Australian Energy Market Commission

RULE CHANGE

FINAL RULE DETERMINATION

Causer Pays for Ancillary Services to Control the Tasmanian Frequency Rule Proposal

Rule Proponent
Hydro Tasmania

Commissioners
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15 October 2009

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About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy, established the Australian Energy Market Commission (AEMC) in July 2005 to be the Rule maker for national energy markets. The AEMC is currently responsible for Rules and policy advice covering the National Electricity Market and, from 1 July 2008, concerning access to natural gas pipeline services and elements of the broader natural gas markets. It is a statutory authority. The AEMC's key responsibilities are to consider Rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council on Energy as requested, or on AEMC initiative.

Contents

Abbreviations and Glossary

2008 TFOS	The frequency operating standard determined by the Reliability Panel in its final report in the TFOS Review
2008 TFOS Unit	Generating units who can operate in the Tasmania region once the 2008 TFOS commences
ACCC	Australian Competition and Consumer Commission
Additional Cost	The cost of the additional quantity of R6 that must be purchased in order to comply with the 2008 TFOS that would not have been required had the 2008 TFOS remained in force
AEMC	see Commission
AEMO	Australian Energy Market Operator
Amended Rule change proposal	Hydro Tasmania's Rule change proposal, as amended on 20 March 2009
CCGT	Combined cycle gas turbine
Code	National Electricity Code
Commission	Australian Energy Market Commission
Contingency raise services	Collectively, the fast raise service, slow raise service and delayed raise service, as those services are defined in Chapter 10 of the Rules
CRA	Charles River Associates
FCAS	Frequency control ancillary services
Final Rule change proposal	Hydro Tasmania's Rule change proposal, as amended on 13 May 2009
MAS	Market ancillary services, as defined in clause 3.11.2(a) of the Rules
MCE	Ministerial Council on Energy
MW	Megawatt
NECA	National Electricity Code Administrator
NEL	National Electricity Law
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company, now AEMO
NEO	National electricity objective
NGF	National Generators Forum
Original Rule change proposal	Hydro Tasmania's Rule change proposal dated 23 December 2008
pre-2008 TFOS	The TFOS that applies until the commencement of the 2008 TFOS
R6	Fast raise service, as defined in Chapter 10 of the Rules

Reliability Panel	AEMC Reliability Panel
Rules	National Electricity Rules
TFOS	Tasmanian Frequency Operating Standard
TFOS Review	Tasmanian Frequency Operating Standard Review
TVPS	Tamar Valley Power Station

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Summary

On 23 December 2008, Hydro Tasmania lodged a Rule change proposal with the Australian Energy Market Commission (Commission) for a Participant Derogation to change the methodology for recovering the costs of purchasing local contingency market ancillary services[a] in Tasmania (Original Rule change proposal).

On 20 March 2009, Hydro Tasmania made a late submission to the initial round of public consultation amending the Original Rule change proposal (Amended Rule change proposal). On 13 May 2009, Hydro Tasmania further modified its proposal (Rule change proposal).

Summary of the Rule change proposal

The Rule change proposal concerns the methodology used to allocate and recover the cost of fast raise services (R6) in the Tasmania region following the commencement of the Tasmanian Frequency Operating Standard determined by the Reliability Panel on 18 December 2008 (2008 TFOS). The Rule change proposal proposes that the Australian Energy Market Operator (AEMO) calculate the quantity of R6 that must be purchased in order to comply with the 2008 TFOS that would not have been required had the frequency operating standard in place at the time of the Reliability Panel's determination (pre-2008 TFOS) remained in force. The cost of the additional quantity of R6 (Additional Cost) would be recovered from market generators in Tasmania who were first registered with AEMO after 18 December 2008 and who could not have operated under the pre-2008 TFOS (2008 TFOS Units). The Additional Cost would be allocated between 2008 TFOS Units in proportion to each unit's registered capacity.

Commission's Rule determination

Under section 102 of the National Electricity Law (NEL), the Commission has determined to not make the Participant Derogation proposed by Hydro Tasmania (proposed Derogation).

Reasons for the Commission's Rule determination

The Commission is not satisfied that the proposed Derogation will or is likely to contribute to the achievement of the national electricity objective (NEO). If made, the Commission considers it likely that the proposed Derogation would:

[a] Hydro Tasmania and submissions made during consultation on Hydro Tasmania's Rule change proposal refer to contingency market ancillary services as contingency frequency control ancillary services (FCAS). In order to maintain consistency between the National Electricity Rules (Rules) and this Rule determination, the Commission will refer to contingency market ancillary services (contingency MAS).

- *distort signals for investment in the Tasmanian electricity generation sector*: the obligation on 2008 TFOS Units to meet the cost of the additional R6 increases the cost of operating those units, thereby making the investment less attractive relative to investment in units that are not required to contribute to the cost of the additional R6. Distorting investment signals in this way may create incentives to build plant that would have met the pre-2008 TFOS in order to avoid these additional costs;

- *restrict competition*: delaying or deferring decisions to invest in 2008 TFOS Units in Tasmania limits the development of competition in the generation sector, and prevents consumers from accessing the benefits of price-based competition;

- *impede the achievement of economic efficiency*: distorted investment signals and limited competition hamper the market's ability to deliver to consumers electricity produced at least cost;

- *create a barrier to entry*: recovering the cost of the additional R6 only from 2008 TFOS Units is likely to create a barrier to entry for that class of generator;

- *introduce a technological bias into the National Electricity Rules* (Rules): the effect of the proposed Derogation on investment signals, economic efficiency and conditions for entry is likely to create a competitive advantage in favour of those generators who meet the pre-2008 TFOS;

- *create regulatory uncertainty*: making the proposed Derogation would demonstrate a willingness to change accepted cost allocation methodologies in a way that increases investment risk and undermines certainty in existing regulatory decision making and processes;

- *not be consistent with the causer pays principle*: the basis on which the proposed Derogation allocates and recovers the cost of the additional R6 is not consistent with the causer pays principle.

For these reasons, the Commission is not satisfied that the proposed Derogation meets the Rule making test set out in section 88(1) of the NEL.

1 Hydro Tasmania's Rule Change Proposal

1.1 Hydro Tasmania's Rule change proposal

On 23 December 2008, Hydro Tasmania lodged a Rule change proposal with the Australian Energy Market Commission (Commission) for a Participant Derogation to change the methodology for recovering the costs of purchasing local contingency market ancillary services[1] in Tasmania.

On 20 March 2009, Hydro Tasmania made a late submission to the initial round of public consultation. Its submission responded to some of the issues raised during public consultation by amending its Rule change proposal. Hydro Tasmania proposed further amendments on 13 May 2009, following discussions with the Australian Energy Market Operator (AEMO).

In this Rule determination, unless otherwise stated, a reference to the "Final Rule change proposal" or to the "proposed Derogation" means the Rule change proposal and proposed Derogation as amended on 13 May 2009.

1.2 Context of the Rule change proposal

In December 2008, the Reliability Panel amended the Tasmanian frequency operating standards (TFOS). The principal change was to raise the lowest frequency that the Tasmanian power system is permitted to operate at under extreme conditions (raising it from 46 Hz to 47 Hz). In addition, the Panel made a number of small changes to reduce the disparity between the TFOS and frequency operating standards on the mainland. The changes to the TFOS relative to the mainland standards are depicted in Figure 1.1.

In deciding whether to amend the TFOS, the Reliability Panel considered whether Tasmania would need additional generation in the future, and whether such generation would be built. It found "there was a credible probability that a proponent for a new base load generator will be forthcoming" and that "the most likely fuel sources for this new generation are gas and wind."[2]

Before making its final decision, the Reliability Panel retained Charles River Associates (CRA) to analyse the economic costs and benefits of changing – and of not changing – the TFOS. One of the costs of tightening the TFOS would be an increase in the amount of market ancillary services (MAS) required, particularly the fast raise service (called "R6"). The Reliability Panel reported that the CRA analysis showed:

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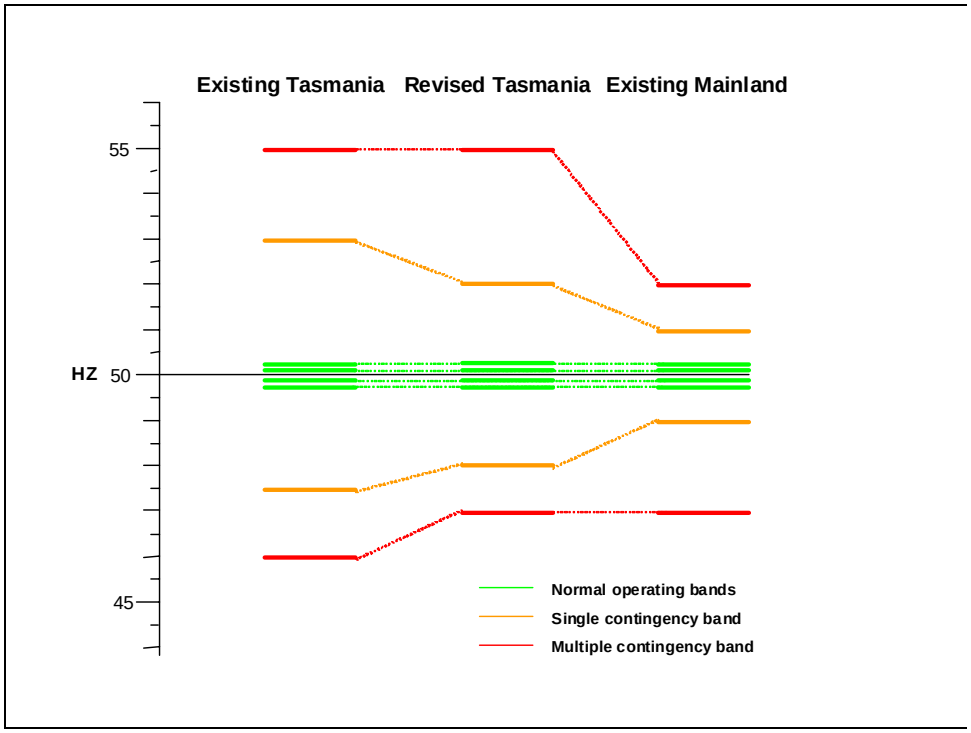
1 Hydro Tasmania and submissions made during consultation on Hydro Tasmania's Rule change proposal refer to contingency market ancillary services as contingency frequency control ancillary services (FCAS). In order to maintain consistency between the National Electricity Rules (Rules) and this Rule determination, the Commission will refer to contingency market ancillary services (contingency MAS).

2 AEMC Reliability Panel, *Tasmanian Frequency Operating Standard Review*, Final Report, 18 December 2008, Sydney, p. 19.

… a smaller, but clear, marginal net benefit for changing the Tasmanian frequency operating standards to allow more efficient thermal gas turbines to operate provided the contingency size is limited to 144 MW.[3]

Figure 1.1 Comparison of the pre-2008 TFOS and the 2008 TFOS with the NEM mainland frequency operating standard under normal conditions



Source: AEMC Reliability Panel, *Tasmanian Frequency Operating Standard Review*, Final Report, 18 December 2008, Sydney, p. xiii.

The Reliability Panel also noted CRA's finding that if a second combined cycle gas turbine was connected, the economic benefits would increase in proportion to the increase in capacity.[4]

Given the benefits of tightening the TFOS to allow combined cycle gas turbines to connect outweighed the economic costs (albeit by a small margin), the Reliability Panel tightened the TFOS.

3 Ibid., p. 21.

4 Ibid.

1.3 Interactions with other processes

1.3.1 AEMO's treatment of inertia

On 18 May 2009, AEMO announced it would change the engine it uses to calculate the Tasmanian MAS requirements(called XDFCAS), including taking into account the effects of inertia and demand.[5] The changes will reduce the amount of Tasmanian inertia that is calculated as being available by excluding the inertia provided by certain generators from the relevant MAS calculations, and implementing corresponding changes to constraint equations. These changes take account of the reduction in inertia following the trip of Basslink or the largest contingency generator.

The changes to XDFCAS will affect the demand for and cost of contingency raise services in Tasmania, in particular R6. However, the Commission does not consider that the changes themselves, or their effect on demand and costs, have any bearing on the its assessment of the Rule change proposal against the national electricity objective (NEO).

1.4 Issue to be addressed

The Rules require AEMO to calculate and procure contingency raise services in sufficient quantities to ensure the power system remains secure following a contingency event. Under the 2008 TFOS, larger quantities of contingency raise MAS will be required. Accordingly, total MAS costs will increase. It is expected that the most substantial increase will be to the R6 requirement.

The costs of contingency MAS procured by AEMO are allocated and recovered from market participants on the basis of energy produced or consumed. In the case of contingency raise services, the costs are allocated to and recovered from market generators. Market customers meet the costs of contingency lower services.[6] This methodology is reflected in clauses 3.15.6A(f) and (g) of the Rules.

Under clause 3.15.6A(f) of the Rules, the cost of the contingency raise services enabled in each dispatch interval in a given trading interval is recovered entirely from market generators. The cost allocated to a region is apportioned between generators operating in that region during that trading interval on the basis of each generator's sent-out energy. Under this approach, each generator pays the same price per unit of energy output, although the amount apportioned to individual generators may not be consistent with the extent to which those generators contributed to the need for contingency raise services[7].

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5 NEM Communication No. 3379, *Changes to Tasmanian FCAS calculation method – Removing the Inertia of the generating unit(s) at risk*, 18 May 2009.

6 NECA Code Change Panel, *Ancillary Services*, Volume I Report, August 2000, p. 3.

7 Loy Yang, International Power and TRUenergy, submission to the draft Rule determination, 11 September 2009, p. 2.

The commencement of the 2008 TFOS will increase the quantity of contingency raise services, particularly R6, that AEMO is required to enable to maintain system frequency. As the largest generator (by MW) in Tasmania, Hydro Tasmania is expected to experience the largest increase in MAS costs.[8] However, Hydro Tasmania submits there is little benefit to it or other generators operating under the pre-2008 TFOS from moving to the 2008 TFOS.[9]

Hydro Tasmania contends that generators who meet the pre-2008 TFOS (and therefore do not benefit from the change) should not be required to contribute to the additional MAS costs[10] imposed by the 2008 TFOS. It submits that maintaining the pre-2008 approach to cost recovery would create regulatory uncertainty and impede economic efficiency by distorting signals for investment in new generation. Further, Hydro Tasmania suggests that maintaining the existing cost recovery methodology would be contrary to the causer pays principle that has historically governed MAS cost recovery in the National Electricity Market (NEM).[11]

1.5 Hydro Tasmania's proposed solution

Hydro Tasmania submitted its Rule change proposal for a Participant Derogation to the Commission on 23 December 2008. A reference to the "Original Rule change proposal" is a reference to this version of the proposal.

Hydro Tasmania refined the terms of its proposed Derogation on two subsequent occasions. The first amendments were proposed on 20 March 2009.[12] The changes reflect Hydro Tasmania's response to issues of concern raised in submissions made during the initial round of public consultation. A reference to the "Amended Rule change proposal" is a reference to this version of the Rule change proposal.

The second series of amendments were put forward on 13 May 2009. The variations took account of AEMO's concerns about the practicalities of implementing the proposed Derogation. The revisions were prepared in conjunction with AEMO. A reference to the "Final Rule change proposal" or the "proposed Derogation" are references to the Rule change proposal and Derogation as at 13 May 2009.

The Commission notes that it was difficult for some stakeholders to identify the scope of the changes proposed by Hydro Tasmania.[13] To clarify the parameters of the proposal analysed by the Commission, this section summarises the evolution of the proposed Derogation since the Original Rule change proposal was lodged.

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8 As the sole registered provider of contingency raise services to the Tasmania region (including R6), Hydro Tasmania's MAS revenue is also expected to increase.

9 Hydro Tasmania, Rule change proposal, 23 December 2008, p. 5.

10 The Rule change proposal originally applied to all contingency raise services. On 13 May 2009, the proposed Derogation was narrowed to apply only to R6. Hydro Tasmania's Original Rule change proposal and subsequent amendments to it are detailed in 1.5 below.

11 Hydro Tasmania, Rule change proposal, p. 8.

12 Hydro Tasmania, first supplementary submission, 20 March 2009.

13 Gunns, response to additional information, 18 June 2009, p. 3; AETV Power, response to additional information, 15 June 2009, p. 5.

1.5.1 Original Rule change proposal

The key operational features of the Participant Derogation originally proposed by Hydro Tasmania were:

1. The Derogation takes effect once AEMO declares the market systems are ready to implement it.

2. The Derogation remains in force for 15 years.

3. Where AEMO needs to purchase additional contingency raise or lower[14] services for the Tasmania region from Tasmanian generators (i.e. the local market ancillary service requirement) for a given dispatch interval, AEMO must calculate the additional MAS requirements under two frequency operating standards: First, using the pre-2008 TFOS and then using the 2008 TFOS. The difference in the MAS requirements under the two standards is called the "Additional Requirement" (clause 5(a) of the Derogation).

4. AEMO calculates the cost of the Additional Requirement (called the "Additional Cost") using the applicable local market ancillary service price for the relevant dispatch interval (clause 5(b) of the Derogation).

5. AEMO uses a variation of the formula specified in clause 3.15.6A(f) of the Rules to allocate the cost of local market ancillary services in Tasmania. That portion of the Additional Cost that relates to contingency raise services is subtracted from the total cost of local market ancillary raise services for that dispatch interval. A corresponding calculation is performed for contingency lower services (clauses 6(1) and (2) of the Derogation).

6. The Additional Cost is allocated to those Market Generators who have a generation unit that would not have been able to connect to the network under the pre-2008 TFOS (i.e. a "non-compliant generating unit"). The Additional Cost is allocated between each non-compliant generating unit on the basis of each generation unit's registered capacity (clause 6(3) of the Derogation).

7. A "non-compliant generating unit" is a generating unit which:

   (a) is a Market Generating unit;

   (b) is located in Tasmania;

   (c) does not meet the pre-2008 TFOS;

   (d) was first registered with AEMO after 1 July 2008.

8. Where the Additional Cost is equal to zero, no adjustment to the allocation of local market ancillary service costs is required (clause 6 of the Derogation).

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[14] Contingency lower services are the fast lower service, slow lower service and delayed raise service, as those services are defined in Chapter 10 of the Rules.

1.5.2 Amended Rule change proposal

The Amended Rule change proposal retained the features of the Original Rule change proposal identified above in items 1, 3, 4, 5, 6, and 8. The amendments put forward on 20 March 2009 made the following the changes:

1. Revise the triggers for the expiration of the Derogation to provide that it ceases at the earlier of:

   (a) 15 years; or

   (b) a further material change to the TFOS; or

   (c) the commissioning of a baseload station in Tasmania with an output in excess of 100 MW.

   This amends item 2 of the Original Rule change proposal.

2. In the definition of "non-compliant generating unit", amend the date for registration with AEMO to 18 December 2008 (item 7 of the Original Rule change proposal). All other aspects of the definition remain unchanged.

1.5.3 Final Rule change proposal

The Final Rule change proposal retains items 1, 5, 6, and 8 of the Original Rule change proposal and items 1 and 2 of the Amended Rule change proposal. The amendments proposed on 13 May 2009 introduced the following new features:

1. The Additional Requirement is calculated solely on the additional R6 service required under the 2008 TFOS. This represents a change to item 3 of the Original Rule change proposal.

2. The Additional Cost is calculated based on the price for R6 that applies for that dispatch interval. This varies the value of the price input used to perform the calculation described in item 4 of the Original Rule change proposal. The calculation itself remains the same.

3. In calculating how much additional R6 is required, AEMO is to use the greater of the following two contingency events:

   - a Basslink trip if the Basslink frequency control system protection scheme is in service; or

   - a trip of the largest generator (by MW and by inertia).

   This is a new element of the Derogation.

1.6 Consultation on the Rule change proposal

The Commission published Hydro Tasmania's Rule change proposal on 29 January 2009 and invited comments from interested parties by 13 March 2009. The Commission received six submissions.[15]

As noted above, on 20 March 2009 Hydro Tasmania provided a supplementary submission in response to these submissions. In its supplementary submission, Hydro Tasmania proposed certain amendments to the Original Rule change proposal.

On 29 April 2009, the Commission requested further information from Hydro Tasmania about the costs it asserted it would incur in providing the additional MAS required under the 2008 TFOS. The Commission also requested that Hydro Tasmania advise it of the outcome of Hydro Tasmania's discussions with AEMO concerning the practicalities of implementing the proposed Rule change.

Hydro Tasmania provided the information requested by the Commission on 13 May 2009. In addition, Hydro Tasmania amended the Amended Rule change proposal and provided new draft language for the proposed Derogation that reflected its changes.

The Commission published Hydro Tasmania's correspondence and invited interested parties to provide relevant written observations, including in the context of AEMO's revised approach to calculating Tasmanian market ancillary service requirements (outlined at 1.3 above). The Commission received responses from AETV Power, Aurora Energy and Gunns.

On 17 July 2009, Hydro Tasmania submitted a third supplementary submission. As the Commission was not able to test the submission through public consultation prior to the release of its draft Rule determination, the Commission invited stakeholders to comment on Hydro Tasmania's third late submission in their submissions in response to the draft Rule determination.

The Commission published its draft Rule determination on 30 July 2009, determining to not make the proposed Derogation. The Commission received four submissions.[16]

AETV Power and Aurora Energy supported the Commission's draft Rule determination.[17] Hydro Tasmania "believes that the rationale for the proposed rule change still applies but understands and accepts the draft determination".[18] The Commission notes that Hydro Tasmania raised a number of other matters concerning the provision of MAS in the Tasmania region. The Commission considers these matters have either been addressed as part of the draft Rule determination or

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15 AEMO, AETV Power, Aurora Energy, Gunns, National Generators Forum and Roaring 40s.

16 AETV Power, Aurora Energy, Hydro Tasmania and a joint submission from Loy Yang, International Power and TRUenergy.

17 AETV Power, submission to the draft Rule determination, 7 September 2009, p. 1; Aurora Energy, submission to the draft Rule determination, 7 September 2009, p. 1.

18 Hydro Tasmania, submission to the draft Rule determination, 10 September 2009, p. 1.

fall outside the scope of matters that fall to be considered as part of this Rule change proposal.

A joint submission from Loy Yang, International Power and TRUenergy queried the Commission's characterisation of clause 3.15.6A(f) of the Rules as an application of the causer pays principle. The Commission's analysis and response to the issue is set out at A.9 of this Rule determination.

2 Rule Determination

2.1 Commission's Rule determination

Under section 102 of the NEL, the Commission determined to not make the Participant Derogation proposed by Hydro Tasmania, as amended on 20 March and 13 May 2009. The Commission is not satisfied that the Participant Derogation will or is likely to contribute to the achievement of the NEO. The Commission's reasons for its Rule determination are summarised at 2.5 below and set out in greater detail in Appendix A.

2.2 Rule making test and the national electricity objective

The NEO is the basis for assessing a Rule change proposal under the Rule making test. The NEO is set out in section 7 of the NEL:

> The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system.

The Rule making test, set out in section 88 of the NEL, states:

> (1) The AEMC may only make a Rule if it is satisfied that the Rule will or is likely to contribute to the achievement of the national electricity objective.
>
> (2) For the purposes of subsection (1), the AEMC may give such weight to any aspect of the national electricity objective as it considers appropriate in all the circumstances, having regard to any relevant MCE statement of policy principles.

There is no MCE statement of policy principles that is relevant to Hydro Tasmania's Rule change proposal.

2.3 Commission's power to make the proposed Derogation

The matters about which the Commission may make Rules are set out in section 34 and Schedule 1 of the NEL.

The Commission is satisfied that the Derogation proposed by Hydro Tasmania falls within the matters the Commission may make Rules about as the proposed Derogation relates to regulating:

- the operation of the NEM, as it relates to the costs of market ancillary services necessary to maintain power system security; and
- the activities of persons participating in the NEM, as it relates to the costs faced by market generators in the Tasmania region.

Accordingly, the Commission is satisfied that the subject matter of the proposed Derogation is a subject matter about which the Commission may make a Rule.

2.4 Matters the Commission had regard to

This Rule determination sets out the Commission's reasons for not making a Rule. The Commission's decision took into account:

- the Commission's powers under the NEL to make a Rule;
- the Rule change proposal (as originally submitted and subsequently amended on 20 March 2009 and 13 May 2009);
- submissions received during the initial and second rounds of public consultation;
- the additional information provided by Hydro Tasmania on 13 May 2009 and the written observations provided by stakeholders in response to it;
- Hydro Tasmania's late submission dated 17 July 2009;
- reports prepared by NEMMCO[19], the National Electricity Code Administrator (NECA) Code Panel, and their consultants, prior to the introduction of market-based arrangements for the provision of ancillary services[20];
- the determination by the Australian Competition and Consumer Commission (ACCC) authorising changes to the National Electricity Code (Code) to introduce market-based arrangements for the provision of ancillary services[21]; and
- the Commission's analysis of whether the proposed Derogation will or is likely to contribute to the achievement of the NEO.

For the reasons set out in this Rule determination, the Commission is not satisfied that the proposed Derogation will or is likely to contribute to the achievement of the

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19 Available from the AEMO Information Centre.

20 Available at http://www.neca.com.au/TheCodef6e6.html?CategoryID=34&SubCategoryID=83&ItemID=603.

21 Australian Competition and Consumer Commission, *Application for Authorisation: National Electricity Code – Ancillary Services Amendments*, 11 July 2001.

NEO. As such, the Commission is not satisfied that the proposed Derogation satisfies the Rule making test under section 88 of the NEL.

2.5 Commission's assessment of the Final Rule change proposal

This section of the Rule determination sets out the Commission's assessment of the Final Rule change proposal and the proposed Derogation against the NEO. In assessing Hydro Tasmania's proposal, the Commission had regard to:

- the effect of the Final Rule change proposal and proposed Derogation on investment in electricity services;
- the effect of the Final Rule change proposal and proposed Derogation on the operation and use of electricity services; and
- whether making the proposed Derogation is consistent with good regulatory practice.

The Commission's assessment of the proposal and the issues raised in submissions is set out in further detail in Appendix A.

2.5.1 Efficient investment in electricity services

The Commission considers the proposed Derogation is likely to distort signals for future investment in generation in the Tasmania region such that investment decisions are less efficient. Less efficient investment in generation may affect the price at which electricity is sold to consumers, and the reliability of the supply of electricity. The Commission's conclusion reflects its view that the increase in the amount of R6 that will be required once the 2008 TFOS commences is not caused by a a 2008 TFOS Unit connecting to the network but, rather, is a consequence of the Reliability Panel's decision to adopt the 2008 TFOS. The Reliability Panel's decision was based on its conclusion that allowing 2008 TFOS Units to connect would be likely to contribute to the NEO.[22]

Requiring 2008 TFOS Units to meet the cost of the additional R6 will increase the revenues the units must earn in order for the investment to be profitable. The need to generate higher returns may delay investment beyond the time that it would otherwise occur or, depending on the magnitude of the Additional Cost, may operate as a barrier to new entry. Distorting market price signals such that it risks new generation investment being built in time to meet demand growth could affect the reliability of electricity supply.

Increasing the operating costs for 2008 TFOS Units may create incentives to invest in generation plant that could operate under the pre-2008 TFOS in order to avoid contributing to the Additional Cost. For example, it would be possible to build wind farms after the 2008 TFOS commences that use turbines that would have met the pre-

22 AEMC Reliability Panel, p. 22.

2008 TFOS. This could give rise to a bias in favour of investment in certain technologies (e.g. hydro generation) relative to other technologies that can only operate under the 2008 TFOS (e.g. more efficient combined cycle gas turbines). These distortions could impede efficient investment in generation.

Permitting the proposed Derogation to expire when a new baseload generator of a specified capacity is commissioned is expected to interfere with decisions about the timing of and specifications for new plant. Investment may be committed early (or delayed) according to how the investor or its competitors are affected by the continued operation of the Derogation. Similarly, the future application of the proposed Derogation is likely to affect decisions about whether the size of the plant to be built does or does not meet the capacity threshold that would be specified in the Rules.[23] The magnitude of this distortion is likely to increase as the Additional Cost grows.

For these reasons, the Commission is not satisfied that the proposed Derogation will or is likely to promote efficient investment in electricity services for the long term interests of consumers of electricity.

2.5.2 Efficient operation and use of electricity services

The Commission is concerned that the effects of the proposed Derogation on prospective investment would reduce the competitive benefits of adopting the 2008 TFOS. In particular, the Commission is concerned that the resulting increase in the operating costs for 2008 TFOS Units, actual or perceived barriers to entry, and distortions to signals concerning the timing and size of new plant will reduce the efficiency of decision making in the generation sector. Any reduction in efficiency brought about by weaker competition in the generation sector is likely to prevent consumers from being offered a price for electricity that is based on the efficient cost of supply.

For this reason, the Commission does not consider the proposed Derogation will or is likely to promote efficient operation and use of electricity services for the long term interests of consumers of electricity.

2.5.3 Good regulatory practice

The Commission considers the proposed Derogation would undermine regulatory certainty and therefore is not likely to contribute to the achievement of good regulatory practice in the NEM.

The Commission does not agree that the cost recovery methodology embodied in the proposed Derogation is consistent with the causer pays principle. The Commission's position reflects its view that the Additional Cost is not caused by 2008 TFOS Units

[23] Clause 3 of the proposed Derogation.

but, rather, is a consequence of the Reliability Panel's decision to adopt the 2008 TFOS.[24]

Making a Rule in the terms of the proposed Derogation would introduce inconsistency into the regulatory framework. It may also serve as a justification for subsequent proposals to diverge from other established market frameworks. In the context of the Final Rule change proposal, certainty in regulatory decision making and processes is promoted by consistency.

2.5.4 Assessment of the Final Rule change proposal against the NEO

For the reasons set out in sections 2.5.1 to 2.5.3 above, the Commission does not consider the Participant Derogation proposed by Hydro Tasmania will or is likely to contribute to the achievement of the NEO.

2.6 Alternatives to making the proposed Derogation

It is foreseeable that the requirements for contingency MAS within a region or throughout the NEM could change materially in the future. As discussed in the 2nd Interim Report of the *Review of Energy Market Frameworks in light of Climate Change Policies*, investment in wind farms are likely to increase in response to climate change policies like the expanded Renewable Energy Target.[25] Substantial increases in wind farm capacity may reduce system inertia by displacing synchronous generators (such as hydro, thermal and gas units). Reduced system inertia can increase the need for market ancillary services to control frequency.

An increase in the size of the largest generator contingency will also increase the amount of contingency MAS required. AEMO will be required to procure sufficient contingency raise services to ensure it can maintain power system security if the largest generator trips.

The effect of these and other changes on the future requirements for market ancillary services may identify a need to assess the ability of the existing cost allocation and recovery methodologies (including for contingency MAS) to continue to deliver efficient market outcomes. Changes focused on ensuring such outcomes could be proposed and considered through the Rule change process provided for in the NEL. The need for change could also be assessed by conducting a review, for example, a review conducted by AEMO in accordance with clause 3.1.4(a1) of the Rules.

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[24] As noted above and in Chapter 1, the Reliability Panel's decision reflects its expectation that allowing New TFOS Units to connect would lead to reduced costs for Tasmanian electricity customers in the long run: AEMC Reliability Panel, TFOS Review Final Report, p. xii.

[25] AEMC 2009, *Review of Energy Market Frameworks in light of Climate Change Policies*, 2nd Interim Report p. 9.

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A Analysis of the Rule Change Proposal

This appendix summarises the matters raised by stakeholders during the initial and second round consultation processes and sets out the Commission's analysis of the proposed Derogation. The scope of the final Rule change proposal and form of the proposed Derogation put forward by Hydro Tasmania and considered by the Commission are set out in Chapter 1 of the draft Rule determination.

A.1 Background

In the Final Report in the *Tasmanian Frequency Operating Standard Review* (TFOS Review), the Reliability Panel noted that many of the benefits of changing the TFOS would be captured by the new higher efficiency generating units that will be able to operate once the 2008 TFOS commences. It also observed that, under the current cost recovery arrangements, the cost of the additional contingency raise services necessary to comply with the 2008 TFOS would be recovered from all Tasmanian market generators.

The Reliability Panel acknowledged that there is merit in exploring alternative cost recovery mechanisms. As a starting point for further discussion, it outlined two alternatives:

- calculating the cost of the additional MAS required to meet the 2008 TFOS and recovering this from the new unit(s) that are only able to operate once the 2008 TFOS commences;

- requiring these units to contract with AEMO to provide an additional amount of MAS that AEMO would take into account when procuring MAS through the ancillary services market.

However, the Reliability Panel identified that both options present difficulties that would need to be considered and addressed, and that either option could only be adopted through the Rule change process provide for in the NEL.[26]

The Rule change proposal put forward by Hydro Tasmania is based on the first of the options identified by the Reliability Panel.

A.2 Issue in the Rules to be addressed via a Rule change proposal

Hydro Tasmania's proposed Derogation reflects its position that the costs of the additional fast raise service necessary to meet the 2008 TFOS should be recovered from those generators who benefit from the new standard, i.e. those generating units who are able to connect and operate in the Tasmania region once the 2008 TFOS commences. Hydro Tasmania submits that recovering the Additional Cost pursuant to the existing cost recovery methodology would be inconsistent with good

[26] AEMC Reliability Panel, pp. 26-27.

regulatory practice and likely to reduce economic efficiency in the NEM.[27] Hydro Tasmania also submits the proposed Derogation places an appropriate incentive on 2008 TFOS Units to provide or procure additional R6 services.[28] The proposed Derogation is supported by the NGF and Roaring 40s.[29]

Other stakeholders did not agree that the introduction of the 2008 TFOS warranted changes to the current cost recovery methodology. The arguments in favour of maintaining the current arrangements are, in summary:

- the effects on investment signals, economic efficiency, regulatory certainty and competition are such that the proposed Derogation does not contribute to the achievement of the NEO;
- the proposed Derogation creates a barrier to entry for new investment and impedes the pro-competitive objectives of the Reliability Panel's decision to change the TFOS;
- the cost allocation and recovery methodology proposed by Hydro Tasmania is inconsistent with the existing causer pays principle applied throughout the NEM; and
- the issue to be addressed is a wealth transfer between generators and, as such, does not justify a change to the Rules.

The views expressed in the Rule change proposal and submissions, and the Commission's analysis of them, are set out in greater detail in this Appendix.

A.2.1 Commission's analysis

The effect of changing the TFOS on MAS costs, particularly R6, was identified in submissions to the TFOS Review.[30] The Reliability Panel acknowledged the potential for stakeholders to submit Rule change proposals suggesting alternative cost recovery methodologies.[31]

The Rule change process provided for in the NEL allows any person to propose a change to the Rules, which is then subject to a process of public consultation. Whether the Rules are amended is a question of whether the Rule change proposal satisfies the Rule making test set out in the NEL.

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27 Hydro Tasmania, Rule change proposal, p. 5.

28 Hydro Tasmania, third supplementary submission, 17 July 2009, p. 2.

29 National Generators Forum, submission to initial consultation, 11 March 2009; Roaring 40s, submission to initial consultation, 13 March 2009.

30 AEMC Reliability Panel, p. 27 and Appendix C.

31 ibid., p. 27.

A.3 Effect on investment signals

Hydro Tasmania submits that the proposed Derogation will encourage efficient future investment in the generation sector in Tasmania. It contends that requiring investors in 2008 TFOS Units to meet all the costs caused by their decision to enter the market (i.e. the costs of the additional R6 required to meet the 2008 TFOS) will ensure investment decisions are based on the total costs of entry.[32]

Hydro Tasmania submits that making 2008 TFOS Units more accountable for the costs they impose on the market will also improve dynamic efficiency. The analysis of the economic efficiency benefits of the proposed Derogation is set out at A.4 below.

The NGF supported making the proposed Derogation on the grounds that it would ensure prospective investors adopt the least cost approach to meeting the standards existing at the time of connection. It submitted that the least cost solution may include the new generation unit providing contingency services (including R6) to the market. As the NGF explained:

> This will mean that the entrant considers all the location specific costs and is incentivised to select the overall least cost investment option to ensure the lowest cost delivered energy to consumers consistent with the NEM objective. In this case, implementation of the rule will encourage TVPS [Tamar Valley Power Station] to provide the additional FCAS which they have caused in Tasmania which is a good outcome for the market and customers.[33]

It is the NGF's view that requiring new entrants to install plant or procure the services required to ensure their plant can operate within the frequency standards existing at the time of connection will prevent harm to incumbents.[34]

A number of stakeholders viewed the impact of the proposed Derogation on future investment differently. AETV Power, the owner of TVPS, submitted that investment decisions would be skewed because the proposed Derogation fails to allocate MAS costs equitably between generators, loads and other entities in Tasmania.[35] Gunns submitted that Hydro Tasmania's proposal "[c]ould encourage investment in less than optimal technology to meet an outdated Standard, reducing the potential for low-cost operation."[36]

Gunns also advised that the potential increase in the operating costs faced by 2008 TFOS Units will reduce competition and, in turn, reduce the potential for lowering the costs passed on to consumers. It argued this would "tend to lead to increased

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32 Hydro Tasmania, Rule change proposal, pp. 9-10.

33 National Generators Forum, p. 3. See also p. 2 of the NGF's submission.

34 National Generators Forum, p. 3.

35 AETV Power, submission to initial consultation, 13 March 2009, p. 12.

36 Gunns, submission to initial consultation, 13 March 2009, p. 4.

electricity charges to consumers due to higher cost of production in new plants or continuing lack of competition."[37]

Gunns also noted that preventing or discouraging investment in larger steam and combined cycle generators is likely to give rise to difficulties with system control. This is because these types of plant increase the amount of system inertia available, which is necessary to enable large quantities of renewable energy sources, such as wind power, to connect to the power system.[38]

A.3.1 Commission's analysis

The Reliability Panel's economic consultant found that, under most plausible conditions, there is a case for additional baseload capacity in Tasmania.[39] However, the effect of the proposed Derogation will be to increase the operating costs of 2008 TFOS Units built to provide the additional capacity required. The Commission is concerned that increasing the cost of operating units that meet the 2008 TFOS will distort investment signals.

Increasing operating costs increases the returns that are required before it is economic to build new plant. This is likely to delay future investment beyond the time it would otherwise occur. Delaying future investment could cause the balance between supply and demand to tighten, which may, in turn, affect the reliability performance of the power system and the price paid by consumers for electricity. As discussed at A.7 below, distorting investment signals in a way that discourages new entry is also likely to restrict the pro-competitive objectives underpinning the Reliability Panel's decision to adopt the 2008 TFOS, including lower average energy costs for customers in the long term.[40]

The proposed Derogation also risks interfering with the selection of the appropriate generation technology or the specifications of turbines. By excusing those generators who meet the pre-2008 TFOS from having to contribute to the Additional Cost, the proposed Derogation creates an incentive to build generation plant that meets the pre-2008 TFOS. The incentives are strengthened if the Additional Cost is, or is likely to be, substantially greater than the cost of building plant that complies with the pre-2008 TFOS. The selection of wind turbines is most likely to be affected by this incentive.

A.4 Promoting economic efficiency

Hydro Tasmania contends that the proposed Derogation will contribute to achieving the NEO by creating incentives for efficient generation investment and therefore promoting dynamic efficiency. It submits the proposed Derogation will deliver these outcomes by:

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37 ibid.

38 ibid.

39 AEMC Reliability Panel, p. 19.

40 ibid, p. 22.

- requiring investors to select the type of plant that presents the least cost investment option; and
- postponing the date plant is commissioned, thereby increasing its profitability.

According to Hydro Tasmania, these incentives will encourage more efficient investment decisions in transmission and load projects in Tasmania and, potentially, in other NEM regions.[41]

With respect to the type of plant selected, Hydro Tasmania submits that recovering the Additional Cost from 2008 TFOS Units will force proponents of new generators to take into account the MAS costs that these technologies impose on the market as a whole.[42]

In relation to the timing of investment, Hydro Tasmania considers the proposed Derogation may lead to the efficient deferral of commissioning dates:

> Assuming load growth and no other supply-side responses, a given generation project is likely to be more profitable the later it is commissioned. This is because wholesale prices and revenues would be higher, with no increase in costs. Therefore to the extent that the proposed Rule change leads to proponents of new higher-efficiency generators facing higher project costs, they are likely to defer the timing of their investments to some degree.[43]

The NGF agreed that, by providing incentives to ensure investors selected the least cost investment option, the proposed Derogation would improve productive efficiency. It stated:

> Compared to the absence of the proposed Rule change, the result should be a more favourable investment climate, lower cost of capital of investment, and ultimately greater productive efficiency as future load can be served at a lower cost.[44]

However, a number of submissions expressed concern that the proposed Derogation would reduce economic efficiency. AETV Power considered that:

> … the Hydro Rule Change Proposal, rather than improving dynamic efficiency by implementing appropriate incentives for future investment, in fact reduces dynamic efficiency by skewing cost signals to parties who do not impose wider costs on the power system.[45]

Gunns suggested that the proposed Derogation would increase the cost of production faced by new plant or continue the lack of competition, leading to

41 Hydro Tasmania, Rule change proposal, pp. 9, 10.

42 Hydro Tasmania, Rule change proposal.

43 ibid., p. 10.

44 National Generators Forum, p. 3.

45 AETV Power, initial submission, p. 13.

increased electricity charges. Gunns submitted that neither result appears to be in the best interests of consumers and therefore does not contribute to the achievement of the NEO.[46]

Aurora Energy did not agree that it is necessary to amend the current cost recovery mechanism. In its view, maintaining the current arrangements is unlikely to reduce economic efficiency or distort future investment signals. Even if there was a need to change the existing arrangements, Aurora Energy did not consider the proposed Derogation would achieve the desired outcomes:

> The allocation of FCAS does not cause new plants to be developed inefficiently late, or result in the "wrong type of capacity or in the wrong location leading to inefficiently high consumer costs". There is not sufficient evidence to believe that the rule change proposed would have a material impact on the timing or merit order of new generation plants.[47]

A.4.1 Commission's analysis

The premise of the proposed Derogation is that the Additional Cost is a cost to the market imposed by a decision to invest in 2008 TFOS Units. The Commission does not consider this characterisation is appropriate. As it discusses further at A.9, the Commission considers the increase in the amount of R6 required to meet the 2008 TFOS and the Additional Cost is a consequence of the Reliability Panel's decision to tighten the TFOS.

Further, deferring potential investment in 2008 TFOS Units will not necessarily improve efficiency outcomes, especially where the decision to defer investment is the result of increased project costs. Unnecessary delays in investment are likely to impede increased competition between generators. Weaker competition reduces the incentives generators face to generate electricity at its efficient cost. As well as failing to encourage generators to operate more efficiently, reducing competitive pressures risks consumers being unable to receive efficiently priced electricity.

While investment signals should reflect the true cost to the market of that investment, the Commission does not consider the effects of the proposed Derogation on investment signals will promote efficient investment in, or efficient operation and use of, generation services.

The Commission notes the comments in submissions lodged during the initial round of consultation concerning the relevance of wealth transfers to its assessment of the proposed Derogation.[48] In determining whether a proposed Rule change meets the Rule making test, it is appropriate to have regard to wealth transfers insofar as the transfers have an economic impact on the electricity sector. In the present case, the Commission considers that transferring the cost of the additional R6 between

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46 Gunns Limited, initial submission p. 4.

47 Aurora Energy, submission to initial consultation, 13 March 2009, p. 5.

48 Ibid.

generators does not achieve any economic efficiency gains (or create any efficiency losses). Given that its economic impact appears to be neutral, the wealth transfer between Hydro Tasmania and the 2008 TFOS Units does not affect the Commission's assessment of the proposed Derogation against the NEO.

A.5 Barriers to entry

A barrier to entry is any market characteristic or condition that places an efficient potential new entrant business at a disadvantage relative to an established business. A barrier to entry does not include a cost or other impediment that applies more or less equally to any party wanting to participate in the market, irrespective of whether it is an established business or a new entrant.

Some stakeholders expressed concern that the Additional Cost may operate as a barrier to new entry. AEMO submitted:

> … there is a risk that the additional cost might operate as a barrier to entry when compared to an approach that does not impose additional charges in this way. This may bear consideration with respect to promotion of efficient investment and the NEM objective.[49]

Similar views were expressed by Aurora Energy[50] and AETV Power[51] in their submissions.

AETV Power was also concerned that the proposed Derogation would operate as a barrier to the competitive objectives identified by the Reliability Panel. AETV Power suggested that the outcome of the proposed Derogation would be to:

> … create an additional barrier for entry for a particular technology type within the Tasmanian region that doesn't exist in the rest of the NEM. AETV submits that this will stifle competition in a region that has a single dominant generator and significant limitations in sourcing competitive prices via Basslink.[52]

In response to concerns that the proposed Derogation created a barrier to entry, Hydro Tasmania amended its Rule change proposal on 20 March 2009. The amendment to clause 3 of the proposed Derogation provided that the Derogation would expire at the earlier of:

- 15 years;
- a further material change to the TFOS; or

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49 AEMO, submission to initial consultation, 12 March 2009, p. 4.

50 Aurora Energy, initial submission, p. 6.

51 AETV Power, initial submission, p. 6.

52 Ibid., p. 13.

- a new baseload generator bigger than 100 MW being commissioned in Tasmania.[53]

Hydro Tasmania stated that allowing the Derogation to lapse if a new baseload generator is built would "remove the barrier to entry for subsequent new entrants."[54] In practical terms, the proposed Derogation would bind TVPS until a second large generator is built.

Aurora Energy[55], AETV Power[56] and Gunns[57] did not consider the revisions proposed by Hydro Tasmania alleviated the barrier to entry the proposed Derogation would create.

A.5.1 Commission's analysis

The Commission agrees that imposing the Additional Cost on new entrant 2008 TFOS Units could operate as a barrier to entry. This Rule determination reflects the Commission's view that the proposed Derogation imposes a cost on generators who are unable to meet the pre-2008 TFOS that is not borne by existing generators. This barrier could preclude entry, or delay new entry beyond the time that is economically efficient, especially where the business case for entry is finely balanced.

The Commission notes Hydro Tasmania's efforts to mitigate the adverse competitive impacts of the proposed Derogation by amending clause 3. Despite the amendments proposed by Hydro Tasmania, the Additional Cost would operate as a barrier to those investors wishing to construct a 2008 TFOS Unit smaller than 100 MW (or such other capacity as specified in the Derogation) as the operator of that plant would be required to contribute to the Additional Cost.

The level of prescription required to ensure clause 3 of the proposed Derogation operates effectively and provides certainty to market participants and prospective investors is likely to distort investment signals. TVPS, as the generator most likely to be bound by the definition of "non-compliant generating unit", would face an incentive to build plant that meets the specifications set out in the Derogation in order to trigger its expiration. Conversely, there is an incentive for generators who benefit from the Additional Cost being recovered from TVPS (e.g. Hydro Tasmania), and who wish to build additional plant, to invest in plant that does not meet the specifications to ensure the Derogation continues. These incentives may result in inefficient decisions to invest in the generation sector in Tasmania.

The Commission notes Hydro Tasmania's view that material provided by AETV Power and Gunns to the Reliability Panel indicating their respective intentions to provide contingency raise services, including R6, is evidence that 2008 TFOS Units

53 Hydro Tasmania, first supplementary submission, 20 March 2009, p. 5.

54 Ibid, p. 5.

55 Aurora Energy, response to additional information, 15 June 2009, p. 2.

56 AETV Power, response to additional information, p. 2.

57 Gunns, response to additional information, p. 4.

do not face a barrier to entry.[58] The Commission considers the barrier created by the proposed Derogation is a barrier to entry into the generation sector, rather than a barrier to providing contingency raise services.

A.6 Technological bias

AETV Power expressed concern that the proposed Derogation will create a barrier to entry for a particular technology type wishing to enter the Tasmania region that does not exist in the rest of the NEM and that this will stifle competition.[59]

A.6.1 Commission's analysis

The NEO is concerned with the comparative effects of changes to the Rules on different energy sources and technologies. The Second Reading Speech to the *National Electricity (South Australia) (New National Electricity Law) Amendment Bill 2005* discusses the economic efficiency objectives of the NEO (at that time called the National Electricity Market objective).[60] It states:

> Applying an objective of economic efficiency recognises that, in a general sense, the national electricity market should be competitive, that any person wishing to enter the market should not be treated more or less favourably than persons already participating in the market, and that particular energy sources or technologies should not be treated more nor less favourably than other energy sources or technologies.[61]

There is a material risk the proposed Derogation will create outcomes that are inconsistent with these efficiency objectives. A result of the proposed Derogation is likely to be that generating units using certain technologies will be treated less favourably than others. Specifically, it is likely to increase the costs faced by units using technologies that can only operate under the 2008 TFOS (e.g. combined cycle gas turbines and some wind turbines) relative to those units that operate under the pre-2008 TFOS (e.g. hydro generators). Increasing the costs of generating units that use certain classes of technologies will, other costs being equal, create an incentive to adopt the technology that attracts lower R6 costs.

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[58] Hydro Tasmania, third supplementary submission. In its submission to the draft Rule determination, Hydro Tasmania stated that Alinta's representations during the TFOS Review as the FCAS capability of CCGT plants such as the AETV plant and Gunns show that new entrants assumed they would provide FCAS capability as a normal part of new entry: Hydro Tasmania, submission to draft Rule determination, p. 2.

[59] AETV Power, initial submission, p. 13.

[60] In accordance with section 8(2a)(c) of Schedule 2 of the NEL, consideration may be given to the Second Reading Speech to confirm the interpretation conveyed by the ordinary meaning of the provision.

[61] Second Reading Speech, *National Electricity (South Australia) (New National Electricity Law) Amendment Bill 2005*, House of Assembly, 9 February 2005, p. 1452.

The language of the draft of the proposed Derogation prepared by Hydro Tasmania does not expressly identify any specific generation technology, e.g. hydro versus combined cycle gas turbine or wind power. However, the effect of the definition of "non-compliant generating unit" is to distinguish between hydro generators and units using more efficient gas turbine generators, thereby creating a bias against 2008 TFOS Units.

Further, as discussed at A.5 above, it is likely that the proposed Derogation would operate as a barrier to new entry. Consistent with the economic efficiency objectives of the NEO, a person wishing to enter the market (e.g. a 2008 TFOS Unit) should not be treated less favourably than persons already participating in the market (e.g. hydro generators). The Second Reading Speech supports this view.

By creating a distinction between generation technologies and between existing generators and new entrants, the proposed Derogation is likely to create outcomes that do not promote economic efficiency.

A.7 Competition in the Tasmanian generation sector

The Reliability Panel's decision to change the TFOS was based on its view that enabling 2008 TFOS Units to be commissioned in the Tasmania region is likely to contribute to the achievement of the NEO, in part by increasing competition in the generation sector. The Reliability Panel expected that increased competition in the supply of electricity would result in more efficient electricity prices to consumers.[62]

Opponents of the proposed Derogation maintain that it will hinder the development of competition in the electricity sector and undermine the competition objectives of the TFOS Review. Aurora Energy observed:

> Any new prospective generator already has a significant disincentive to locate in Tasmania due to the generator contingency size limit imposed by the Tasmanian frequency standard review, without any additional raise and lower FCAS costs being assigned to it. This is clearly to the disadvantage of Tasmanian consumers and the development of a competitive market in Tasmania.[63]

AETV Power voiced a similar concern:

> Hydro [Tasmania] proposes that the additional FCAS costs should be borne by new high efficiency thermal generators—exactly the types of generators that the Reliability Panel indicated should be encouraged in Tasmania.[64]

62 AEMC Reliability Panel, p. 22.

63 Aurora Energy, initial submission, p. 6.

64 AETV Power, initial submission, p. 6.

A.7.1 Commission's analysis

In light of its effects on investment signals, economic efficiency, barriers to entry and incentives to invest in new technology, it is unlikely that the proposed Derogation will promote competition in the generation sector in the Tasmania region or in the NEM. The Commission is also concerned that weaker competition would mean consumers may not be offered a price for electricity that is based on the efficient cost of supply.

A.8 Regulatory certainty

In exercising its powers and functions under the NEL, the Commission aims to promote frameworks for regulatory processes and decision making that provide appropriate certainty and predictability to market participants, while allowing the regulator sufficient discretion and flexibility to perform its role effectively. Energy market frameworks that deliver these outcomes can be characterised as providing regulatory certainty.

Hydro Tasmania submits that the proposed Derogation enhances regulatory certainty by consistently applying the causer pays principle that applies elsewhere in the NEM, including in relation to other market ancillary services. Applying the causer pays principle in a consistent, predictable manner gives investors confidence that they will not be forced to bear costs imposed by future regulatory changes resulting from a subsequent new entrant.[65] According to Hydro Tasmania, this reduces "actual and perceived regulatory risk" by promoting "good regulatory practice and consistency with prior regulatory determinations."[66]

Hydro Tasmania submits that, in the absence of the proposed Derogation, prospective investors in new generation, load and transmission projects in Tasmania and elsewhere in the NEM "will be more reluctant to invest if they perceive a significant risk that they may be required to bear costs arising from decisions of a similar nature."[67] The inability of investors to control these costs could adversely impact the value of their investment(s).

The NGF argued that increased investor certainty is particularly important at present as the electricity industry adjusts to the impact of a carbon constrained world in which major new investments will be required. It supported Hydro Tasmania's view that the proposed Derogation will increase regulatory certainty for prospective investors:

> … protecting investments from costs derived from regulatory change is a cornerstone in developing confidence in the investment climate in the NEM …

65 Hydro Tasmania, Rule change proposal, p. 8.

66 Ibid., p. 11.

67 Ibid., p. 8.

> By adopting this Rule Proposal, the AEMC will have reaffirmed the principle that investors will not be faced with costs arising from regulatory decisions made in response to later investments.[68]

Aurora Energy and AETV Power did not agree that the introduction of the 2008 TFOS, in the absence of the proposed Derogation, would undermine regulatory certainty for prospective investors in generation. Rather, they considered that making the Derogation would create uncertainty. In AETV Power's view:

> … "regulatory change" is merely a feature of market governance and accordingly does not present a compelling reason why the FCAS costs settlement market in Tasmania should be changed in the manner suggested by Hydro [Tasmania].[69]

Similarly, Aurora Energy noted:

> As a market participant, Aurora's experience is that the introduction and removal of jurisdictional derogations by their nature creates perceptions of regulatory unpredictability compared to the uniform application of rules across the National Electricity Market.[70]

Aurora Energy and AETV Power also queried Hydro Tasmania's view that the proposed Derogation insulates prospective investors from costs stemming from changes to the regulatory framework. AETV Power asserted that making the proposed Derogation would give rise to the precise consequence that Hydro Tasmania claims it intends to avoid: "changing the regulatory system in a manner which imposes additional costs on a party which has already made its investment decision."[71] Similarly, Aurora Energy observed:

> … the rule proposal would have the currently committed Tamar Valley Power Station investment and any future development exposed to a regulatory rule change that imposed additional costs on them that they are unable to control.[72]

In response to these comments, Hydro Tasmania submitted that "[a]ny generator is able to manage their MAS costs."[73] Every generator has the option to use financial products to hedge their exposure to the market and generators with MAS capability can sell MAS into the market. Hydro Tasmania stated that the proposed Derogation

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68 National Generators Forum, pp. 2, 3.

69 AETV Power, initial submission, p. 12.

70 Aurora Energy, initial submission, p. 3.

71 AETV Power, initial submission, p. 10.

72 Aurora Energy, initial submission, p. 3.

73 Hydro Tasmania, first supplementary submission, p. 3.

creates incentives for TVPS to adopt this risk management option which, given "the scarcity of supply in Tasmania, this is a good incentive."[74]

Gunns observed that it may be difficult for generators to manage their MAS costs as Hydro Tasmania is the only registered supplier of MAS in the Tasmania region.[75]

A.8.1 Commission's analysis

The Commission does not consider that, if made, the proposed Derogation would contribute to regulatory certainty. Rather than promoting clarity, transparency and predictability, the changes the proposed Derogation would make to existing frameworks are likely to reduce confidence in the certainty of cost recovery processes.

The Commission agrees that applying a common methodology for recovering the cost of R6 throughout the NEM promotes regulatory certainty. Consistency in the methodologies between regions and between different classes of contingency raise services (e.g. R6, slow raise and delayed raise) plays an important role in promoting investor certainty and reducing regulatory risk. As the cost recovery methodology in the proposed Derogation is inconsistent with the cost recovery methodology that would apply to R6 in the remainder of the NEM, and to slow raise and delayed raise services, the proposed Derogation is unlikely to promote regulatory certainty.

The Commission does not consider the cost recovery methodology in the proposed Derogation is consistent with the causer pays principle, as that principle currently applies to MAS. The Commission's analysis of this issue is set out in A.9 below.

Regulatory uncertainty may be exacerbated where a decision to deviate from an existing market framework could be used to support further divergence from existing frameworks. The prospect of increased inconsistency within the NEM can undermine confidence in regulatory processes, and certainty in the market frameworks that are likely to apply into the future. Together, these factors can reduce investor confidence in the NEM.

In the present case, making the proposed Derogation could be used in support of the following arguments:

- in the event the Reliability Panel decides to tighten the TFOS a second time, grandfathering all plant registered at the date of the decision. This would require AEMO to calculate the MAS requirements for the Tasmania region according to three different frequency operating standards;

- in the event of a change to the mainland frequency operating standards, grandfathering all plant registered at the date of the Reliability Panel's decision;

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74 Ibid.

75 Gunns, response to additional information, p. 3.

- grandfathering all plant registered at the date of a decision to change other standards (other than for access), including the Reliability Standard and the market price cap.

In light of the sorts of changes that the proposed Derogation could be used to support, the Commission considers making the proposed Derogation presents a material risk to good regulatory practice.

The Commission is also concerned to ensure market participants can identify, with confidence and certainty, the circumstances in which the proposed Derogation will expire (clause 3 of the proposed Derogation). It considers lack of clarity around the circumstances in which the proposed Derogation will expire are likely to undermine regulatory certainty.

The first new criterion triggers the expiration of the proposed Derogation when a "further material change" is made to the TFOS. However, it does not specify the circumstances in which a change will be considered "material". As such, it is likely to be difficult for market participants and prospective investors to determine whether a proposed change to the TFOS will increase or reduce their liability for contingency MAS costs.

The second new criterion provides for the proposed Derogation to expire when a new 100 MW baseload generator is commissioned. However, by failing to identify the technical specification of the plant that would trigger its expiration, the proposed Derogation fails to promote regulatory certainty. For example, the proposed Derogation does not specify the output of the unit (e.g. 100 MW) or how that output is ascertained e.g. the unit's registered capacity, or its winter or summer rating. It also does not contemplate whether the capacity of the generating plant reflects the output of a single turbine (e.g. 1 x 100 MW) or multiple turbines (e.g. 2 x 50 MW). Further, any attempt to specify the position the new generation unit must occupy in the merit order is problematic as this is likely to change as generators respond to price signals in the wholesale energy market.

Finally, there is a lack of clarity about the process for confirming that a threshold for triggering the expiration of the Derogation has been met. It is possible to develop a process. For example, AEMO, at the request of a market participant, could confirm there has been in a material change to the TFOS, or that new plant has been commissioned that meets the specifications contained in the Derogation. However, the administrative burden imposed on AEMO (or such other body) by this process indicates it is sub-optimal.

In light of these matters, the Commission considers that the proposed Derogation is unlikely to promote regulatory certainty.

A.9 Determining the cause of the need for additional R6

In the context of MAS, the causer pays principle describes an approach to recovering the costs of procuring market ancillary services whereby a market participant (or class of market participant) is required to contribute to the cost of MAS in proportion to the extent to which that participant (or class or market participant) creates those

costs.[76] The central notion of the causer pays principle is that a market participant incurs a cost if it engages in certain conduct. Faced with the true cost of that conduct, the market participant takes action to reduce the cost to others of its conduct, or pays a charge equivalent to that cost which can be used to compensate the other parties.[77]

As discussed in the preceding sections, Hydro Tasmania contends that the proposed Derogation is consistent with the causer pays principle because it recovers the Additional Cost from the party who caused the need for additional R6.[78] The NGF supports Hydro Tasmania's view.[79] Hydro Tasmania further submits that, as the main beneficiaries of the 2008 TFOS, it is appropriate to recover the Additional Cost from the 2008 TFOS Units.[80]

Roaring 40s noted that it is only the connection of the first 2008 TFOS Unit that creates the need for additional R6; connection of the second and subsequent higher efficiency generation units does not increase the R6 required to meet the 2008 TFOS. Accordingly, Roaring 40s suggested that the proposed Derogation apply only to the first 2008 TFOS Unit connected.[81]

However, not all stakeholders accepted that 2008 TFOS Units caused the need for additional R6. These stakeholders submitted that making the proposed Derogation on this basis would not be consistent with the existing cost recovery arrangements for MAS in the NEM.[82] As Gunns pointed out, the need for the additional R6 is the result of the Reliability Panel's decision to change the TFOS:

> Indeed the cause is not new entrants but the fact that the old standard was significantly out of line with that required for a modern multi generator type system such as that found on mainland Australia and in most developed countries around the world.[83]

Aurora Energy and AETV Power noted that a new generator is not the sole cause of an incremental increase in the amount of MAS required.[84] Other factors to be

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76 Kieran Murray and John Mather, *Who Should Pay For Ancillary Services: An independent appraisal of NEMMCO's recommendations; A Report to The NECA Code Change Panel*, 25 January 2000, p. 12.

77 Ibid. See also Intelligent Energy Systems, *Who Should Pay for Ancillary Services? A Project Commissioned by the NEMMCO Ancillary Services Reference Group*, Final Report, July 1999, p. 23.

78 Hydro Tasmania, Rule change proposal, p. 6.

79 National Generators Forum, p. 3.

80 Hydro Tasmania, Rule change proposal, p. 6.

81 Roaring 40s, p. 1.

82 Aurora Energy, response to additional information, p. 2; AETV Power, initial submission, p. 9.

83 Gunns, initial submission, p. 4. See also Aurora Energy, initial submission, p. 5.

84 Aurora Energy, initial submission, p. 4; AETV Power, response to additional information, p. 2.

considered include system conditions[85], the manner in which Basslink is operated[86], inertia[87] and transmission system contingencies.[88]

AEMO's view of Hydro Tasmania's position was that "it is not clear whether identifying the major beneficiary should be the key objective when applying a causer pays recovery framework."[89]

Loy Yang, International Power and TRUenergy jointly submitted that characterising the cost allocation methodology in clause 3.15.6A(f) as an application of the causer pays principle is not accurate. They submitted that describing the clause in these terms may affect the Commission's ability to consider future proposals to change the way market ancillary service costs are allocated and recovered so as to fit the description of "causer pays".[90]

A.9.1 Commission's analysis

The Commission is concerned by two key elements of the proposed Derogation:

- the parties identified as creating the need for the additional R6 under the 2008 TFOS, i.e. the Market Generators who fall within the proposed definition of a "non-compliant generating unit"; and

- the basis upon which the Additional Cost is apportioned between "non-compliant generating units".

Hydro Tasmania considers that, because the 2008 TFOS Units required the TFOS to be tightened before they could operate, these units "caused" the Additional Cost. As noted at A.8 above, Hydro Tasmania submits that a cost recovery methodology that recovers the Additional Cost from the 2008 TFOS Units is consistent with the causer pays principle.

The Commission does not consider the cost recovery methodology in the proposed Derogation is consistent with the causer pays principle. As noted earlier, the Commission's view is that the change in the TFOS—and therefore the increase in the amount of R6 required—is a consequence of the TFOS Review. The R6 requirement would increase once the 2008 TFOS commences even if no 2008 TFOS Units are registered. Therefore, it is not the behaviour of the 2008 TFOS Units that creates the Additional Cost.

The second aspect of the proposed Derogation that is of concern to the Commission is the basis for apportioning the cost of the additional R6 required under the 2008

85 Gunns, initial submission, p. 4.

86 AETV Power, initial submission, p. 2.

87 Ibid.

88 Loy Yang, International Power and TRUenergy, p. 2.

89 AEMO, submission to initial consultation, 12 March 2009, p. 3. See also Aurora Energy, initial submission, p. 5.

90 Loy Yang, International Power and TRUenergy, pp. 1, 2.

TFOS. The Rules apportion the contingency MAS costs required in a dispatch interval between those Market Generators operating during the relevant trading interval on the basis of energy output. In this way, each generator pays the same price per unit of energy output in a given trading interval. However, the proposed Derogation divides the Additional Cost between "non-compliant generating units" on the basis of registered capacity. This means a non-compliant generating unit will be required to pay for R6 services during those trading intervals in which it did not generate.

The Commission does not consider that the arguments presented by Hydro Tasmania in favour of changing the cost recovery methodology for R6 demonstrate that its preferred methodology will benefit consumers in the long term. Further, the Commission agrees that seeking to recover costs from the primary beneficiary may not be consistent with the application of the causer pays principle in other contexts in the NEM. Finally, the Commission notes that other parties, such as market customers and consumers, may also benefit from the 2008 TFOS through, for example, more efficient electricity prices.

The Commission recognises that there may be a number of methodologies that could be used to recover contingency MAS costs and that each methodology, to a varying degree, could be consistent with the causer pays principle. As such, notwithstanding its determination to not make the proposed Derogation, the Commission acknowledges the possibility that a future Rule change may propose a cost recovery methodology that better reflects the causer pays principle, and satisfies the Rule making test set out in the NEL.

A.10 Consistency of cost recovery mechanisms across the NEM

A corollary of Hydro Tasmania's position that the proposed Derogation reflects a consistent application of the causer pays principle is its view that the cost recovery mechanism in the proposed Derogation is consistent with the cost recovery mechanisms used throughout the NEM. The NGF supports this view.[91]

Several stakeholders submitted that making the proposed Derogation would create inconsistency. Aurora Energy noted that, not only was the proposed Derogation inconsistent with the Commission's application of the causer pays principle in other contexts (e.g. transmission pricing), it was not consistent with the cost allocation of regulation MAS in the NEM.[92] AETV Power characterised the effect in the following terms:

> It should be noted that, if the Rule Change Proposal were to be implemented, Tasmania would have a markedly differently system for the settlement of FCAS costs than the mainland NEM participating jurisdictions, without there being any demonstrated net economic benefit either to the Tasmanian region

[91] National Generators Forum, p. 2.

[92] Aurora Energy, initial submission, p. 4.

> of the NEM or to the NEM as a whole which justifies the differential cost treatment.[93]

In its 2007 FCAS Review, AEMO (then, NEMMCO) considered the merits of replacing the existing cost recovery methodology with a form of runway pricing. The runway pricing methodology considered by AEMO is similar to the approach reflected in the proposed Derogation. AEMO concluded:

> Any move away from this uniform approach [of apportioning contingency costs in proportion to the energy produced] would need a strong argument to support it, particularly in order to explain why one non-uniform pricing arrangement would be better than another non-uniform pricing arrangement.[94]

In its submission to the Commission, AEMO further noted:

> The proposal is putting forward a form of runway pricing as an exception to current arrangements in a portion of the NEM, and its acceptance would therefore give rise to a need to maintain two recovery mechanisms. The merits of such an arrangement would need careful consideration in view of the lack of support for broader application of runway pricing revealed in [AEMO's 2007 FCAS] review.[95]

AETV Power expressed a similar view:

> In AETV's view, it would not represent good regulatory practice to move away from the current method of FCAS cost allocation in the absence of a compelling case and a well thought out and structured alternative which achieves an efficient and equitable allocation of FCAS costs in a manner which best contributes to the achievement of the national electricity objective.[96]

A.10.1 Commission's analysis

In the course of assessing the proposed Derogation against the NEO, it is appropriate that the Commission have regard to the effects the proposed Derogation will or is likely to have on investment in, and the operation and use of, electricity services.

As discussed in A.9 above, the Commission considers the proposed Derogation would create inconsistencies between the cost recovery mechanism used in the Tasmania region for R6 and the approach applied to contingency raise services, including R6, in the remainder of the NEM. Further, the Commission notes AEMO's observations that the merits of adopting a form of runway pricing are unclear.

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93 AETV Power, initial submission, p. 7.

94 AEMO, *FCAS Review Final Report*, July 2007, p. 27.

95 AEMO, initial submission, p. 2.

96 AETV Power, initial submission, p. 10.

B Causer Pays Principle

This Appendix provides a brief overview of the key stages in the development and implementation of the causer pays principle in relation to contingency market ancillary services in the NEM.

B.1 Ancillary services

When the ACCC authorised the initial National Electricity Code, one of the conditions of authorisation was that NEMMCO review the possibility of developing market-based arrangements for the provision of ancillary services. One of the matters to be considered in the review was arrangements for a short term market in which market participants which are not parties to ancillary services agreements may submit offers for the provision of regulating capability or contingency capacity reserve. This condition was reflected in clause 3.11.1(c) of version 1 of the Code.

In 1999, NEMMCO undertook its review in accordance with clause 3.11.1(c). With respect to contingency market ancillary services, NEMMCO recommended:

> Costs of contingency raise services will be allocated to market generators initially on the basis of energy pending development of a causer pays methodology.
>
> Costs of contingency lower services will be allocated to market customers on the basis of energy consumed.
>
> TNSPs will not be remunerated for provision of, or required to pay for contingency FCAS beyond their current service obligations. NEMMCO expects this will be reviewed depending on the outcome of current work to integrate the energy market with network service provision.[97]

The NECA Code Change Panel reviewed NEMMCO's recommendations and the proposed changes to the Code. After consulting with stakeholders and commissioning its own independent advice[98], the Code Change Panel published a report recommending some refinements to NEMMCO's proposal.[99] It noted criticisms of NEMMCO's cost allocation proposals and stated that:

> … in relation to FCAS, anything less than an ideally targeted, despatch interval-based allocation of costs will inevitably introduce distortions as a

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97 NEMMCO, *Ancillary Service Review – Recommendations*, Final Report, 19 October 1999, p. iii.

98 Kieran Murray and John Mather, *Who Should Pay For Ancillary Services: An independent appraisal of NEMMCO's recommendations; A Report to The NECA Code Change Panel*, 25 January 2000. Available at http://www.neca.com.au/TheCodef6e6.html?CategoryID=34&SubCategoryID=83&ItemID=603

99 NECA Code Change Panel, *Ancillary Services*, Volume I, August 2000. Available at http://www.neca.com.au/TheCodef6e6.html?CategoryID=34&SubCategoryID=83&ItemID=603

> result of averaging and imprecision in identify the cause of frequency deviations. Nonetheless, the Panel is satisfied, for all the reasons set out in the consultants' reports, that NEMMCO's proposals represent a reasonable and sensible way forward.[100]

NECA submitted applications for authorisation to change the Code (Authorisation numbers A90742, A90743 and A90744), which were determined by the ACCC.[101] Relevantly, the ACCC observed:

> Contingency costs are to be allocated 100% to generators for raise services, and 100% to market customers for lower services. This allocation is a very loose causer pays approximation, reflecting the impact of generator and large customer trips on the system.
>
> The LECG report to NECA mentions that spreading these costs over as broad a base as possible, until more sophisticated mechanisms are implemented, should minimise distortions to decision making during the transition. Substantial progress is envisaged in the second phase toward a structure where costs are borne by entities that can act to reduce the costs of these ancillary services.
>
> Allocating contingency FCAS costs on a better causer pay basis is not technically possible at this stage, and any review of the cost allocation should also consider the role of network outages in causing a need for contingency FCAS. Further, given that contingency FCAS is usually required in response to an unintended outage, it is not clear that a direct attribution of costs (where measurable) will result in changes to behaviour. The [ACCC] considers that the proposed cost allocation is an improvement over the current cost allocation, but more work needs to be undertaken by NEMMCO in the ongoing review of ancillary service arrangements to develop a more effective causer pays arrangement (see condition C3.1).[102]

The changes to the Code, as authorised by the ACCC, took effect on 9 August 2001.

B.2 Regional pricing of ancillary services

In 2003, further changes were proposed to the cost allocation arrangements that would apply when part of the NEM is isolated and ancillary services needed to be

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100 Ibid, p. 13. The Code Change Panel did recommend two small amendments to NEMMCO's proposals in relation to small deviation FCAS, i.e. regulation market ancillary services.

101 Documentation relating to the ACCC's determination of these applications is available at http://www.accc.gov.au/content/index.phtml/itemId/744446/fromItemId/401858.

102 Australian Competition and Consumer Commission, *Application for Authorisation: National Electricity Code – Ancillary Services Amendments*, 11 July 2001, p. 34. Available at http://www.accc.gov.au/content/trimFile.phtml?trimFileName=D01+22703.pdf&trimFileTitle=D01+22703.pdf&trimFileFromVersionId=756479

sourced locally. An overview of the events precipitating the changes to the Code is set out in the Code Change Panel's report, *Regional pricing of ancillary services*.[103]

Applications for authorisation were submitted to the ACCC on 27 March 2003 (Authorisation numbers A40086, A40087, A40088). The ACCC granted authorisation on 17 September 2003, subject to certain conditions.[104]

103 NECA Code Change Panel, *Regional pricing of ancillary services*, Report, March 2003. Available at http://www.neca.com.au/TheCodec3a4.html?CategoryID=34&SubCategoryID=83&ItemID=1243.

104 Australian Competition and Consumer Commission, *Applications for Authorisation: Amendments to the National Electricity Code – Regional Pricing of Ancillary Services*, 17 September 2003. Available at http://www.accc.gov.au/content/trimFile.phtml?trimFileName=D03+36113.pdf&trimFileTitle=D03+36113.pdf&trimFileFromVersionId=756566.