power;

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[29] Power New Zealand Ltd v Mercury Energy Ltd (CL 48/94 Barker J. and Dr Maureen Brunt, 14/12/95, HC-Auckland).

[30] New Zealand Commerce Commission, Decision No. 317, Mercury Energy Limited / Power New Zealand Limited (26 February 1998).

[31] New Zealand Commerce Commission, Decision No. 476, Genesis Power Limited / Energy Online Limited (10 October 2002) at [58].

[32] https://www.ea.govt.nz/monitoring/enquiries-reviews-and-investigations/2012/locally-net-pivotal-generation/

[33] *Turners & Growers Ltd v Zespri Group Ltd* [2011] NZHC 913 at [342].

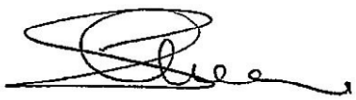
(c) ensuring that the firm, now denied all aspects of its substantial market power, does not gain (or rather retain) any advantage from its monopoly or monopsony in its dealings with its hypothetical competitors;

(d) retaining any special or essential features in the actual market, ie those that do not give rise to the substantial degree of market power; and

(e) checking that the hypothetical firm without its substantial degree of market power is in the same position and circumstances as the actual powerful firm in the real world, but for the removal of its substantial degree of market power.

50. The counterfactual assessment is conceptually simple in the case of a generator at a point of connection that has been islanded from the grid. The assessment simply requires a comparison of the generator's actual offer behaviour with how it would have offered if that point of connection remained connected to the rest of the grid.

Yours faithfully
RUSSELL McVEAGH



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Appendix One – Worked examples of the application of s13.5A(1)

1. The proposed counterfactual test in cl 13.5A(1) could, where relevant, entail an assessment of:

   (a) the offers made by other generators with similar generation assets located at the same point of connection in the same trading period;[34]

   (b) the offers of the same generator at the same point of connection in previous trading periods where no generator had significant market power;[35] and

   (c) the offers of other generators with similar generation assets at a different point of connection to the grid where no generator had significant market power.[36]

2. We describe below the types of conduct that are (and are not) likely to breach the proposed rule in cl 13.5A(1), although outcomes in each case will depend on the facts of a particular situation:

   (a) **Withholding capacity:** If the capacity could not have profitably been withheld in a competitive market, withholding the capacity from the market is likely to breach the new test. The European Commission ("**EC**") has investigated generators in the EU for abusing their dominance by withholding capacity, with any potential losses from that withheld capacity recouped through obtaining higher prices for the capacity that was dispatched.[37] This is consistent with the safe harbours in the current Code, which requires generators to offer all of its generating capacity that it is able to operate in a trading period.[38]

   (b) **Excessive offer prices.** Excessive offer prices are likely to breach the new test if such prices would not have been possible or profitable in a workably competitive market. The EU prohibition of market manipulation prohibits pricing wholesale energy products at an "artificial" level.[39] European case law and guidance has determined that artificiality considers whether prices "correspond to available production capacity or to fundamental market data".[40] This includes considering:

      (i) the intention of the generator in offering higher prices. In New Zealand this would likely involve review of the generator's internal documents;

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[34] This is the traditional approach to the counterfactual under New Zealand competition law as set out in *0867*.

[35] This approach was highly persuasive in *Melway v Robert Hicks* (2001) 205 CLR 1.

[36] This is one of the methodologies used in EU Competition Law to determine whether a firm has abused its dominant position by engaging in excessive pricing – see EU Court of Justice, *AKKA / LAA*, Case C-177/16, 14 September 2017.

[37] EU Commission, COMP/39.317, E.ON Gas, 4 May 2010.

[38] Electricity Industry Participation Code 2010, s13.5(1)(a).

[39] Regulation on Wholesale Energy Market Integrity and Transparency, Regulation 1227/2011.

[40] ACER Guidance on the application of REMIT, 4th ed, 17 June 2016; Spanish Competition Authority (*Comisión Nacional de la Competencia*), *Iberdrola*, 24 February 2012.

(ii) the capacity of the generator to offer more electricity. This is linked to (a) above;

(iii) the demand for electricity at the point in time that prices increased (i.e. can the increased offer prices simply be attributed to perceived increased demand); and

(iv) any justifications offered by the defendant as to why prices had increased.

(c) **Predatory pricing:** The new test could also conceivably capture predatory pricing, in a situation where a generator prices below cost to prevent as-efficient generation assets from generating a sufficient return on investment to cover their operating costs leading to them being mothballed with a resulting reduction in capacity at a relevant node. New Zealand has been reluctant to prohibit low prices (even below cost pricing), which are ultimately in the best interests of consumers, and therefore requires proof that the firm would be able to recoup any short-term losses by charging higher prices in the future.

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Appendix Two

MDAG's original 13.5A(3)

The purpose of this clause 13.5A is to promote offer behaviour and efficiency outcomes consistent with competitive markets, in particular so that –

(a) The prices of offers or reserve offers do not exceed, by too much or for too long, the associated economic costs to the generator or ancillary service agent respectively, assuming a market in which no generator or ancillary service agent has significant market power;

(b) with the effect that offers or reserve offers made by generators or ancillary service agents promote efficient:

(i) consumption decisions by consumers; and

(ii) production decisions by suppliers (including generators and providers of electricity services); and

(iii) innovation and investment by suppliers and consumers (including the location of their investments); and

(iv) risk management and risk management markets,

in relation to the point of connection to the grid (including an interruptible load group GXP) at which the generator or ancillary service agent, as applicable, submits or revises an offer or a reserve offer, and any node in respect of which the offer or reserve offer may have a material influence on efficiency outcomes of the kind referred to in subparagraphs (i) to (iv);

(c) where, for the purposes of paragraph (a) "economic costs" in clause 13.5A(3)(a):

(i) when assessed in relation to short-run costs, includes scarcity rents and the opportunity cost of generating electricity or of providing instantaneous reserve, as applicable;

(ii) when assessed in relation to long-run costs, includes recovery of capital costs with a suitable premium for risk.

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MDAG's clause 13.5A(3), with suggested amendments

The purpose of this clause 13.5A is to promote offer behaviour and efficiency outcomes consistent with competitive markets, in particular so that –

(a) offers or reserve offers do not depart, by too much and for too long, from offers that would be expected in a workably competitive market;

(b) with the effect that offers or reserve offers made by generators or ancillary service agents promote efficient:

(i) consumption decisions by consumers; and

(ii) production decisions by suppliers (including generators and providers of electricity services); and

(iii) innovation and investment by suppliers and consumers (including the location of their investments); and

(iv) risk management and risk management markets;

(c) where, for the purposes of paragraph (a) "offers that would be expected in workably competitive markets" in clause 13.5A(3)(a) reflects:

(i) scarcity rents and the opportunity cost of generating electricity or of providing instantaneous reserve, as applicable;

(ii) recovery of capital costs with a suitable premium for risk; and

(d) in construing the hypothetical workably competitive market the actual existing market is replicated, save for eliminating the substantial degree of market power.

Misread theory and underweighting harm to price discovery

Comments on MDAG's proposed High Standard of Trading Conduct prohibition

Kieran Murray, Toby Stevenson

1 May 2020

Contents

Appendices

Executive summary

1. To mitigate the risk of market power, MDAG proposes that all offers to sell electricity or ancillary services in the wholesale market be subject to a form of price control. Under the proposal, a generator, or supplier of interruptible load, would breach the Code if the Authority considered its offer price exceeds the price it would have offered were it to have faced stronger competition.

2. The MDAG proposal is novel. It would apply price control after services have been supplied, when best practice regulation argues for ex ante regulation. MDAG justify ex post price regulation by referring to competition policy; a regulatory framework that does not attempt to set or regulate prices. And it would empower the Authority to revew offer prices by generators that do not have significant market power.

3. MDAG recommend these measures without first assessing whether market power has been exercised, or is a problem, in the wholesale electricity market; the potential benefits of its proposal are therefore unknown.

4. MDAG says that the costs of its proposal would be negligible; it believes that no efficient behaviour would be deterred. In practice, achieving that degree of precision in regulatory intervention is an impossible task; it is important to recognise that impossibility so the expected costs can properly be weighed against expected benefits.

5. The reason it is safe to say that the Authority would make significant mistakes in assessing efficient offer prices, is because discovering the competitive, or efficient, price has to do with information. Fundamentally, the information a central decision-maker needs to promote social welfare (such as individual preference functions and supplier production functions) is hidden from it. Efficient economic costs—scarcity rents, opportunity costs, premiums for risk, etc—are revealed in the process of price discovery. They cannot be accurately determined ex ante nor known when a generator prepares its offers.

6. As the estimates by the Authority of efficient offer prices will almost certainly be wrong, the proposal will distort some efficient behaviour. Over time, these errors are likely to be biased toward under-estimating efficient costs. This is because, if the Authority were to have the power to influence prices, there would be demands by interested parties for those powers to be used for their benefit. The rule as drafted by MDAG would provide the Authority with few handholds to resist that pressure.

7. Under-pricing tends to restrict the supply-side of the markets: certainly in the longer-term by discouraging investment and innovation, and possibly also in the short-term by reducing reliability and security of supply. A poorly conceived intervention, that errs toward unduly low prices over time, would lead to the electricity sector becoming a very major policy problem.

8. MDAG's design work appears to have been misled by misreading several of the economic principles it relies upon. MDAG has formed the view that in workably competitive markets, offer prices by suppliers at separate locations would be equal to or close to each supplier's efficient economic costs. This conclusion seems central to MDAG's analysis as it hopes the

Authority would assess whether offer prices by a generator would exceed its economic costs by too much or too long.

9. However, in a strongly competitive market, the prices offered by the marginal producer for the likely marginal units will tend toward the marginal cost of that plant. This static efficiency condition applies only to the marginal unit; it does not mean that every offer in a workably competitive market reflects the marginal cost of each plant. Rather, the price offered by competitive suppliers in efficient markets tend toward the competitive market price (set by the price of the marginal unit), not the economic costs of the entity making the offer, otherwise opportunities for arbitrage would arise.

10. Hence, not only would MDAG task the Authority with estimating values—economic costs—that it can never do precisely, there would be no basis for the Authority to be confident that by limiting a generator's offers to an estimate of its efficient costs would increase economic efficiency. The market prices that would result could be either above or below the efficient market price.

11. Curiously, MDAG do not discuss its view of the relevant market for assessing whether any generator would have significant market power. In competition economics, a market is the field of exchange (or potential exchange) between buyers and sellers and encompasses the factors that shape and constrain rivalry.

12. To apply the proposed test, the Authority would need to both assess whether any generator has market power in a trading period, and assess what offers a generator might make if no generator had market power. These are different exercises. The first considers the market as it is, and the second requires a counterfactual in which the competitive constraint has been removed—how a generator might offer in market in which no generator has significant market power cannot be properly assessed only in relation to one point of connection and with respect to one half-hour as MDAG appear to suggest in its drafting.

Introduction

13. The Market Development Advisory Group (MDAG) has been considering "how to mitigate the risks of prices rising above their efficient level due to the exercise of market power" (MDAG, 2020, p. 17). It proposes that all offers to sell electricity or ancillary services in the wholesale market would be subject to review by the Electricity Authority (the Authority).

14. MDAG expects the costs of extending this form of price control to the wholesale electricity to be negligible and, in particular, that no efficient behaviour would be deterred by the proposed Code. MDAG holds this belief because it considers its proposed standard is tightly linked to the relevant economic principles (MDAG, 2020, p. 83).

15. We explore whether MDAG is right in assuming that its proposals would not distort price discovery in the wholesale market. Such an assessment is necessary so that the economic cost of any distortions can then be compared against the benefits expected from curbing prices influenced by the exercise of significant market power.

16. We also consider whether MDAG is correct in saying that its proposal is tightly linked to the relevant economic principles.

17. Our report unfolds in four sections as follows:

    - We outline our understanding of the proposed prohibition and the approach taken by MDAG to assessing its economic effects.
    - We discuss the importance of price discovery and the potential for the proposed prohibition to harm price discovery
    - We assess whether MDAG is correct in saying that its proposal is "tightly linked" to three important economic concepts.
    - Finally, we summarise our conclusions.

MDAG's proposal

A novel form of discretionary price control

18. MDAG proposes that all offers to sell electricity or ancillary services in the wholesale market would be subject to a form of discretionary price control. The Authority would be empowered to take disciplinary action (for a Code breach) if it considers that in any half-hour period an offer price submitted by a generator exceeds the price the generator would have offered were it to have faced stronger competition in that half-hour trading period.[1] For ease of reference, the proposed rule is replicated in appendix 1.

19. To apply the proposed rule, the Authority would exercise judgement across matters fraught with complexity and incomplete data; these judgements would include:

    a) whether any generator could exercise significant market power in relation to a point of connection to the grid, and hence whether the offers made by a generator at that point of connection were amenable to review[2]

    b) how offers by generators (at each node at which any generator can exercise significant market power) would be different if no generator could exercise significant market power in relation to that point of connection

    c) whether the offers under review differed sufficiently—from the offers the Authority judges would have been made if no generator could exercise significant market power in relation to that point of connection—to give rise to a breach of the rule.

20. No other sector in New Zealand is subject to price control in this way; the intervention would mark a significant departure from the current wholesale electricity market design.

21. Markets which have been investigated and determined as having little or no competition, and little or no likelihood of a substantial increase in competition, may be price regulated under Part 4 of the Commerce Act. Before price control can be imposed on a business under this Act, the Commerce Commission must hold an inquiry into whether, and if so how, to regulate prices and an Order in Council made following a recommendation for regulation by the Minister of Commerce.[3] That is, price control follows an extensive investigation into whether the benefits would exceed the costs. Currently, electricity, gas and telecommunication networks are subject to price control; airports are subject to information disclosure under these provisions as the

[1] For ease of exposition, we refer to offers by generators. However, the proposed rule would also apply to consumers offering to supply ancillary services such as interruptible load.
[2] The test under the proposed rule is that "no generator could exercise significant market power in relation to [the relevant] point of connection"; this drafting would suggest that if no generator could exercise significant market power then no offer could be in breach of the rule; likewise, it would not appear necessary to establish that the entity making an offer to be reviewed had or could exercise market power, just that a generator (wherever located) could exercise significant market power in relation to the relevant point of connection.
[3] Section 52E.

government decided that the comparatively small benefits to consumers did not justify the economic costs of price regulation.[4]

22. However, MDAG has not assessed whether market power has been exercised, or is a problem, in the wholesale electricity market (MDAG, 2020, p. 27). Because MDAG does not assess whether market power has been exercised, or is a problem, the potential benefits of its proposal are unknown.

23. A feature of the price control regime (and price regulation generally) is that the method by which the Commission would determine prices is detailed in advance (in the form of the Input Methodologies) and the prices that would apply are set by the Commission *before* an entity provides regulated services. We discuss the reasons why governments require regulators to detail in advance how they would regulate prices further below (see section 'Regulatory Commitment').

24. In contrast with ex ante price regulation, competition policy issues guidelines and is enforced ex post and relies on precedent. Competition policy aims to protect rivalry—the competitive process the Authority is charged with promoting under its statutory objective. It curbs behaviours that would reduce competition. For example, section 27 of the Commerce Act makes it unlawful to enter into arrangements to substantially lessen competition, and section 36 precludes an entity with substantial market power from using that market power to prevent or deter rivals from competing on their merits.

25. The policy presumption (with strong theoretical and historical justification) for competition policy is that competitive discipline will over time drive firms to adopt the most cost-efficient supply arrangements, redirect resources to their most profitable use, provide consumers with cheaper or better products, and compete away excess returns. In competition frameworks, prices result from the interplay of market forces—other than for the industries regulated under Part 4 (that is, the lines companies), the Commerce Commission does not set or regulate prices; its focus is on supporting the competitive process.

26. In addition to its focus on price, the proposed rule also differs from competition policy principles in that it appears to provide for the Authority to review offers by entities that do not have significant market power. Generators that respond (pro-competitively) to market conditions may have their offers reviewed if that response involves an offer at a node where another generator can exercise market power.

27. The MDAG proposal therefore is novel in that it would:

    - extend price regulation to the wholesale market without first assessing whether the exercise of market power is a problem in the wholesale electricity market
    - apply price regulation ex post, when best practice argues for ex ante regulation
    - justify ex post price regulation with reference to a regulatory framework (competition policy) that does not attempt to set or regulate prices

[4] https://infratil.com/infratil-news/2003/media-statement-from-hon-lianne-dalziel-minister-of-commerce-no-control-imposed-on-airfield-ac/

- provide for a review of offer prices by generators that do not have significant market power.

MDAG did not properly consider the costs or benefits of its proposal

28. MDAG says that the costs of its proposal to extend price control to the wholesale electricity "are expected to be negligible because direct costs are near-zero and we expect no increase in indirect costs" (MDAG, 2020, p. 8). Indirect costs is the term used by MDAG to describe efficient behaviour deterred by the proposed Code. MDAG explains that it holds this belief "because the proposed Code uses a standard that is more tightly linked to the relevant economic principles than the existing Code, and for this reason we expect more deterrence of 'bad' behaviour and less deterrence of 'good' behaviour" (MDAG, 2020, p. 83).

29. Prior to reaching this conclusion, MDAG had investigated and determined that the existing High Standard of Trading Conduct (HSTOC) provisions and the Authority's enforcement actions have not had "any appreciable effect on participants' behaviour or market outcomes, positive or negative" (MDAG, 2020, p. 4). As MDAG found that the current rule has not deterred efficient behaviour, and it expects the new rule not to increase those costs, MDAG is, in effect, asserting that its proposed form of price control can be introduced without *any* risk of deterring efficient behaviour.

30. For MDAG's claim to be correct, the offers the Authority considers should have been made must always result in more efficient market prices than would result from price discovery in the market, and all participants would need to be confident ex ante how the Authority would determine those offers so they can act and react efficiently to the altered price signals. Such a claim asks too much of the Authority. If the Authority were able to always calculate the efficient offer price for each generator and to set those prices without fear or favour, competition in the wholesale market would be largely redundant.

31. MDAG is not, of course, making a case against competition in favour of regulated prices. Its mistake is that it did not assess how its proposals might distort price discovery (a distortion that is unavoidable if a regulator is to alter market prices). Such an assessment is necessary so that the economic cost of these distortions can then be compared against the benefits expected from the objective of curbing prices influenced by the exercise of significant market power. In the following section of this note we touch on some of the matters relevant to assessing the economic distortions to price discovery that would result from MDAG's proposal—these comments are not intended to be comprehensive but illustrative.

Importance of price discovery

Markets solve what would otherwise be intractable

32. It has been said that (McMillan, 2002):

> The market system is like democracy. It is the worst form of economy, except for all the others that have been tried from time to time… We should cheer it because it solves some all-but-intractable problems, which have been tackled by none of the alternative forms of economic organization… But it has its limits. There are things it cannot do… it works only if it is well designed. Two cheers are enough.

33. The intractable problem solved by markets is price discovery. The economic function of organised markets, such as the wholesale electricity market, is largely to aggregate dispersed information into a signal, in the form of prices, of value and scarcity. That is, market prices are primarily a means of collating and conveying information. Market prices help solve the central problem of economics—how to secure the best use of resources known to and controlled by individual members of society for ends whose relative importance only these individuals know (Hayek, 1937).

34. In the vast majority of real-world markets, including many that would reasonably be categorized as workably competitive, market prices can be impacted by some degree of market power. Indeed, the dynamics of competitive processes can be seen in terms of competition for temporary positions of market power—firms strive to gain an advantage that cannot, at least immediately or very quickly, be fully matched by rivals.

35. MDAG would like to improve on existing market outcomes. We deduce, it hopes that its proposed form of price regulation would constrain the exploitation of market power but not constrain or otherwise impede competitive conduct. In practice, achieving this degree of precision in targeting a regulatory intervention is an impossible task, and, as a practical matter, it is important to recognise that impossibility so that the expected costs could properly be weighed against the expected benefits.

36. The reason why it can safely be said that regulators, no matter how wise and no matter how well resourced, can be expected to make significant mistakes is because discovering the competitive, or efficient, price has to do with information. Price discovery is a process that (implicitly) makes use of huge amounts of information, of such scale and scope as can not feasibly be processed by a single decision making unit such as a regulatory agency (Yarrow, Decker, & Keyworth, 2008). Fundamentally, the information a central decision-maker needs to promote social welfare (such as individual preference functions and supplier production functions) is hidden from it, as we illustrate below.

Distorting price discovery harms consumers

37. The importance of price discovery is far from being a theoretical point, of academic interest only. Soviet type economies spent decades during the twentieth century applying policies that sought to hold down prices below what would have been market clearing levels, across a whole range of economic sectors. The impacts on the supply-sides of markets in such economies are matters of economic history. In consequence of those supply-side impacts, they were not good places to be a consumer (Yarrow, Decker, & Keyworth, 2008).

38. New Zealand also experimented with centralised pricing in the electricity sector prior to the creation of the wholesale market in 1996. The Davidson inquiry into the 1992 electricity shortage concluded that "the lack of appropriate pricing signals … contributed to the event, because the necessary pricing information and financial incentives for ESAs and consumers to mitigate against the shortage were inadequate until the shortage actually existed" (Davidson, 1992, p. ix). A prior investigation found that administered pricing and centralised decision-making had led to very poor use of capital (Galvin, 1985).

39. MDAG is of course not proposing to centralise decisions in relation to pricing and resource allocation to the same extent as occurred prior to 1996. However, the history of why the wholesale market was created may help in recognising that consumers are harmed not just from the exploitation of market power but also by regulatory interventions that lead to under-pricing. Under-pricing tends to restrict the supply-side of the markets: certainly in the longer-term by discouraging investment and innovation, and possibly also in the short-term by reducing reliability and security of supply. In short, the risks (of harm) associated with regulating prices unduly low tends to become a very major policy issue.[5]

40. The history of electricity market designs that require participants to structure offers to reflect the operating cost of the plant being offered (plus some amount for the recovery of capital with a suitable premium for risk etc), illustrates how markets fail without price discovery. The original, and since abandoned, market in the United Kingdom required generators to submit offers based on operating costs. In that market a capacity payment was added with the aim of compensating the generator for its capital costs and risk.[6] In essence, the market design attempted to externalise what had previously been internalised 'least cost' models operated by the former monopoly supplier. Those engineering optimisation models ensured a merit order could be established and efficient dispatch of existing plant (Newbery, 1997). However, the process provided no form of price discovery, and hence no signals for efficient investment and operation, and the market failed.

[5] The Authority recognises the consumer harm from under-pricing, most recently in its response to feedback on its Transmission Pricing Methodology cost benefit analysis (Electricity Authority, April 2020, paras. 5.12-5.13).

[6] The system was thermal so opportunity costs were thought to be captured by operating costs plus capital costs. Hence, the pool design attempted to provide for offers to reflect economic costs as described by MDAG in its proposed clause 13.5(3)(c).

41. In contrast to the United Kingdom, price discovery is central to the New Zealand market design. From its inception in 1996, generators submitted price offers, not costs, to discover the marginal price at each node. The core of the market design is unchanged because it has served New Zealand well. The 2019 Ministerial Electricity Price Review observed (Deans et al, 2019):

> New power stations have mostly been built in order from cheapest to most expensive. This contrasts with the period before generation competition in the mid-1990s when comparatively high cost investments were made ahead of cheaper alternatives. This indicates competition among generation developers has disciplined costs.
>
> The evidence from Transpower's monitoring of the security of electricity supply shows competition has delivered sufficient new investment to maintain reliable supply. Again, performance in this regard has been better than before the mid-1990s.

42. Further, 47% of the 2500 MW of new generation capacity commissioned in the past 20 years produces electricity from renewable fuel sources. This is an important additional consideration for New Zealand electricity market design, given the aspiration to achieve 100% renewable generation and very low emissions from generation under the Climate Change Response (Zero Carbon) Amendment Act 2019.

Efficient costs are revealed through price discovery

43. To illustrate the concept of price discovery, consider a simple market with two suppliers, one a generator from renewable sources with a total cost of production of $5MW and one with a total cost of production of $80MW. Suppose demand is uncertain. In a workably competitive market, the lower cost generator could offer at a price closer to $80MW than to $5MW, and expect to be dispatched if the other producer prices at their cost of production (at an offer price higher than $80MW there is a risk that its offer would be undercut by the competitor). If demand is higher than expected, and generation from renewable sources lower than expected, the higher priced generator might offer at a price above $80MW, as might the lower cost generator, and still see its plant dispatched. The higher price would be necessary, in this scenario, to balance demand to supply.[7]

44. Hence, in this highly simplified illustration, the efficient price may lie within a range from $5MW to above $80MW, with demand conditions picking out the efficient price. The simple example also illustrates that efficient economic costs are revealed in the process of price discovery and not something that can be accurately determined ex ante, as the information required will not be fully available ahead of the price determination process. The price strategy of each generator to recover costs that do not vary with production (for example, a return on capital) will depend not only on total demand but also on the expected offer strategy of its competitors.

[7] As MDAG observes (MDAG, 2020, p. 73), an efficient price depends on the opportunity costs of both supply and demand.

In competitive markets, these pricing strategies are characterised by continual updating as (always incomplete) new information becomes available and expectations are adjusted. These updated expectations depend on new information about rivals' costs and expectations, including rivals' expectations of others' expectation, and reallocation of risk, and so on.

45. The outcome is that efficient economic costs—for example scarcity rents, opportunity costs, premiums for risk, etc—are revealed in the process of price discovery. They cannot be accurately determined ex ante nor known to a generator when it prepares its offers; economic costs and prices are jointly and simultaneously discovered via the competitive process (Yarrow & Decker, 2014, p. 9). As we have seen in New Zealand, the price discovery process may reveal that some costs that are quantifiable ex ante are not economic (such as running costs for aging thermal stations), while other costs that cannot be known for sure in advance (such as the return on generation from renewables) has proven to be economic, while the economic costs for other technologies have yet to be fully revealed (such as for grid scale batteries).

46. Similar issues arise in relation to MDAG's explanation as to why there might not be a conceptual conflict between using SRMC and LRMC as an efficiency benchmark. MDAG observes that, in a competitive market with free entry, scarcity rents will on average equal the cost of new capacity over time (MDAG, 2020, p. 245). The difficulty with this observation, for the MDAG proposal, is that it provides no basis for assessing whether any estimated scarcity rents are efficient or not; that question would only be answerable over time (potentially measured in decades)—that is, if the net present value of SRMC (including efficient scarcity rents) turned out to equal the LRMC of new capacity.

47. Because the efficient level of scarcity rents in any given half-hour trading period is not observable, the estimate by the Authority of this value—as would be required to apply the MDAG prohibition—will almost certainly be wrong. Over time, these errors are likely to be biased toward under-estimating the efficient level of scarcity rents for the reasons discussed below (see 'Regulatory Commitment' section).

48. The prospect that regulatory interventions may prevent generators recovering all of their economic costs in an energy only market is often referred to as the "missing money problem".[8]

49. Bill Hogan has raised the challenge of the missing money problem directly with the Electricity Authority (Hogan, Market Design and the Green Agenda, 2012)

> The "missing money" problem is material and has a significant impact on investment incentives. If market prices do not provide adequate incentives for generation investment, the result is a market failure. A workable "energy only" market would eliminate the "missing money" problem. The concept is

[8] The central problem, labelled "missing money," is that when generating capacity is adequate (including reserves) and electricity prices are set based on the costs of the marginal unit, those prices would be too low to pay for adequate capacity. The consequence of this problem is a long-run average shortage of capacity and too little reliability (Cramton, 2006).

> not that there should be no market interventions. But the interventions should not overturn the market.

50. Yarrow and Decker also draw on the concept to explain the relationship between efficient prices and within-period marginal incurred (and hence observable) costs (Yarrow & Decker, 2014):

> for any plant that is marginal in a particular pricing period, efficient prices will be in excess of within-period, marginal, incurred costs.
>
> where the spot market cleared at prices that were always equal to the within-period, marginal, incurred costs there would indeed likely be a missing money problem.
>
> what would be problematic is if misguided regulatory policy required that bids reflected within-period, marginal, incurred costs or set an unduly low upper bound to prices.

51. In the future, as the proportion of generation from renewable energy sources approaches 100% in New Zealand, the risks of harm to consumers from interventions leading to 'missing money' will grow. In particular, discretionary renewable generation—releases from stored hydro—will face weaker signals from thermal generation with its high fuel cost. A poorly conceived intervention, that errs toward unduly low prices over time, will lead to the electricity sector becoming a very major policy problem.

Misread theory

52. MDAG's expresses confidence that its proposal is "tightly linked to the relevant economic principles" (MDAG, 2020, p. 83). However, it appears to misread several fundamental economic principles, and this misreading may have misled its design work. We discuss three important economic concepts below.

Offer prices in workably competitive markets

53. MDAG has formed the view that in workably competitive markets, offer prices by suppliers at separate locations would be equal to or close to each supplier's efficient economic costs. This conclusion seems central to MDAG's analysis as it hopes the Authority, in investigating whether the rule had been breached, would assess whether offer prices by a generator would exceed its economic costs by too much or too long (MDAG, 2020, pp. 4,6).

54. However, competition economics and market theory does not hold that efficient offer prices of each supplier will equal its economic costs. Rather, in a strongly competitive market, the prices offered by the marginal producer for the likely marginal units will tend toward the marginal cost of that plant. This static efficiency condition applies only to the marginal unit; it does not mean that every offer in a workably competitive market reflects the marginal cost of each plant. An efficient market results in the same price for identical commodities regardless of where they are traded, once adjustments are made for transport and transaction costs, otherwise opportunities for arbitrage would arise.[9] As a consequence, the price offered by competitive suppliers in efficient markets tend toward the competitive market price (set by the price of the marginal unit), not the economic costs of the entity making the offer.[10]

55. Descriptions of market power in competition economics reflect these concepts and refer to market power as the ability of a supplier to profitability raise *market prices* above *competitive levels*. For example, in its guidelines, the Commerce Commission describes market power as "the ability to raise price above the price that would exist in a competitive market (the 'competitive price')" (Commerce Commission, 2019, p. 5). Similarly, the United States Department of Justice cite its Supreme Court and define market power as "the ability to raise prices above those that would be charged in a competitive market" (Anti-trust division, 2020).

56. In contrast, MDAG restates the concept of market power as inferring an observable relationship between costs and offer prices. In summarising the key rationale for its approach, MDAG state that (MDAG, 2020, p. 6):

[9] A nice overview of the concept of the Law of One Price is available at Economic History Association website https://eh.net/encyclopedia/the-law-of-one-price/

[10] There are design features of the wholesale electricity market that allow a participant to offer less than its expectation of the market price with the expectation that if called to generate it will receive the market price (e.g., for run of river hydro or wind). However, this is a specific design feature of the wholesale market and not a test for an economically efficient offer. For example, if a generator is contracted it can face incentives to offer below its marginal costs.

> …offer prices in strong competition are not expected to exceed economic costs by too much or too long. Offer prices exceeding associated economic "by too much" or "for too long" should be disciplined by effective rivalry. If this does not happen, it would indicate significant market power…"

57. This restatement of the concept of market power is repeated several times in its discussion document. Some examples follow.

58. At footnote 122, MDAG state: "At law, market power is the ability to raise prices above marginal costs both sustainably and profitability" and reference *Southern Cross v Commerce Commission*. However, the Court expressed the concept in conventional terms and referred to competitive price levels (Commerce Commission v Southern Cross Medical Care Society, 2001, para. 68):

> If a seller can raise its prices above a competitive level, without losing sales to the point that price increase becomes unprofitable, the seller is regarded, for competition law purposes, as possessing market power.

59. Recently, the High Court in *NZME* used similar terminology while noting that the test is derived from *Southern Cross* (NZME Ltd v Commerce Commission, 2017, para. 166):

> … the Commission would need to find circumstances in which the merged entity could *raise prices above a competitive level* without losing sales to an extent that the price increase would become unprofitable. (emphasis added)

60. MDAG footnote a cite to Joskow & Kahn, (2001, p. 9) in support of its contention that rivalry between sellers pushes offer prices close to their associated efficient costs—see footnotes 125, 198. However, Joskow & Kahn express the test in conventional terms:

> The more the observed price exceeds the competitive benchmark price, the more one can presume that either market power was being exercised or some other source of market imperfection has interfered with the competitive interplay of supply and demand. The competitive price benchmark that we utilize is the short run marginal cost of supplying electricity from the last unit that clears the market in each hour.

61. The confusion in MDAG's approach may have arisen because it relies heavily in its discussion document on the concepts explored in the *Wellington Airport* case. This case concerns the input methodologies for regulating prices under Part 4 of the Commerce Act (that is, the price control provisions that apply when the government has determined that there is no competition in a sector and no prospect of competition). When there is no prospect of competition, regulated price setting tends to rely on cost-estimation processes. As Yarrow & Decker (2014, p 10) observe in a paper cited by MDAG:

> Such approaches are unobjectionable given the regulatory task, but they are only so because, in the relevant circumstances, the alternative of competitive discovery/determination of efficient prices is infeasible. That is, it becomes the best feasible option

> for the purpose of determining prices and costs for want of a superior alternative. However, when such an alternative is available the notion that economic costs should be estimated on an ex ante and 'objective' basis should properly be put to one side.

62. The problem for MDAG is not one of semantics. Its misreading of theory means that its proposal is not "tightly linked to the relevant economic principles", as it assumes for its cost benefit analysis. Not only would MDAG task the Authority with estimating values—economic costs—that it can never do precisely (as discussed in the preceding section), there would be no basis for the Authority to be confident that by limiting a generator's offers to an estimate of its efficient costs it would increase economic efficiency. The market prices that would result could be either above or below the efficient market price. The cost of these distortions has not been considered by MDAG.

Market definition

63. The *Wellington Airport* case might also have deflected MDAG from thinking about how the Authority ought to define the relevant market when assessing whether any generator could exercise significant market power. All entities price-controlled by the Commission are natural monopolies—there is only one supplier in each market.[11]

64. An assessment of market power of generators would necessarily involve considering the relevant market or markets—that is, the relevant range of economic activity. In competition economics, a market is the field of exchange (or potential exchange) between buyers and sellers and encompasses the factors that shape and constrain rivalry. It is these factors that limit the ability of a firm "to give less and charge more" (Re Queensland Co-operative Milling Association Ltd; Re Defiance Holding Ltd, citing Attorney General for the USA Report of the US Attorney General's National Committee to Study the Antitrust Laws (31 March 1955), 1976)

65. The High Court expressed the concept of a market as follows (Commerce Commission v Air New Zealand, 2011, para. 124):

> Without wishing to be definitive, while we see the heart of a market in economic terms as being the actual and prospective transactions between sellers and buyers, the broader ambit of a "market" looks to the rivalry between sellers for those who will buy their products, and encompasses the factors that directly shape and constrain that rivalry, as a matter of fact and commercial common sense. In particular, relevant participants in a market can include those whose responses to changes in market terms are material to the decisions sellers make regarding those terms; this embraces sellers of goods that are

[11] The regulatory challenge faced by the Commission is to match revenue to efficient average costs, and not to actual costs (as MDAG would task the Authority), because actual costs may be excessive if an entity faces limited competition.

> close substitutes (in supply or demand) and may also include participants in downstream transactions, to the extent that such transactions transmit significant competitive pressures upstream.

66. Curiously, MDAG do not discuss its view of the relevant market for assessing whether any generator would have significant market power. The draft prohibition refers to a "point of connection to the grid for that trading period". How a generator might offer in market in which no generator has significant market power cannot be properly assessed only in relation to one point of connection and with respect to one half-hour; such an assessment would not encompass the factors that directly shape and constrain rivalry and therefore could not be described as being "tightly linked to the relevant economic principles".

67. However, MDAG provide no guidance as to the factors it believed would be considered by the Authority when it assesses the offers a generator would have made if no generator could have exercised significant market power in relation to the relevant trading period.[12] Without this guidance, submitters may have different perspectives of important considerations such as:

- whether derivative contracts are in the same market as generator offers to the wholesale market; contract positions can clearly have powerful effects on offer strategies, and for this reason international competition authorities tend to view derivative and wholesale markets as one market for competition analysis,[13] whereas in New Zealand the Commission has previously considered derivative contracts to be a different product to physically delivered electricity (Commerce Commission, 2009, p. 41)
- whether ancillary services are a separate product from wholesale electricity (Commerce Commission, 2009, p. 44), or an inherent feature of the wholesale market as neither the quantity nor the price of ancillary services are determined independently from wholesale electricity demand and supply
- the period of time over which market power and offer strategies are to be assessed; markets are typically assessed as operating continuously through time because market equilibrium is a relationship between actions that necessarily take place successively. However, the Commission will define a time dimension if suppliers can price discriminate across time periods because buyers' competitive

[12] The discussion in the MDAG paper seems not to distinguish between an assessment of whether a particular generator has market power in a trading period, and an assessment of what offers a generator might make if no generator had market power. These are different exercises. The first considers the market as it is, and the second requires a counterfactual in which the competitive constraint has been removed.

[13] See for example, Australian Gas Light Company v Australian Competition and Consumer Commission (No.3) [2003] FCA 1525; Australian Competition Tribunal, Application for Authorisation of Acquisition of Macquarie Generation by AGL Energy Limited [2014] ACompT 1; Commission of the European Communities, 2010, Public Consultation by the Directorate General for Energy on measures to ensure transparency and integrity of wholesale markets in electricity and gas: 31 May 2010; Regulation (EU) No 1227/ 2011 of the European Parliament and Council of 25 October 2011 on wholesale market integrity and transparency, *Official Journal of the European Union*, 8 December 2011, L326/1-16; Heyer, K., & Shapiro, C., 2010, 'The Year in Review: Economics at the Antitrust Division, 2009-2010', *Review of Industrial Organization* 37, 291-307.

alternatives vary over time (Commerce Commission, 2019, p. 22). It is not clear from the MDAG discussion document, whether it intends its proposed rule to pre-determine how the Authority considers the time dimension when assessing market power and offer strategies.

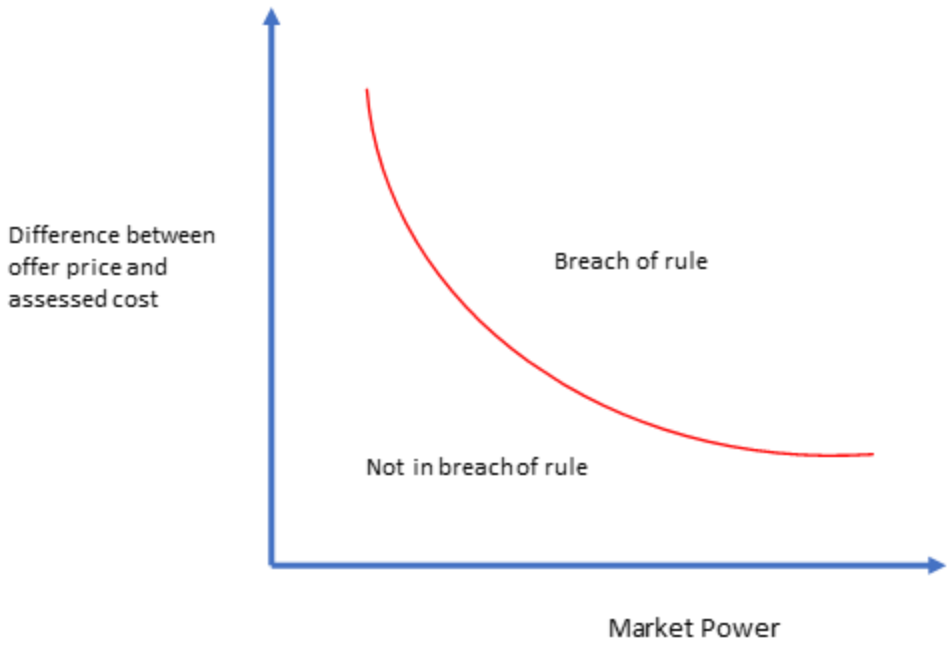
68. Without working through these concepts, MDAG cannot be sure how the Authority would assess how a generator would have offered if no generator had significant market power, and therefore the scope of intervention its rule would provide the Authority. MDAG do not provide a worked example, applied to real data, to illustrate its understanding of its proposed rule.

Regulatory credibility

69. As discussed further above, we consider MDAG gives too little weight to the complex and ineffable factors the Authority would need to assess to estimate the offers a generator would have made were it to have faced increased competition in the market. Established literature identifies a further problem that appears not to have been considered by MDAG—that problem is referred to as regulatory commitment. Regulatory commitment is the problem that, without a binding commitment by the regulator to consistent long-term policies, investors in long-life assets would reasonably be concerned that once investments were made the regulator might switch to what appears a better policy (in the short-term).

70. The proposed rule requires the Authority to exercise considerable judgement. The Authority could refer a generator to the Rulings Panel based on its assessments of the degree of market power by any generator and the extent to which it considers a generator's offer would have been different if market power were less. This liability function is shown in **Figure 1** below.

Figure 1 MDAG proposed liability function



71. The downward slope of the curve illustrates that there would be a trade-off in the required levels of market power in the market, and the assessed divergence between a generator's offers and its costs. When market power is greater, the divergence between offer prices and costs need not be so strong to cause a rule breach. If the Authority determines that no generator has significant market in a given trading period, no amount of divergence would breach the rule. Similarly, no amount of market power is sufficient to breach the rule if the divergence of offer prices from costs is assessed by the Authority as "not too much or for too long".

72. To anticipate how the proposed rule would impact on market prices, participants would need to understand the shape and height of the liability function, as illustrated in **Figure 1**. For example, even small differences in the Authority's assessment of whether market power were significant or not (and hence whether offers were amendable to review) would be critical while large variations in offer prices would not matter much below this assessment range. Conversely, once across the threshold of 'significant', small differences in offers could be decisive in determining whether the variance was too much or for too long, and increased market power would be immaterial. In addition, if the curve were closer to the origin, the rule would be breached in a broader array of cases, whereas if it were further to the northeast, liability would attach less frequently.

73. Remarkably, MDAG would leave it to the discretion of the Authority to determine the shape and location of this liability curve. Even if the Authority could discover an oracle that would allow it to determine correctly the efficient offers for each generator, an efficient allocation of resources would emerge only if the Authority acted solely in accord with the costs and benefits predicted for the whole community and not in relation to its own preferences (Buchanan, 1969). Any decision by a regulator to alter market prices will raise concerns about regulatory commitment.[14]

74. New Zealand has been well served by the current Authority. However, it would be naive to think, for example, that the Authority would not have come under intense pressure to use the proposed rule to lessen price impacts on households if the current lock-down for Covid-19 had occurred during a hydro shortage and an unusually cold winter. More generally, as long as the Authority has the power to influence prices, that in itself will create demands by interested parties who stand to benefit, for those powers to be used and used in a manner that bites. The rule as drafted by MDAG would provide the Authority with few handholds to resist that pressure, as there is nothing in the rule that requires a fixed location of the liability curve relative to the origin nor that it not be redrawn with a steeper slope in response to political pressure.

[14] Electricity pricing is particularly vulnerable to opportunistic behaviour by regulators because the entire population consumes the services and hence politicians and interest groups are sensitive to price levels and generation technology is characterised by large specific, fixed investment providing regulators with considerable leeway. For a discussion of these influences see for example Spiller & Volgelsang, 1997.

Conclusion

75. MDAG would have the Authority extend price regulation to the wholesale market to mitigate the use of market power without first assessing whether the exercise of market power is a problem in the wholesale electricity market. It proposes an ex post form of price regulation: a generator could be found to have breached the rules if its offer price turns out to be higher than the prices the Authority considers the generator may have offered if the market were more competitive.

76. No other sector in New Zealand is subject to price control in this way, for good reason. Ex post price control increases regulatory uncertainty and invites political pressure on regulators to set prices below efficient costs.

77. MDAG is wrong in saying that the costs of its proposal would be negligible. In practice, achieving that degree of precision in price regulation is an impossible task. The information the Authority would need to accurately determine efficient prices is hidden from it. Efficient economic costs—scarcity rents, opportunity costs, premiums for risk, etc—are revealed in the process of price discovery.

78. As estimates by the Authority of efficient offer prices will almost certainly be wrong, the proposal will distort some efficient behaviour. Over time, these errors are likely to be biased toward under-estimating efficient costs as the proposed rule provides the Authority with few handholds to resist demands by interested parties for its new powers to be used for their benefit.

79. As under-pricing tends to restrict the supply-side of markets a poorly conceived intervention, that errs toward unduly low prices over time, would lead to the electricity sector becoming a very major policy problem.

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Appendix A: MDAG's proposed 13.5A

1. Where a **generator** submits or revises an **offer** for a **point of connection** to the **grid**, that **offer** must be consistent with **offers** that the **generator** would have made where no **generator** could exercise significant market power in relation to that **point of connection** to the **grid** for that **trading period**.

2. Where an **ancillary service agent** submits or revises a **reserve offer** for a **point of connection** to the **grid** (including an **interruptible load group GXP**), that **offer** must be consistent with **reserve offers** that the **ancillary service agent** would have made where no **ancillary service agent** could exercise significant market power in relation to that **point of connection** to the **grid** for that **trading period**.

3. The purpose of this clause 13.5A is to promote offer behaviour and efficiency outcomes consistent with competitive markets, in particular so that –

    (a) The prices of offers or reserve offers do not exceed, by too much or for too long, the associated economic costs to the generator or ancillary service agent respectively, assuming a market in which no generator or ancillary service agent has significant market power;
    (b) with the effect that offers or reserve offers made by generators or ancillary service agents promote efficient:
        (i) consumption decisions by consumers; and
        (ii) production decisions by suppliers (including generators and providers of electricity services); and
        (iii) innovation and investment by suppliers and consumers (including the location of their investments); and
        (iv) risk management and risk management markets,

        in relation to the point of connection to the grid (including an interruptible load group GXP) at which the generator or ancillary service agent, as applicable, submits or revises an offer or a reserve offer, and any node in respect of which the offer or reserve offer may have a material influence on efficiency outcomes of the kind referred to in subparagraphs (i) to (iv);

    (c) where, for the purposes of paragraph (a) "economic costs" in clause 13.5A(3)(a):

        (v) when assessed in relation to short-run costs, includes scarcity rents and the opportunity cost of generating electricity or of providing instantaneous reserve, as applicable;
        (vi) when assessed in relation to long-run costs, includes recovery of capital costs with a suitable premium for risk.

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