IN THE DISPUTE RESOLUTION PANEL AT MELBOURNE
(Constituted for a determination under Rule 8.2 of the National Electricity Rules)

BETWEEN

Origin Energy Electricity Limited (**Origin**)

and

Australian Energy Market Operator Limited (***AEMO***)

and

Lake Bonney Wind Power Pty Ltd, Pacific Hydro Clements Gap Pty Ltd, Snowtown Wind Farm Pty Ltd and Waterloo Wind Farm Pty Ltd (**SA Wind Farm Coalition**)

and

Alinta Energy Retail Sales Pty Ltd (**Alinta**)

and

CS Energy Limited (**CS Energy**)

and

Stanwell Corporation Limited (**Stanwell**)

and others (according to Attachment 1 of the Schedule)

REASONS FOR DETERMINATION

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1. This matter raises significant issues about the allocation under the National Electricity Rules (***Rules***) of costs that result where certain kinds of *market ancillary services*, known as *regulation services*, are *enabled* in circumstances where *AEMO* has determined that *local market ancillary service requirements* apply in respect of a particular *region* or *regions* of the *National Electricity Market* (***NEM***).[1]

2. The following reasons for determination rely on the abovenamed parties' Agreed Statement of Facts dated 12 July 2016 (**ASOF**). The ASOF is **the** Schedule to these reasons.[2]

Procedural history

3. Origin disputed various *final statements*, *special revised statements* and *routine revised statements*, issued by *AEMO* to Origin in November and December 2015, in relation to *billing periods* spanning the period 11 October to 10 November 2015 (**Disputed Billing Periods**). During the Disputed Billing Periods, *AEMO* had determined that *local market ancillary service requirements* for the *regulating raise service* and for the *regulating lower service* applied in the South Australia *region* of the *NEM* and imposed corresponding *constraints*[3] on the running of the *dispatch algorithm*. On grounds which we examine in more detail in the reasons that follow, Origin contended that *AEMO* had not complied with the *Rules* in allocating the costs resulting from those *local market ancillary service requirements*.

4. For reasons that will become apparent, it is important to note that in all but a handful[4] of the *dispatch intervals* comprising the Disputed Billing Periods, the South Australia *region* of the *NEM* continued to operate at a *frequency* that was synchronous with the remainder of the *power system* in the other *regions* of the *NEM*, save for the Tasmania *region*.

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[1] Italicised words bear their meanings as defined in Chapter 10 of the *Rules*. The version of the *Rules* to which we have had regard is the current version, 82, which is relevantly unchanged from the version that applied at the commencement of the Disputed Billing Periods (version 73).

[2] The Schedule version of the ASOF includes corrected footnotes, added on 20 July 2016.

[3] *AEMO* imposed *constraints* F-S_LREG_0035 and F-S_RREG_0035 in each *dispatch interval* between 10:45 on 11 October 2015 and 17:39 on 13 October 2015, 07:30 on 15 October 2015 and 10:39 on 26 October 2015, and 07:05 on 29 October 2015 and 17:30 on 10 November 2015.

[4] As noted in the discussion of the facts below, from 21:51 to 22:26 on 1 November 2015, the South Australia *region* was operating asynchronously from the remainder of the mainland *regions* of the *NEM* (and from the Tasmania *region*).

5. In February 2016, Origin raised a dispute under clause 3.15.18 of the *Rules* by issuing a *DMS referral notice* to *AEMO* under clause 8.2.4, and on 28 April 2016 Origin issued an *Adviser referral notice* under clause 8.2.5.

6. We were appointed as the *DRP* for this dispute, and the dispute was referred to us, on 15 June 2016. By this time various other *Registered Participants* had indicated their intention to participate in the resolution of the dispute, and it was clear that the arguments that would be made were such that the resolution of the dispute might involve the recalculation of the relevant *settlements* in a way that would expose *Market Participants* throughout the *NEM* to recalculation of their *settlement statements* for the Disputed Billing Periods. At a directions hearing on 16 June 2016, we therefore indicated our intention to join *Registered Participants* identified by *AEMO* as being materially affected by the dispute and to adopt a proposal that there would be active and non-active categories of parties. We made clear our intention that non-active parties would not be exposed to any potential costs liability under clause 8.2.8(b) of the *Rules* at the conclusion of the matter before us. On 17 June 2016, we made directions to facilitate the joinder of the *Market Participants* identified by *AEMO*, and subsequently we gave them notices under clause 8.2.6B directing their joinder, which were sent to the parties by the *Adviser* acting on our behalf. Also by directions made on 17 June 2016, we established a regime for the joined parties to indicate whether they would become active parties, in default of which they would be treated as non-active parties.

7. After the conclusion of the procedure for parties to indicate whether they would actively participate, the active parties before us were those named in the heading to these reasons: Origin, *AEMO*, four companies associated with wind farm electricity generation going for present purposes by the name of the SA Wind Farm Coalition (or the **Coalition,** for short), Alinta, CS Energy and Stanwell. During the dispute before us, the entities making up the Coalition were jointly represented at all times, and each of the other named entities was separately represented.

8. In substance, Origin and the Coalition contended before us that *AEMO's settlement statements* for the Disputed Billing Periods were non-compliant with the *Rules*, although they each advanced different arguments in this respect. *AEMO*, Alinta, CS Energy and Stanwell each contended that *AEMO's final statements* for the Disputed Billing Periods were relevantly compliant with the *Rules*, although it is fair to say there were certain differences in the explanations advanced amongst these parties for why this was so.

9. A substantive hearing in the matter took place in Melbourne on 25, 26 and 27 July 2016. As part of its submissions provided on 11 July 2016, the Coalition proposed to lead evidence in the form of a report from Mr David Bones of GHD. At a subsequent directions hearing, the Coalition raised an issue about whether *AEMO's* participation should be restricted,[5] and *AEMO* indicated its intention to cross-examine Mr Bones. The Coalition later provided a written submission foreshadowing an application to have *AEMO's* participation restricted, and Alinta provided a written submission opposing the course proposed by the Coalition. At the commencement of the hearing, *AEMO* indicated that it would not seek to cross-examine Mr Bones, and that it would be content to make submissions about whether Mr Bones' report should be excluded from the material before us or on the weight to be accorded to it. The Coalition did not press its foreshadowed application to restrict the participation of *AEMO*. We then heard submissions about whether to exclude Mr Bones' report.

10. Much of *AEMO's* objection to Mr Bones' report was attributable to the fact that it covered matters that had become the subject of agreed facts between the parties, included in the ASOF. Of the five questions addressed in the report, it emerged from submissions that only question 5 and the propositions in section 5.2 addressed matters not already covered elsewhere.[6] It further emerged that counsel for *AEMO* accepted that the propositions in that section were not controversial.[7] No other party indicated any controversy with those matters either.[8] For those reasons, we indicated that we would not be putting any weight on Mr Bones' report.[9]

Overview of the issues for consideration

11. Our jurisdiction to determine this dispute arises because it is a dispute between *Registered Participants* within the meaning of clause 8.2.1 "about the application or interpretation of the *Rules*" (clause 8.2.1(a)(1)). It might also be regarded as a dispute "about the payment of moneys under or concerning any obligation under the *Rules*" (clause 8.2.1(a)(5)).

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[5] On the basis of the principles in *R v Australian Broadcasting Tribunal; ex parte Hardiman* (1980) 144 CLR 13 at 35-36.

[6] Transcript 25 July 2016, p 22.12-13.

[7] Transcript, 25 July 2016, p 20 .16-28 and 23.2-5.

[8] Transcript 25 July 2016, p 23.6-23.

[9] For the purposes of these reasons, we regard it as uncontroversial that, at times when the South Australian region of the NEM is operating synchronously with other *regions*, in a practical, physical sense it cannot be said that *generating units* or *loads* in the South Australian regions are causing deviations *frequency* of the *power system* any more than units or loads in other regions, and that generating units or loads throughout the interconnected regions are both contributing to deviations in *frequency* and to correction of such deviations.

12. In this dispute we must first determine whether *AEMO's settlement statements* for the Disputed Billing Periods were non-compliant with the *Rules* for any of the reasons Origin and the Coalition have raised in this dispute.

13. The dispute as to whether the *settlement statements* were non-compliant largely turns on the proper construction to be given to clauses 3.15.6A(h), (i) and (j) of the *Rules*, and also on the question of whether the procedure *AEMO* has most recently published[10] (**Causer Pays Procedure**) in purported compliance with clause 3.15.6A(k) is relevantly non-compliant with the *Rules*. The Causer Pays Procedure describes how *AEMO* calculates "contribution factors" for *Market Participants*, based on recent historical data about the performance of their respective portfolios of *generating units* and *loads*, relative to certain metrics about the performance of the *power system*. The contribution factors are published, then recalculated and republished regularly. Contribution factors so calculated and published were used by *AEMO* to make the calculations that led to the relevant *settlement statements* being issued.

14. In order to determine whether the *settlement statements* prepared by *AEMO* were non-compliant, we consider that we need to address questions about the inputs "TSFCAS", "MPF" and "AMPF" into the formulae for "PTA" in clause 3.15.6A(i)(1) and (2) of the *Rules*, and what was required to be aggregated by the formulae for PTA. The focus of the dispute is on the formula in clause 3.15.6A(i)(1). In particular:

    a) Where a *local market ancillary service requirement* has been determined by *AEMO* in respect of a particular *region*, in circumstances other than asynchronous operation of the *region*:

        i) is the "TSFCAS" term to be constituted by an amount referable to only that *region*, or

        ii) is TSFCAS a total or aggregate across all *regions*?

    b) Where a *local market ancillary service requirement* has been determined by *AEMO* in respect of a particular *region*, in circumstances other than asynchronous operation of the *region*, is the "MPF" term in clause 3.15.6A(i)(1) only to be populated in the case of a *Market Generator, Market Small*

[10] *AEMO*, Causer Pays: Procedure for Determining Contribution Factors (**Causer Pays Procedure**), version 4.0, 15 December 2013.

Generation Aggregator or Market Customer that has a *generating unit* or *load* in that *region* (with AMPF being the aggregate of all such MPFs)? And if so:

i) is MPF only to be populated to the extent that the *Market Generator, Market Small Generation Aggregator* or *Market Customer* has *generating units* and/or *loads* in that *region*, and by a contribution factor calculated by reference only to those *generating units* and/or *loads* (with AMPF being the aggregate of all such MPFs)? Or

ii) is MPF to be populated by a contribution factor calculated by reference to the entire portfolio of the *Market Generator, Market Small Generation Aggregator* or *Market Customer* comprising all its *generating units* and/or *loads* throughout the *NEM* (with AMPF being the aggregate of all such MPFs)?

c) Alternatively to (b), where a *local market ancillary service requirement* has been determined by *AEMO* in respect of a particular region, in circumstances other than asynchronous operation of the *region*, is the "MPF" term to be populated by reference to the contribution factor last set by *AEMO* under clause 3.15.6A(j) for a *Market Generator*, *Market Small Generation Aggregator* or *Market Customer* wherever in the *NEM* that participant has its *generating units* and/or *loads* (with AMPF being the aggregate of all such MPFs)?

d) Are the answers to (a), (b) and (c) above different in a case where the *local market ancillary service requirement* is determined because the *region* or *regions* to which the requirement applies "has operated asynchronously" within the meaning of clause 3.15.6A(j)(2)?

e) Is *AEMO's* Causer Pays Procedure inconsistent with clause 3.15.6A(i) of the *Rules*, properly construed?

f) Is *AEMO's* Causer Pays Procedure inconsistent with clause 3.15.6A(k) of the *Rules*, properly construed?

g) Are contribution factors determined in accordance with *AEMO*'s Causer Pays Procedure contribution factors that fail to answer the descriptions or requirements in clause 3.15.6A(j)(1) or (2)?

h) Did *AEMO's* calculations in this case fail to conform to the requirements of clause 3.15.6A(i) of the *Rules*, and if so, in what respects?

15. If we conclude that any of the relevant *settlement statements* were non-compliant with the *Rules*, it will be necessary to consider whether we are able to require the parties under 8.2.6D of the *Rules* to take steps to give effect to a different outcome, and if so, what that outcome should be.

The *NEM*

16. The *NEM* is the market that operates across the *power system* comprising the majority of *Generators*, *transmission networks* and *distribution networks,* and *Market Customers* in Queensland, New South Wales, Australian Capital Territory, Victoria, South Australia and Tasmania.

17. Electricity is produced by participating *Generators* and transported across *transmission networks* and delivered into *distribution networks* where it is purchased by *Market Customers* and delivered to end consumers. For the purposes of setting market prices and *settlement* calculations the *NEM* is divided into five *regions* defined by and large by the boundaries of Queensland, New South Wales (incorporating the Australian Capital Territory), Victoria, South Australia and Tasmania.

18. Alternating current (AC) *interconnections* connect Queensland, New South Wales, Victoria and South Australia. These four mainland *regions* of the *NEM* are operated at the same *power system frequency* when these *interconnections* are in service. The Tasmania *region* is connected to the Victoria *region* by a direct current (DC) *interconnection* and therefore operates asynchronously to the rest of the *NEM*. Direct current *interconnections* also operate in parallel with alternating current *interconnections* between the Queensland *region* and New South Wales *region*, and between the Victoria *region* and South Australia *region*.

19. Physical operation of the *NEM* is coordinated by *AEMO* as system operator.

20. *AEMO* is also the market operator accountable, inter alia, for undertaking *settlement* activities of the *NEM*.

21. *Ancillary services* are acquired by *AEMO* to assist it in managing the physical operation of the *power system* within system security standards.

22. Under the Rules, *ancillary services* are divided into *market ancillary services* and *non-market ancillary services*.

23. The *ancillary services* relevant to this dispute are *market ancillary services* used by *AEMO* to manage *power system frequency,*[11] more particularly the *market ancillary services* that are defined in the *Rules* as *regulation services*.

24. There are two types of *regulation services*, being the *regulating raise service* and *regulating lower service.*

25. *AEMO* also acquires a second type of *market ancillary service*, commonly known as contingency *ancillary services,* with the six types of contingency *ancillary services* being the *fast raise service*, *fast lower service*, *slow raise service*, *slow lower service*, *delayed raise service* and *delayed lower service*.

26. A price for each *regulation service* is determined by *AEMO* each 5-minutes simultaneously with a price for the *dispatch* of electrical *energy* produced by *Generators* and delivered to wholesale *Market Customers*, in each *region*, pursuant to clauses 3.9.2 and 3.9.2A.

27. Depending on the circumstances prevailing from time to time, *AEMO* may determine that requirements for different *market ancillary services* may be met from anywhere across the *NEM* – global requirements, or may only be filled from a particular *region* or combination of *regions* – local requirements.

The relevant facts of this case

28. There is no dispute about the essential facts of the case. *AEMO* determined that it was necessary to set a *local market ancillary service requirement* of 35MW for each of the *regulating raise service* and *regulating lower service* in the South Australia *region* of the *NEM*, thus requiring the *dispatch algorithm* to source that level of these services from within the South Australia *region*. *AEMO* did this because one of the two AC transmission lines making up the Heywood *interconnector* between South Australia and Victoria had been taken out of service and *AEMO* formed the view that these *local market ancillary service requirements* were required to ensure *power system security* would be maintained in South Australia in the event the other AC *interconnector* line between Victoria and South Australia failed. If this were to occur the South Australia *region* would no longer have a synchronous connection to other *regions* of the *NEM* and would therefore be operating asynchronously.

[11] Different terminology is often used by *AEMO* and others in practice to refer to such services. Any of the eight *market ancillary services* can be referred to as a "*frequency* control *ancillary service"* (FCAS), and in the Causer Pays Procedure *AEMO* refers to the two *regulation services* as "Regulating FCAS").

29. The *local market ancillary service requirements* determined by *AEMO* have been described as pre-contingent requirements, in that they were determined by *AEMO* in case of a failure of the second AC *interconnector* line. Only in the event of that failure would the South Australia *region* then be operating asynchronously. In other words they were determined to be requirements notwithstanding the fact that (for almost the entirety of the Disputed Billing Periods) the South Australia *region* was and remained synchronously connected to other *regions* of the mainland *NEM*.

30. In this dispute before us, no party contended that we should attempt to review the correctness of *AEMO's* determination that the *local market ancillary service requirements* identified above be applied in the South Australia *region* in the Disputed Billing Periods. No such issue forms any part of the dispute before us.

31. As it happened, for virtually all of the relevant *dispatch intervals* in the Disputed Billing Periods, the mainland *NEM* continued to operate synchronously. However, there was a failure of the second AC *interconnector* line on 1 November 2015 between 21:51 and 22:26, meaning the South Australia *region* operated asynchronously for this period (affecting, it seems, eight *dispatch intervals* straddling two *trading intervals*).

32. For completeness, we note that at no stage was the South Australia *region* completely disconnected from other parts of the *NEM* (or electrically islanded), as the Murraylink DC transmission *interconnector*, which also connects South Australia and Victoria, remained in service.

33. For and in respect of each and every *dispatch interval* during which a *local market service ancillary requirement* was determined by *AEMO*, *AEMO* allocated the costs of these *local market ancillary service requirements* on the basis of a "PTA" calculation for participants that had at least one *generating unit* or *load* located in the South Australian *region* in a manner that utilised the contribution factor last set by *AEMO* in accordance with the express terms of the Causer Pays Procedure. Those contribution factors had been published at least 10 business days before the relevant *dispatch interval*. Those contribution factors were used as the "MPF" term which appears in clause 3.15.6A(i) for each relevant participant, with the "AMPF" term comprising all such MPFs.

34. Under the express terms of the Causer Pays Procedure, *AEMO* had calculated those contribution factors by reference to each participant's entire portfolio of *generating units* and *loads*, wherever those units or *loads* happened to be located throughout Australia.

35. Aside from what is intended at times when one or more *regions* operate asynchronously, there was no dispute about the *ex facie* meaning of relevant aspects of the Causer Pays Procedure. The Causer Pays Procedure states that *AEMO* will calculate contribution factors for each *Market Participant* in the *NEM* by reference to data (where available, depending on metering arrangements) about the performance of all *generating units* and/or *loads* across that participant's portfolio. In the event of asynchronous operation of a *region* or *regions* other than Tasmania, it is stated that separate contribution factors will not be determined. There is controversy about whether that amounts to the adoption of a procedure in relation to asynchronous operation (that is, by the adoption of the same procedure as applies for synchronous operation), or whether this amounts to having no procedure for asynchronous operation.

Our general approach to the task

36. The task before us is primarily one of statutory construction. The following general principles are relevant to our approach to that task in this case:

    a) The task of statutory construction must begin with a consideration of the statutory text. So must the task of statutory construction end.[12]

    b) The statutory text must be considered in its context. That context includes legislative history and extrinsic materials. Understanding context has utility if, and in so far as, it assists in fixing the meaning of the statutory text.[13]

    c) Objective discernment of statutory purpose is integral to contextual construction.[14] Here the *National Electricity Law* (Schedule 2, clauses 1, 7 and 41 in combination) requires a purposive approach to be taken to the *Law* and the *Rules*, referable to the purpose or object of the *Law* and the *Rules*.[15] That

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[12] *Thiess v Collector of Customs* (2014) 250 CLR 664 at [22], quoting from *Federal Commissioner of Taxation v Consolidated Media Holdings Ltd* (2012) 250 CLR 503 at [39]. We note Origin's Submissions in Reply at [19] which suggests the contrary, relying on *Application by Energex Limited (No 4)* [2011] ACompT 4, [21]-[24]. However, we consider that this passage should not be understood as mandating an approach in this case that would permit us to do otherwise than apply the text, construed in light of its purpose and other contextual matters. As was explained by the subsequent decision of the Tribunal cited by Origin, *Re United Energy Distribution Pty Ltd* [2012] ACompT 1, [61](d), "Clause 7 and cl 8 do not authorize a wholesale redrafting of the relevant provision. The quest is always to find the correct interpretation of that provision, not to embark upon an exposition of the interpreter's view of what the relevant provision should mean."

[13] *Thiess v Collector of Customs* (2014) 250 CLR 664 at [22], quoting from *Federal Commissioner of Taxation v Consolidated Media Holdings Ltd* (2012) 250 CLR 503 at [39].

[14] *Thiess v Collector of Customs* (2014) 250 CLR 664 at [23], references omitted.

[15] The objective of the *Law* is stated in s 7: "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

is, we are to prefer the interpretation "that best achieves the purpose or object" of the *Law*, and the *Rules*, to "any other interpretation". In this regard, we are to bear in mind that "statutes always have some purpose or object to accomplish, whose sympathetic and imaginative discovery is the surest guide to their meaning".[16]

d) Further, it is necessary to achieve to the greatest extent possible a harmonious construction which accords to each provision a function that can be reconciled with any apparently inconsistent provisions of the instrument.[17]

e) Although extrinsic material cannot be used to displace "the clear meaning of the text" (assuming one can be discerned), extrinsic material can assist, at least by revealing the mischief to which a provision is directed.[18] Context and legislative purpose will cast light upon the sense in which the words of the statute are to be read, and in this sense context is referable, inter alia, to the existing state of the law and the mischief which the statute was intended to remedy.[19]

f) Here the Law (Schedule 2, clause 8) expressly permits us to have regard to defined categories of Rule extrinsic material and Law extrinsic material, for certain purposes, including to resolve ambiguity or obscurity in a provision.

g) However, it would be an error to look at extrinsic materials before exhausting the application of the ordinary rules of statutory construction,[20] and in any event, as already mentioned, we must begin (and end) with the text.

37. We therefore propose to commence addressing the contentious construction issues in the dispute with a consideration of the text of the relevant provisions and to form tentative conclusions on that basis. We will also test our textually based conclusions by reference to relevant aspects of the legislative history of the provisions concerned, and accompanying extrinsic material.

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and security of the national electricity system." Chapter 3 of the Rules is intended to give effect to the market design principles set out in clause 3.1.4(a).

[16] *Thiess v Collector of Customs* (2014) 250 CLR 664 at [23], references omitted.

[17] *Project Blue Sky Inc v Australian Broadcasting Authority* (1998) 194 CLR 355 at [69]-[71].

[18] *Alcan (NT) Alumina Pty Ltd v Commissioner of Territory Revenue* (2009) 239 CLR 27, at [47], see also [25].

[19] *CIC Insurance Ltd v Bankstown Football Club Ltd* (1997) 187 CLR 384 at 408, explained by French CJ in *Alcan (NT) Alumina Pty Ltd v Commissioner of Territory Revenue* (2009) 239 CLR 27, at [4],

[20] *Saeed v Minister for Immigration and Citizenship* (2010) 241 CLR 252 at [33].

Clause 3.15.6A and its context

38. In order to understand the various concepts which appear in clause 3.15.6A(i), it is necessary to examine certain other provisions of Chapter 3 and terms defined in Chapter 10 of the *Rules*.

Rule 3.8 central dispatch

39. Key elements of *central dispatch* are summarised below:

    a) Under clauses 3.8.1(a) and (b), *AEMO's* duty is to operate a *central dispatch* process to balance *power system* supply and demand, and to use its reasonable endeavours to maintain *power system security*. The process should aim to maximise the economic value of *spot market* trading.

    b) Clause 3.8.1(d) requires *AEMO* to develop and publish the *dispatch algorithm* that is an integral part of the *central dispatch* process.

    c) Under clause 3.8.1(e1), *AEMO* must use the *dispatch algorithm* to determine the quantity of each *market ancillary service* which will be *enabled* for each *ancillary service generating unit* or *ancillary service load*.

    d) Clause 3.8.1(e2)(1) requires *AEMO* to determine the required quantity of each *market ancillary service* "that may be sourced from any *region* (referred to as the *global market ancillary service requirement*)", and clause 3.8.1(e2)(2) requires *AEMO* to determine "any required quantity of each *market ancillary service* which must only be sourced from one or more nominated *regions* (referred to as the *local market ancillary service requirement*)".

40. The terms *global market ancillary service requirement* and *local market ancillary service requirement*, are important in the present dispute. The definition in Chapter 10 of "*global market ancillary service requirement*" refers to clause 3.8.1(e1)(1) and the definition of "*local market ancillary service requirement*" refers to clause 3.8.1(e1)(2). As to the latter, it is a determination of *AEMO* that a particular required quantity of a *market ancillary service* must only be sourced from one or more nominated *regions* that gives rise to a "*local market ancillary service*", and this is worth bearing in mind wherever in the *Rules* that expression appears.

41. Clause 3.8.7A sets out the requirements for *market ancillary service* offers, and clause 3.8.8 deals with validation of *dispatch* bids and offers.

42. Clause 3.8.10 deals with *network constraints*, with paragraph (a) requiring *AEMO* to determine any *constraints* on *dispatch* which may result from planned network outages.

43. Clause 3.8.11 is concerned with *ancillary service constraints*. Under clause 3.8.11(a1), for each *dispatch interval, AEMO* must impose *constraints* upon the *dispatch algorithm* to determine the quantity of each *global market ancillary service requirement*, and any *local market ancillary service requirements*. This is an important point, in particular because it means that the determination that a *local market ancillary service requirement* exists imposes a limitation on how the market clearing mechanism operates, raising the potential for the *dispatch algorithm* to arrive at a higher price (thus resulting in a higher cost to be paid by *Market Participants*) than would otherwise be the case.

44. Pursuant to clause 3.8.21:

    a) *AEMO* must run the *dispatch algorithm* each five minutes (situations where *AEMO* is unable to do this are treated as special cases).

    b) The *dispatch algorithm* produces prices for each five-minute *dispatch interval* for *energy* and *market ancillary services* (*dispatch prices* and *ancillary service prices* respectively).

Rule 3.9 price determination

45. Key features of the *Rules* relating to pricing for *energy* and *ancillary services* are as follows:

    a) Pursuant to clause 3.9.2 *AEMO* must determine prices for each *regional reference node* for *energy*.

    b) Pursuant to clause 3.9.2A *AEMO* must determine prices for each *market ancillary service* for each *regional reference node*. In particular *AEMO* must:

        i) calculate the marginal price of meeting any *global market ancillary service requirement* for that service;

        ii) calculate the marginal price of meeting each *local market ancillary service requirement* for that service;

iii) identify for each *local market ancillary service requirement* the *regions* requiring the service;

iv) calculate an *ancillary service price* for each ancillary service for a *region* as the sum of:

(1) the marginal price of meeting any *global market ancillary service requirement* for that service; and

(2) the marginal price of meeting each *local market ancillary service requirement* for that service in that *region*.

Rule 3.11 ancillary services

46. Rule 3.11.1 introduces the different types of *ancillary services* and describes how they are acquired. It categorises *ancillary services* into *market ancillary services* and *non-market ancillary services*. Paragraph (b) deals with *market ancillary services*, stating that the prices for *market ancillary services* acquired by *AEMO* are determined using the *dispatch algorithm*.

47. Clause 3.11.2(a) lists the eight types of *market ancillary service*, including the *regulating raise service* and *regulating lower service* (being the two categories defined in Chapter 10 of the *Rules* as *regulation services*).

48. The *market ancillary services*, and aspects of the *central dispatch* process under the *Rules* summarised in paragraphs 39 to 44 above, are reflected in the facts agreed in the parties' ASOF at [20]-[30]. In that passage, the parties note that the *central dispatch* process conducted by *AEMO* involves the *enabling* of relevant *market ancillary services* pursuant to offers to *enable* such services made by *Market Customers* and *Market Generators*, and refer to the enablement of *ancillary service* offers in merit order of cost. In the course of that explanation, the parties note (ASOF [27A]), and we accept, as follows:

> When all *regions* of the *NEM* are interconnected via *interconnectors* that are capable of conveying FCAS, *regulation services* can be provided from anywhere in the *NEM* to correct small deviations across the entire *power system*.

49. In all but a handful of the *dispatch intervals* in the Disputed Billing Periods, all *regions* of the mainland *NEM* were *interconnected* via *interconnectors* that were capable of

conveying FCAS, and the South Australia *region* of the *NEM* was operating synchronously with the remainder of the mainland *NEM*.

Rule 3.15 settlements

50. Rule 3.15 contains a number of provisions relating to *settlements*, much of it concerned with *energy* trading rather than *ancillary services*. For present purposes it suffices to note by way of overview that:

    a) providers of *market ancillary services* are paid for capacity that has been *enabled* by *AEMO* using the *dispatch algorithm* at the relevant *ancillary service price* in each *region* for the amount of each service *enabled* in each *region*; and

    b) the amounts paid to providers of *ancillary services* are recovered from *Market Participants* according to the provisions of rule 3.15, and in particular:

        i) clause 3.15.1(a)(4) requires *AEMO* to facilitate the billing and *settlement* of payments due in respect of transactions, including those under in 3.15.6A, which relates to transactions for *ancillary services*;

        ii) clause 3.15.6A details the calculation of transactions to both pay the providers of *ancillary services* (to be precise, *Market Participants* whose *ancillary service generating units* or *ancillary service loads* are "*enabled*" in a given *trading interval)* and to recover from *Market Participants* the amounts paid in respect of such *enabled ancillary service generating units* or *enabled ancillary service loads*. This clause is of central importance in the dispute.

51. Clause 3.15.6A(a) sets out the formula for calculating positive *trading amounts* for each *enabled generating unit* or *load*, based on the MW *enabled*, and the *ancillary service price* for the relevant *dispatch interval* "for the *region* in which the *ancillary service generating unit* or *ancillary service load* has been *enabled*". Price in this context is price (at the *regional reference node*) in the *region* where the *enabled* unit or *load* is located.

52. Clauses 3.15.6A(b) and (b1) deal with *trading amounts* payable to providers of *non-market ancillary services* and are not relevant to this dispute.

53. The remainder of clause 3.15.6A deals with cost allocation, that is, with the raising of negative *trading amounts* to meet the payments to be made under that clause.

54. The scheme under which those provisions are arranged is as follows:

a) Clause 3.15.6A (c1)-(c10) relate to *non-market ancillary services* and comprise a set of provisions (including contemplated procedures to be published by *AEMO* from time to time) about allocation the costs of such services to *regions* according to regional benefit, based on published "regional benefit factors".

b) Clause 3.15.6A(d) and (e) relate to the costs of the particular *non-market ancillary service* known as the *system restart ancillary service*, which are split 50/50 between *Market Generators* and *Market Small Generation Aggregators* on the one hand and *Market Customers* on the other, with regional allocation, and then allocation of costs within the *region* based on *generator energy*/*customer energy* in that *region*.

c) Clause 3.15.6A(f) relates to the total amount calculated by *AEMO* under 3.15.6A(a) for three of the eight *market ancillary services*, that is, the *fast, slow and delayed raise services.* These are addressed by a set of provisions that require regional allocation, then allocation to each *Market Generator* and *Market Small Generation Aggregator* in the *region*. Regional allocation, and further allocation within each *region*, involves pro-rata allocation by reference to ratios related to *generator energy*. [21]

d) Clause 3.15.6A(g) provides similarly in respect of allocation of the costs of the *fast, slow and delayed lower services* to *Market Customers,* utilising ratios related to *customer energy*.[22]

e) Thus, clause 3.15.6A(f) and (g) together provide for the allocation of costs of all six forms of FCAS typically referred to as "contingency FCAS", and they do so by employing ratios based on *energy* volumes generated or consumed.

f) Clause 3.15.6A(h)-(k) relate to the regulation *frequency* control *ancillary services*, that is, the r*egulating raise service* and the *regulating lower service,* central to this dispute. We will turn to those provisions, along with 3.15.6A(na) and (nb), in a moment.

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[21] The term *generator energy* is defined in clause 3.15.6A(o) in respect of a *Market Generator* for a *trading interval*, meaning the sum of the *adjusted gross energy* figures calculated for that *trading interval* in respect of that *Market Generator's* applicable *connection points…*" (and set at zero if that sum has a negative value).

[22] The term *customer energy* is defined in clause 3.15.6A(o) in respect of a *Market Customer* for a *trading interval*, meaning the sum of the *adjusted gross energy* figures calculated for that *trading interval* in respect of that *Market Customer's* relevant *connection points*".

55. Before leaving clause 3.15.6A(c1)-(g), however, we note that they constitute a comprehensive regime for allocating the costs attributable to all kinds of *ancillary services* save for the *regulating raise service* and the *regulating lower service*, and in each case they do so in a manner that involves a form of regional allocation.

56. It is useful to set out virtually the entirety of clause 3.15.6A(h)-(nb) in their present form (which is the same as the form in which they applied in November and December 2015). In doing so, immediately below, we have added emphases to certain passages that featured prominently in submissions and/or which we consider to be particularly important to the issues to be resolved:

> (h) The **total amount calculated by *AEMO* under paragraph (a)** for the *regulating raise service* or the *regulating lower service* in respect of each *dispatch interval* which falls within the *trading interval* **must be allocated by *AEMO* to each *region* in accordance with** the following procedure **and the information provided under clause 3.9.2A(b)**:
>
> (1) **allocate on a pro-rata basis for each *region*** and **for each *dispatch interval*** within the relevant *trading interval* **the proportion of the total amount** calculated by *AEMO* under paragraph (a) for the *regulating raise service* and *regulating lower service* **between *global market ancillary service requirements*** and ***local market ancillary service requirements*** to the **respective marginal prices for each such service**; and
>
> (2) calculate **for each relevant *dispatch interval*** the **sum of the costs of acquiring the *global market ancillary service requirements* for all *regions*** and the **sum of the costs of acquiring *local market ancillary service requirements* for all *regions***, as determined under subparagraph (1).
>
> (i) In **each *trading interval*** in relation to:
>
> (1) each *Market Generator*, *Market Small Generation Aggregator* or *Market Customer* which has *metering* to allow their individual contribution to the aggregate deviation in *frequency* of the *power system* to be assessed, **an *ancillary services* transaction occurs, which results in a *trading amount*** for that *Market Generator*, *Market Small Generation Aggregator* or *Market Customer* determined **in accordance with the following formula**:
>
> $TA = PTA \times -1$
>
> and
>
> $$PTA = \text{the aggregate of} \left(TSFCAS \times \frac{MPF}{AMPF} \right)$$
>
> **for each *dispatch interval* in the *trading interval* for *global market ancillary service requirements* and *local market ancillary service requirements* where**:

TA (in $)	=	the *trading amount* to be determined (which is a negative number);
TSFCAS (in $)	=	**the total of all amounts** calculated by *AEMO* under paragraph **(h)(2) for the *regulating raise service*** or the ***regulating lower service*** **in respect of a *dispatch interval***;
MPF (a number)	=	**the contribution factor last set by *AEMO* for** the *Market Generator*, *Market Small Generation Aggregator* or *Market Customer*, as the case may be, **under paragraph (j) for the *region* or *regions* relevant to the *regulating raise service*** or ***regulating lower service***; and
AMPF (a number)	=	the aggregate of the MPF figures for all *Market Participants* for the *dispatch interval* **for the *region* or *regions* relevant to the *regulating raise service*** or ***regulating lower service***.

or

(2) **in relation to each *Market Customer* for whom the *trading amount* is not calculated in accordance with the formula in subparagraph (1),** an ancillary services transaction occurs, which results in a trading amount for that *Market Customer* determined in accordance with the following formula:

TA = PTA × -1

and

$$PTA = \text{the aggregate of} \left(TSFCAS \times \frac{MPF}{AMPF} \times \frac{TCE}{ATCE} \right)$$

for each *dispatch interval* in the *trading interval* for *global market ancillary service requirements* and *local market ancillary service requirements* where:

TA (in $)	=	the *trading amount* to be determined (which is a negative number);
TSFCAS (in $)	=	**has the meaning given in subparagraph (1);**
MPF (a number)	=	the aggregate of the contribution factor set by *AEMO* under paragraph (j) **for *Market Customers*, for whom the *trading amount* is not calculated in accordance with the formula in**

subparagraph (1) for the *region* or *regions* relevant to the *regulating raise service* or the *regulating lower service*;

AMPF (a number)	=	the aggregate of the MPF figures **for all *Market Participants*** for the *dispatch interval* **for the *region* or *regions* relevant to the *regulating raise service* or *regulating lower service***;
TCE (in MWh)	**=**	**the *customer energy* for the *Market Customer*** for the *trading interval* **in the *region* or *regions* relevant to the *regulating raise service* or *regulating lower service*; and**
ATCE (in MWh)	**=**	**the aggregate of the *customer energy* figures for all *Market Customers*, for whom the *trading amount* is not calculated in accordance with the formula in subparagraph (1),** for the *trading interval* **for the *region* or *regions* relevant to that *regulating raise service* or *regulating lower service*.**

(j) *AEMO* **must determine for the purpose of paragraph (i)**:

(1) **a contribution factor** for each *Market Participant*; and

(2) **notwithstanding the estimate provided in paragraph (nb)**, **if a *region* has or *regions* have operated asynchronously during the relevant *trading interval*, the contribution factors relevant to the allocation of *regulating raise service* or *regulating lower service* to that *region* or *regions***,

in **accordance with the procedure prepared under paragraph (k)**.

(k) ***AEMO* must prepare a procedure** for determining contribution factors **for use in paragraph (j) and, where *AEMO* considers it appropriate, for use in paragraph (nb)**, **taking into account** the following principles:

(1) **the contribution factor for a *Market Participant* should reflect the extent to which the *Market Participant* contributed to the need for *regulation services***;

…

(3) **for the purpose of paragraph (j)(2)**, the contribution factor determined for a group of *regions* for all *Market Customers* that do not have *metering* to allow the individual contribution of that *Market Customer* to the aggregate need for *regulation services* to be assessed, must be divided between *regions* in proportion to the total *customer energy* for the *regions*;

(4) the individual *Market Participant's* contribution to the aggregate need for *regulation services* **will be determined over a period of time to be determined by *AEMO***;

…

(6) where contributions are aggregated for ***regions* that are operating asynchronously** during the calculation period under paragraph (i), the contribution factors should be normalised so that the total contributions from any non-synchronised *region* or *regions* is in the same proportion as the total *customer energy* for that *region* or *regions*; and

…

(l) *AEMO* may amend the procedure referred to in clause 3.15.6A(j) from time to time.

(m) *AEMO* must comply with the *Rules consultation procedures* when making or amending the procedure referred to in clause 3.15.6A(k).

(n) *AEMO* must *publish*, in accordance with the *timetable*, **the historical data used** in determining a factor for each *Market Participant* for the purposes of clauses 3.15.6A(h) and (i) in accordance with the procedure contemplated by clause 3.15.6A(k).

(na) **Notwithstanding any other provisions** of the *Rules*, *AEMO* **must *publish* the factors determined in accordance with clause 3.15.6A(j)(1) at least 10 *business days* prior to the application of those factors** in accordance with clauses 3.15.6A(h) and 3.15.6A(i).

(nb) When **a *region* is or *regions* are operating asynchronously**, *AEMO* must *publish* (where appropriate in accordance with the procedure developed under paragraph (k)), an estimate of the contribution factors referred to in **paragraph (j)(2)** to be applied for information purposes only by *Market Participants* **for the duration of the separation**.

Preliminary observations about the provisions

57. It is noteworthy that, in addressing the allocation of costs of the six forms of contingency FCAS, each of clause 3.15.6A(f) (which addresses the *fast raise service, slow raise service* and *delayed raise service*) and clause 3.15.6A(g) (which addresses the *fast lower service*, *slow lower service* and *delayed lower service*) includes provisions analogous to clause 3.15.6A(h)(1) and (2) above, but also includes a provision that has no analogue in clause 3.15.6A(h). In the case of clause 3.15.6A(f), that provision is as follows:

> (3) allocate for each relevant *dispatch interval* the sum of the costs of the *global market ancillary service requirement* and each *local market ancillary service requirement* calculated in clause 3.15.6A(f)(2) to each *region* as relevant to that requirement pro-rata to the aggregate of the *generator energy* for the *Market Generators* and *small generator energy* for the *Market Small Generation Aggregators* in each region during the *trading interval*.

58. Clauses 3.15.6A(h)-(k) are not easy to construe. In the course of considering the competing constructions advanced in this dispute, we have identified the following key steps and points for consideration.

59. Clause 3.15.6A(h) begins with a reference back to 3.15.6A(a). As noted above, that provision gives rise to a positive *trading amount* denoted "TA" for a *Market Participant* in each *trading interval* in relation to each of the participant's *enabled ancillary service generating units* or *enabled ancillary service loads*. That *trading amount* is the aggregate across the *trading interval* of the *enabled* quantity of the service in each *dispatch interval* denoted "EA" (in MW) and price, denoted as "ASP" (in $ per MW per hour).

60. Clause 3.15.6A(h) refers to allocating, in a certain way, the total amount calculated under clause 3.15.6A(a), for each of the *regulating raise service* and the *regulating lower service*, in each *dispatch interval*. There is controversy in the dispute about what is required by clause 3.15.6A(h).

61. Clause 3.15.6A(i) is separated into two provisions. Clause 3.15.6A(i)(1) addresses *Market Generators, Market Small Generation Aggregators* and *Market Customers* which have *metering* to allow their individual contributions to aggregate deviation in *frequency* of the *power system* to be assessed, and clause 3.15.6A(2) addresses *Market Customers* which do not have such metering. Each provision operates to raise a negative *trading amount* for the relevant Market Participant in a *trading interval*, denoted "TA", based on a formula for "PTA", involving the conversion of the amount produced by the "PTA" formula into a negative figure. A negative *trading amount* indicates this amount is a cost to be paid by the relevant party

62. The "PTA" formula in clause 3.15.6A(i)(1) is the aggregate of the products of the formula which appears within the brackets, said (by the interstitial words that follow, in the midst of clause 3.15.6A(i)(1)) to be the aggregate of what appears within the brackets "for each *dispatch interval* in the *trading interval*". There is a degree of ambiguity about this, but in our view it indicates that the aggregation in question is, like in clause 3.15.6A(a), at least, an aggregation of six *dispatch interval* amounts. The PTA formula is also capable of being read as involving an aggregation of repeated applications of the terms within the brackets on the right hand side of the formula, for a given *dispatch interval*. Whether that is so depends on the meaning to be given to "TSFCAS".

63. The PTA formula in clause 3.15.6A(i)(1) is also described in the interstitial words as being "for *global market ancillary service requirements* and *local market ancillary service requirements*" where the three operative terms "TSFCAS", "MPF" and "AMPF" have the definitions that appear below the interstitial words.

64. The meaning to be given to the definition of TSFCAS is a controversial issue in the proceeding. In particular, there is controversy as to whether TSFCAS should be regarded as an aggregation across *regions* of the amounts calculated by *AEMO* under paragraph (h)(2). On a literal interpretation of the definition, this approach seems to be supported by the words "the total of all amounts calculated by *AEMO* under paragraph (h)(2) …".

65. In clause 3.15.6A(i)(2), "TSFCAS" has the same meaning as it does in clause 3.15.6A(i)(1).

66. The meaning to be given to "MPF" in clause 3.15.6A(i)(1) is also a controversial issue in the proceeding. The first important point to note is that "MPF" is defined by reference to a value (or, perhaps, values) specific to the particular *Market Participant* set by *AEMO*, from time to time: "the contribution factor last set by *AEMO* for the [Market Participant] under paragraph (j) **…".** The second point is that this description appears to be qualified by the words that appear immediately afterwards, "… for the *region* or *regions* relevant to the *regulating raise service* or *regulating lower* service". In particular, there is controversy in this dispute about the meaning to be attributed to the words "for the *region* or *regions* relevant to the *regulating raise service* or *regulating lower service*". Do these words qualify the contribution factor, the *Market Participant*, or both? The controversy in relation to this phrase as it applies to MPF flows through to "AMPF", because that term is defined as an aggregate of the MPF figures for all *Market Participants* for the *dispatch interval*, again qualified by the words "for the *region* or *regions* relevant to the *regulating raise service* or *regulating lower service*".

67. The definitions of "MPF" and "AMPF" in clause 3.15.6A(i)(2) are different. In that provision, "MPF" is itself an aggregate – an aggregate of the contribution factor[s] set by *AEMO* under paragraph (j) for all *Market Customers* who do not have the requisite metering to enable clause 3.15.6A(i)(1) to apply, again apparently qualified by the words, "for the *region* or *regions* relevant to the *regulating raise service* or the *regulating lower service*". The denominator "AMPF" is a larger aggregate of MPF figures for all *Market Participants* for the *dispatch interval*, again "for the *region* or *regions* relevant to the *regulating raise service* or *regulating lower service*".

68. In clause 3.15.6A(i)(2) there is an additional ratio to be applied within the mandated formula, denoted by "TCE/ATCE". This ratio represents the proportion the particular *Market Customer's customer energy* (in the *trading interval* in which the particular *dispatch intervals* the subject of the formula apply), bears to the aggregate of the

customer energy figures for all *Market Customers* who do not have the requisite metering to enable clause 3.15.6A(i)(1) to apply, for the same period. The definition of "TCE" refers to the *customer energy* of the *Market Customer* "in" the *region* or *regions* relevant to the *regulating raise service* or *regulating lower service*. The definition of "ATCE" are qualified in a similar way by the phrase "for the *region* or *regions* relevant to that *regulating raise service* or *regulating lower service*".

69. As noted in paragraphs 66 and 67 above, "MPF" in clause 3.15.6A(i)(1) and (2) are both defined by reference to an administrative step that *AEMO* takes under paragraph (j), viz., the setting of contribution factors for *Market Participants*.

70. Clause 3.15.6A(j) imposes a duty on *AEMO* to determine, for the purpose of paragraph (i), certain contribution factors "in accordance with the procedure prepared under paragraph (k)". *AEMO* contends that the Causer Pays Procedure is the procedure referred to in paragraph (j), but there is a question about whether or to what extent it meets the requirements of the *Rules*, which we will now outline.

The Causer Pays Procedure

71. There is significant controversy in this dispute about whether *AEMO's* Causer Pays Procedure on its face truly answers the description of the procedure that is implicitly required by clause 3.15.6A(j)(1) and (2), whether *AEMO* complied with clause 3.15.6A(k) in preparing it, and whether the Causer Pays Procedure can be read as embodying a different methodology to the one expressly set out in it.

72. The Causer Pays Procedure that applies in the present case (Version 4.0) took effect on 15 December 2013. In its introduction (section 1), it states that it is made in accordance with clause 3.15.6A(k) of the *Rules*, and may only be amended in accordance with clause 3.15.6A(l). In order for *AEMO* to make or amend the Causer Pays Procedure, it must comply with a set of procedural conditions (the *Rules consultations procedures*: clause 3.15.6A(m)). Item 3 of section 1 then states:

> If there is any inconsistency between this Procedure and the *Rules*, the *Rules* will prevail to the extent of that inconsistency.

73. In section 4, entitled "General Principles", the Causer Pays Procedure states that contribution factors are determined for the purpose of assigning the costs of "Regulating FCAS" (viz., the *regulating lower service* and the *regulating raise service*) "to those *Market Participants* who have caused the need for those services".

74. Although these are the words used, it is clear that those words cannot be read literally, because the determination of contribution factors under the Causer Pays Procedure depends on data on the performance of the metered *generating units* and metered *loads* of a *Market Participant* in a 28-day historical period, where the resultant contribution factor is determined and published 10 business days prior to being applied. In our view, it is clear that this backward-looking approach is contemplated by the *Rules*, because clause 3.15.6A(n) expressly refers to "historical data" in this respect, clause 3.15.6A(i)(1) (the definition of "MPF") contemplates the application of contribution factors previously set by *AEMO,* and clause 3.15.6A(na) requires their prior publication.[23]

75. The Causer Pays Procedure sets out a methodology for measuring the extent of contribution of such *generating unit* and *load* to deviations from the *power system's* requirement for *frequency* correction on a 4-second by 4-second resolution.

76. The parties have agreed on a summary of the procedure set out in the Causer Pays Procedure in the ASOF at [41]-[51].

77. Of most importance for the present dispute, as recorded in the ASOF at [46], the Causer Pays Procedure provides for *AEMO* to calculate a single contribution factor for a *Market Participant* based on the aggregate performance of all *generating units* and *loads* in its portfolio throughout the *NEM*. That is, the contribution factor is a metric of the *Market Participant's* entire portfolio, not of its *generating units* and *loads* in any particular *region* or *regions*. Section 5.10 of the Causer Pays Procedure states:

> For each *Market Participant*, determine the net of the positive and negative factors by aggregating the individual *generating unit* and *load contribution factors* for all *generating units* and *loads* within the *Market Participant's* portfolio.

78. There is a complication relating to the Tasmania *region* of the *NEM*. As recorded in the ASOF at [44], and also as reflected in sections 5 and 7 of the Causer Pays Procedure, the Tasmania *region* is never connected to the other regions by an AC *interconnector*, and therefore it operates at a different *frequency* and has "different correction requirements".

[23] Origin contended that it would be permissible for AEMO to recalculate, republish, wait 10 *business days* and then re-apply the contribution factors. While that may be permissible, we do not consider this to have contemplated as the ordinary manner in which the provisions would operate.

79. There is no definition in the *Rules* of what is meant in clause 3.15.6A(j)(2) and (k)(6) by the expression "operated [operating] asynchronously". Nor is it explained in the *Rules* whether, if one *region* operates asynchronously from all the rest, the remainder are, or are not, to be regarded *per se* as a group of *regions* operating asynchronously for the purposes of clause 3.15.6A(j)(2), and (k)(3) and (6).

80. It is possible that the special position of the Tasmania *region* means that at all times it is a *region* that operates asynchronously for the purposes of clause 3.15.6A(j)(2) of the *Rules*. That raises a question about how the *Rules* treat the remaining *regions* of the *NEM*. We did not receive any submissions squarely addressing this point, however our preliminary view is that in circumstances where all the other *regions* of the *NEM* operate synchronously with each other, clause 3.15.6A(j)(2), (k)(3) and (6), and (nb) do not apply. To name one indication that this must be correct, we note that the text of paragraph (j)(2) refers only to a scenario in which a *region* or *regions* have operated asynchronously, and to name another, we consider that the reference in paragraph (nb) to "for the duration of the separation"[24] can be used to inform the proper construction of paragraph (j)(2). These indications suggest that the reference to asynchronous operation attaches to a *region* or *regions* that have become separated or at least temporarily operating asynchronously from the remainder of the *NEM*, rather than attaching to the *NEM* as a whole, and that the separation has a particular duration. If it had been intended that paragraph (j)(2) would apply to all *regions* in the *NEM* in the event that one *region* operated asynchronously, and that this would occur at all times, more direct language would have been used. Further, in our view it is clear that the scheme contemplates that *ex ante* published contribution factors for general application in clause 3.15.6A(i) will have been "set" ("last set") by *AEMO* prior to the *dispatch interval* and *trading interval* in question, and the circumstances contemplated by paragraph (nb) are an exception by which estimates are to be provided "for the duration of the separation", to be replaced in due course by *ex post* contribution factors especially formulated under paragraph (j)(2). That is an important feature of the scheme, as without it the scheme would be less transparent, and less likely to facilitate efficient decision-making by the firms involved, contrary to the market design principle in clause 3.1.4(2). As well as being inconceivable that paragraph (j)(2) was intended to apply to all *regions* at all times, it is also most unlikely that (j)(2) was inserted by the *AEMC* in ignorance of the peculiar position of Tasmania. As we note below when we turn to the extrinsic material, the

[24] As we have elsewhere observed, electrical separation is not synonymous with asynchronous operation. However, in context, we consider that the concept of separation is clearly being used to refer to asynchronous operation.

AEMC was aware that the Tasmania *region* would be perpetually operating asynchronously from the remainder of the *NEM*.

81. As is explained in section 5.1 of the Causer Pays Procedure, the methodology for determining the contribution made by a *generating unit* or *load* to deviation from the required correction of *frequency* of the *power system* involves a metric of the extent of deviation of the *generating unit* or *load* from its assumed ramping trajectory and another metric known as "FI", or *frequency* index, representing the required correction in *frequency* of the *power system* from time to time. In the Causer Pays Procedure, it is made clear that *AEMO* calculates a separate FI for the Tasmania *region*, and to this extent the calculations applicable to the Tasmanian *region* and the mainland *regions* of the *NEM* differ. That said, the Causer Pays Procedure also makes it clear that as from 1 January 2009 a single set of contribution factors for all regions of the *NEM* have been, and continue to be, determined (section 4).

82. The Causer Pays Procedure (section 5.6) goes on to state that once the settlement factors have been calculated for each *generating unit* and *load* in the mainland *regions* and for each *generating unit* and *load* in the Tasmania *region*, they are normalised to produce a single set of settlement factors.

83. The normalisation process involves the application of ratios representing the *energy* demand in the Tasmania region as a proportion of total *NEM* demand averaged over the sample period, and the *energy* demand in the mainland *NEM* as a proportion of total *NEM* demand averaged over the same period (section 5.9).

84. Aside from addressing the asynchronous operation of the Tasmania *region* as against the mainland *NEM* in the above manner, the Causer Pays Procedure states that contribution factors that reflect separated *regions* are not to be calculated.

85. In this regard, section 5.1 (4)(e) includes a statement that "If an abnormal *frequency* island temporarily forms within the *NEM* separate values of FI will not be calculated. See section 7 for further details."

86. Section 7 (including its footnote) states:

> **7 Dealing with Regions when they become Electrically Separated**
> The current methodology does not calculate factors that reflect separated *regions*[17]. There is no automatic logic to deal with *regions* when they become electrically separated. The number of occurrences of *region* islanding is typically very low and the durations when they occur are relatively short and, therefore, the increased complexity of the process and the added expense of covering these reasonably rare contingencies is not warranted. Although data

is collected for the duration of a *regional* separation, this data is discarded and is not applied in determining the *contribution factors* for the mainland *regions*.

17 This does not include an outage of Basslink. The calculation of *contribution factors* will not be affected if the Tasmania *region* is separated from the Mainland *regions*.

87. In light of the portfolio-wide methodology for determining contribution factors mandated by the Causer Pays Procedure, in this dispute it is contended (by Origin) that the aggregated, portfolio-wide contribution factors determined and published by *AEMO* should not be treated as contribution factors for the purposes of applying the formulae in clause 3.15.6A(i), and they should be re-determined, re-published and then the formulae re-applied using the fresh contribution factors.

88. We do not have any power to declare the Causer Pays Procedure invalid, but we are required to form conclusions about these matters to the extent necessary to resolve the dispute, because they relate to the meaning and application of the *Rules* in relation to the *settlement statements* for the Disputed Billing Periods. We are also permitted to indicate where a relevant breach of the *Rules* has occurred.[25]

Overview of the parties' submissions

89. There are in essence four competing approaches amongst the active parties, one propounded by *AEMO* and others, two closely related approaches propounded in the alternative by the Coalition, and a fourth propounded by Origin, who also enlists the Coalition's arguments in the alternative. In short, the positions of the parties may be summarised as follows:

a) *AEMO*, Alinta, CS Energy and Stanwell contend that the *Rules* require or at least permit a portfolio-wide approach to the calculation of contribution factors, and a regional allocation of the costs of meeting *local market ancillary service requirements* based on such contribution factors (the **Portfolio-wide Regional Recovery approach**). That is:

i) the costs of meeting any *local market ancillary service requirement* for the *regulating raise service* or any *local market ancillary service requirement* for *the regulating lower service* are in each such case to be treated as giving rise to a pool of costs (denoted in clause 3.15.6A(i) by "TSFCAS")

[25] Clause 8.2.1(d).

for each *dispatch interval* attributable to the *region(s)* identified by *AEMO* as being subject to each such requirement;[26] and

ii) that pool of costs is to be allocated amongst *Market Participants* who have a *generating unit* or *load* in the South Australia *region* using the single contribution factor (denoted in clause 3.15.6A(i) by "MPF") previously calculated and published (more than 10 *business days* earlier than the relevant *dispatch interval*) by *AEMO* in accordance with its Causer Pays Procedure (Version 4.0), being a contribution factor that was calculated by reference to the performance of all the *generating units* and *loads* in the portfolio of the relevant *Market Participant* irrespective of geographical location, over a 28 day period prior to publication, expressed as a proportion of the sum of contribution factors of all such *Market Participants*.

b) The Coalition contends for:

- *first*, a construction by which clause 3.15.6A(i) provides for a global allocation of costs of *regulation services* in all circumstances (the **Global Recovery approach**), with the only exception to this being the potential for *AEMO* to make and apply a procedure for the calculation of specially modified contribution factors that could achieve regional cost allocation in cases of asynchronous operation of "one or more *regions*" from "the rest of the *NEM*"[27]; or
- *secondly* and in the alternative, a construction by which clause 3.15.6A(i) provides for a global allocation of all costs of *regulation services enabled* during periods of synchronous operation, and regional allocation of costs arising during asynchronous operation (the **Synchronous Global Recovery approach**).

In neither case does the Coalition impugn the contribution factors calculated by *AEMO*.

In a little more detail, the Coalition's arguments are:

[26] Alinta's Submissions at [62]-[63] seemed to be directed to, and concluded with, a contention that "TSFCAS is the aggregate cost for both global and local market ancillary service requirements (clause 3.15.6A(h)(2))", but Alinta explained in oral submissions that its position was that the matters in paragraph (h)(2) are not to be summed together in one calculation, but rather are each to be summed separately, and that there will be a separate "TSFCAS" for each separate "requirement": transcript, 26 October 2016, p205.29-206.7, 211.5-12, 211.14-212.31, 213.16-214.15.

[27] Coalition's Outline of Submissions dated 11 July 2016, [55], [56](d), [69], [70].

i) on the basis of the text and the formulae, and in order for clause 3.15.6A(h)(1) and (2) to be given an interpretation consonant with the equivalent provisions of clause 3.15.6A(f)/(g)(1) and (2), the costs of *local market ancillary service requirements* for the *regulating raise service* and for the *regulating lower service* are not each to be treated as giving rise each to a separate pool of costs attributable to the *region*(s) identified by *AEMO* as being subject to each such requirement, but are rather to be aggregated with the costs of *global market ancillary service requirements* (this total is denoted in clause 3.15.6A(i) as "TSFCAS"), across all *regions*; and

ii) that total is to be allocated amongst all *Market Participants* in the *NEM* using the single contribution factor (denoted "MPF") previously calculated and published by *AEMO* in accordance with its Causer Pays Procedure (Version 4.0), being a contribution factor that was calculated by reference to the performance of all the *generating units* and *loads* in the portfolio of the relevant participant irrespective of geographical location, over a 28 day period prior to publication; and

iii) the only exception to the application of clause 3.15.6A(i) in this manner would be under the exception created by paragraph (j)(2), and this could only occur if *AEMO* had made a procedure for the calculation of contribution factors in the event of asynchronous operation;[28]

iv) however, *AEMO* has failed to make a procedure for the calculation of contribution factors in the event of asynchronous operation.

v) In the alternative to points (i) to (iii) above, in periods of synchronous operation, the construction of clause 3.15.6A(i) advanced in points (i) and (ii) is required, but in periods of asynchronous operation, the provisions of clause 3.15.6A can accommodate a regional allocation of costs in the following way:

[28] The Coalition did not set out to explain precisely how, if such a procedure addressing paragraph (j)(2) had been prepared by *AEMO*, it might be able to provide for contribution factors that could achieve a regional allocation of the costs arising from asynchronous operation, but presumably this could only be by modification of the "MPF" numerator that appears in the PTA formulae in clause 3.15.6A(i) (e.g. Transcript 27 July 2016, pp 371-372), as it was not contended (and we do not think it could be contended) that clause 3.15.6A(i) could be displaced altogether by a procedure addressing paragraph (j)(2).

- In that event, and that event only, the words "region or regions relevant to the [*regulation service*]" permit and require a regional limitation to be imposed on the scope of "MPF";
- Only the MPFs as previously determined by *AEMO* for *Market Participants* in a *region* (or combination of *regions*) operating asynchronously from the rest of the *NEM* are thereby included in the PTA calculation in respect of regulation *services* for that *region* (or *regions*);
- In order to maintain mathematical logic between the factors on the right hand side of the "PTA" equation, TSFCAS is to be treated as the total of the costs of the *regulating raise service* and/or the total of the costs of the *regulating lower service* in respect of a *region* that is operating asynchronously from the rest of the *NEM* (and for each such combination of *regions*);
- However, *AEMO* has failed to make a procedure for the calculation of contribution factors to apply in the event of asynchronous operation.

c) Origin contends for calculation of contribution factors based only on the performance of *generating units* and *loads* located in the *region*(s) concerned, and a regional allocation of costs based on such contribution factors (the **Regional Factor approach**). That is:

i) The costs of *local market ancillary service requirements* for the *regulating raise service* and for the *regulating lower service* are each to be treated as giving rise to a pool of costs attributable to the *region*(s) identified by *AEMO* as being subject to each such requirement.

ii) That pool (denoted "TSFCAS") is to be allocated amongst participants who have a *generating unit* or *load* in the South Australia *region,* but not by using the single contribution factor previously calculated and published by *AEMO* following the steps in its Causer Pays Procedure (Version 4.0).

iii) The Causer Pays Procedure is inconsistent with the *Rules* to the extent that the procedure purports to require the calculation of a contribution factor by reference to the performance of all the *generating units* and *loads* in the portfolio of the relevant participant irrespective of geographical location of the units/*loads*, because the *Rules* require the calculation of a contribution factor only by reference to the performance of a participant's

generating units or *loads* located in the *region* or *regions* the subject of the relevant *local market ancillary service requirement*.

iv) In the alternative to points (i) to (iii), Origin in effect adopts the Global Recovery approach proposed by the Coalition.

90. We will now turn to the central task of analysing the text of the relevant provisions and expressing our conclusions on their proper statutory interpretation, and then turn to consider the available extrinsic material. In the course of doing so, it will be necessary to address the way the parties put certain aspects of their competing positions in more detail.

Overview of analysis and conclusions

91. Each of the parties has presented a persuasive case for the construction of the formula in clause 3.15.6A(i)(1) they urge, and each has been able to enlist the support of aspects of the text. In a sense, none of the competing positions is entirely supported by the text. What we mean by this is that if one takes the most obvious literal interpretation of each aspect of the text in isolation from the whole, some parts of the text support one approach and some another. In this sense, clause 3.15.6A is ambiguous.

92. We have reflected on each of the competing positions and have concluded that the proper resolution of the various ambiguities identified by the parties must involve ascertaining a construction that both:

a) permits of a coherent combined operation of the various provisions; and

b) avoids distortion of the ordinary conventions of English expression and grammar in respect of each provision and each constituent part thereof.

93. What do we mean by a coherent combined operation of the provisions? The combined operation of the provisions must be free from any arithmetic illogicality. That is, for example, where a ratio is required to be applied by one of the formulae concerned, that ratio must relate logically to the value to which it is to be applied. Also, it is necessary to take a holistic view of the provisions of clause 3.15.6A(h)-(nb), and to seek to discern whether a construction is available that does not strain the language used and by which it can be seen that the provisions all contribute to a rational outcome. We must also arrive at a construction that attaches like meaning to like expressions and drafting appearing elsewhere in clause 3.15.6A, subject to any

differences that arise from differences in context. These considerations accord with the general principles of statutory construction outlined in paragraph 36 above.

94. On this approach, in our view it is possible to discern the correct construction of the provisions. As will be seen, it is a construction that very largely supports the contentious aspects of *AEMO*'s approach to the calculation of the *settlement statements* in this case.

95. In light of the conclusions we have reached about the proper construction of the relevant provisions, and their application to the facts, we are not inclined to make any determination that would involve revisiting the vast majority of the *settlement statements* for the Disputed Billing Periods. The only potential exception might be the *settlement statements* that involve *trading amounts* calculated for the two *trading intervals* during which the South Australia region operated asynchronously, viz., *trading intervals* 22:00 and 22:30 on 1 November 2015. We propose to hear the parties further on that matter.

96. The remainder of these reasons sets out our reasoning for these conclusions.

97. In the analysis that follows, we first address the resolution of whether the Coalition's Global Recovery approach is to be preferred over the other parties' approaches (viz., the Portfolio-wide Regional Recovery approach and the Regional Factor approach) or any other approach[29]. We do so first on the primary basis on which the Coalition advanced that approach, then secondly on the alternative basis, namely the Synchronous Global Recovery approach. We then address Origin's Regional Factor approach. We adopt a textual analysis first, and then test our preliminary conclusions from that analysis by reference to the available extrinsic material.

Textual analysis of the Coalition's Global Recovery approach and Synchronous Global Recovery approach

98. We accept, as the Coalition contended, that *AEMO's* market settlement role under Chapter 3 requires strict and transparent adherence to the *Rules*, including the applicable formulae. That is so whatever may be the case with respect to functions conferred on *AEMO* by other parts of the *Rules*, for example, in relation to *power system security*. The questions here are, what do the *Rules* require *AEMO* to do, and

[29] Provided the parties receive a fair opportunity to understand the issues, put their cases and be heard, we are not confined to the parties' formulations of the issues: see clause 8.2.6C(e) and (f). As it happens, we have been able to reach our conclusions without having to travel beyond the issues squarely raised by the parties, save that the issue on which we express a preliminary conclusion in paragraph 80 above only arises indirectly.

has *AEMO* complied? The latter question follows directly from the former, because in this case the facts as to how *AEMO* relevantly carried out its calculations are uncontroversial.

99. The Coalition's primary contention is that there is no regional limitation (express, implied, or otherwise intended) in clause 3.15.6A(i), and that regional allocation was not allowed for any of the *dispatch intervals* in the Disputed Billing Periods. Its primary submission is that in all instances (save for where the exception provided for in clause 3.15.6A(j)(2) provides for the determination of special contribution factors[30]), clause 3.15.6A(i) and the Causer Pays Procedure as made by *AEMO* require *AEMO* to:

    a) determine (under the Causer Pays Procedure) and apply a single contribution factor for each *Market Participant*; and

    b) allocate the costs of meeting *regulation services* globally.

100. The Coalition contends that *AEMO's* current process (achieving a regional allocation by aggregating the MPFs of only those participants with a presence in the relevant *region*) does not comply with the formulae in clause 3.15.6A(i). Those formulae must be strictly applied, and *AEMO* has no discretion to depart from them. According to the Coalition, those formulae provide for a single calculation to arithmetically apportion the global TSFCAS amount:

    a) among all *Market Generators* and SCADA-metered *Market Customers*, pro rata to their respective MPFs; and

    b) among all non-SCADA-metered *Market Customers*, by allocating the residual MPF portion pro rata to their respective *customer energy*.

101. According to the Coalition, the meaning of TSFCAS reflects an accumulation of intractable words of aggregation. It is the total of all the sums for both the global and the local requirements for all *regions*. In order to address this submission, it is necessary to view the scheme created by clause 3.15.6A(h) and (i) as a whole, and in context. We address this point, and the reasons for our rejection of the Coalition's

[30] Coalition's Outline of Submissions, [55], "The only exception to a global settlement contemplated by these provisions arises when one or more regions has operated asynchronously during the relevant trading interval", [67]-[70], and [73]; Coalition's Outline of Reply Submissions, "Para (j)(2) is the only route by which a regional allocation is permitted", [27]-[34].

submission about "TSFCAS", under the next heading, in particular at paragraphs 162, 163, and 167 to 169, below.

102. In support of its submission on the aggregated nature of the cost allocation exercise, the Coalition also contends that there must be a single MPF value per *Market Participant*, and not an MPF per *generating unit*, per *load* or per *region*. According to the Coalition, *AEMO* is not required or authorised to determine different MPFs for the same *Market Participant*, a) separately for *regulation services* provided pursuant to global or local requirements; or b) separately in respect of different *regions* within the *NEM*.

103. In our view, it may be accepted that there must be a single MPF value per *Market Participant*, and not an MPF per *generating unit*, per *load* or per *region,* without it necessarily following that "TSFCAS" is a global cost pool. In this regard, much depends on the function of the MPF/AMPF ratio, and the relationship of each of "MPF" and "AMPF" to the words "for the *region* or *regions* relevant to the [regulation services]". We return to this point later.

104. According to the Coalition, clause 3.15.6A(h)(1) and (2) should be interpreted in like fashion to each of clauses 3.15.6A(f)(1) and (2) and (g)(1) and (2). The Coalition contends that the critical provision by which a regional cost allocation is effected for the purposes of contingency FCAS (clause 3.15.6A(f)(3) and (g)(3)) is absent from clause 3.15.6A(h), so the conclusion should be drawn that clause 3.15.6A(h) does not enable *AEMO* to carry out a regional allocation.

105. Again, in our view, it may be accepted that clause 3.15.6A(h)(1) and (2) should be interpreted in like fashion to each of clauses 3.15.6A(f)(1) and (2) and (g)(1) and (2), without it necessarily following that an analogue of step (f)(3) or (g)(3) is required in order to achieve a regional allocation of costs. We return to this point too, to explain our reasons in context, in particular at paragraph 166, below.

106. The Coalition further contends that *AEMO* does not have any powers to carry out a regional allocation to be found in or derived from the words "for the *region* or *regions* relevant to the *regulating raise service* or the *regulating lower service*" appearing in the definitions of MPF and AMPF in clause 3.15.6A(i)(1). The Coalition's primary contention in this regard (as part of its Global Recovery approach) is that those words are a "drafting relic" and cannot displace the clear meaning of the provisions constituting the "PTA" formula, and the various, "intractable" words of aggregation that appear in clause 3.15.6A(h) and (i).

107. We do not think these words can be taken to be a drafting relic. They must be accorded a function. The meaning and function to be accorded to them is in many ways the central construction issue in the case. For reasons we explain in detail below, we have concluded that the phrase "for the *region* or *regions* relevant to the *regulating raise service* or the *regulating lower service*" (and its variants) that appear in the definitions of "MPF" and "AMPF" in clause 3.15.6A(i)(1), and that appear in the different definitions of "MPF" and "AMPF", and in the definitions of "TCE" and "ATCE" in clause 3.15.6A(i)(2), have an important function in the allocation of the cost of *regulation services*. We consider that, when read in context with the whole of the scheme for meeting the cost of payment of *trading amounts* for such services, this inherently elastic phrase can be, and is to be, read as corresponding to the *region* or group of *regions* to which a particular requirement for such services applied. No other construction results in a harmonious and rational operation for the scheme as a whole.

108. The Coalition contends that the words that appear in the definition of "TSFCAS" do not refer to, and therefore do not relate to, the costs of individual global and local requirements for the relevant *regulation services*; rather they refer to the total costs of the *regulation services* themselves. It is true that there is no reference in that definition to "requirements", but this must be the case the definition of TSFCAS speaks of "the total of all amounts calculated by *AEMO* under paragraph (h)(2) …" which does. On a proper construction of paragraph (h), as we explain in more detail below, the amounts calculated under paragraph (h)(2) are amounts that have been allocated to (disaggregated) amounts for global and local requirements respectively. Paragraph (h) begins with *trading amounts* for such services, and subjects them to a procedure set out in the subsequent steps, (1) and (2). Step (h)(2) expressly refers to the costs of acquiring *global market ancillary service requirements* and *local market ancillary service requirements*. This clearly means the costs of acquiring the services to meet such requirements. In this context, the reference in the definition of "TSFCAS" to the amounts arrived at in step (h)(2) as being "for the [*regulation services*]" is properly to be read as a shorthand way of referring to the particular character of the amounts specified in (h)(2), that is, costs of acquiring (or meeting) requirements for such services. This construction is reinforced by the interstitial words that follow directly after the PTA formulae, which indicate that the PTA calculations are being performed "for *global market ancillary service requirements* and *local market ancillary service requirements*".

109. The Coalition contends that in the circumstances described in clause 3.15.6A(j)(2), assuming *AEMO* has first made a procedure addressing those circumstances, *AEMO* will be empowered to perform a regional allocation of costs by the utilisation of contribution factors calculated in accordance with that procedure. The key here is that clause 3.15.6A(j)(2) is confined to instances of asynchronous operation of a *region* or *regions* of the *NEM*.

110. In support of this argument as to the exceptional quality of clause 3.15.6A(j)(2), the Coalition submits that at times of synchronous operation of *interconnected regions* of the *NEM*, both the deviations in the *frequency* of the *power system* that give rise to the need for *regulation services*, and the acquisition of *regulation services* to address such deviations, are phenomena that arise in any or all of such *interconnected regions*. In such circumstances, no process occurs by which the *generating units* or *loads* of any particular *region* are identified as those which cause *frequency* deviations. No other party contested this submission. Thus, so the Coalition contended, it is only where asynchronous operation has occurred that there is a special avenue for regional allocation of costs. Further, this was done subject to a requirement in clause 3.15.6A(m) to follow the *Rules consultation procedures* in connection with the making or altering of the procedures to be followed in the event of asynchronous operation. The Coalition contends that to construe the *Rules* as allowing regional allocations of the costs of *regulation services* in other circumstances would offend against the *Anthony Hordern* principle.[31]

111. Addressing the *Anthony Hordern* argument first, in our view it is important to note that the requirement for complying with the *Rules consultation procedures* applies not only where *AEMO* is making or amending a procedure addressing paragraph (j)(2), but equally also where *AEMO* is making or amending a procedure addressing paragraph (j)(1). It may be accepted that in addressing the scenario of asynchronous operation, paragraph (j)(2) (when read in combination with paragraph (k)(3) and (6)) single out special mandatory considerations that do not apply for the purposes of addressing paragraph (j)(1), but there are no additional procedural conditions that attend the making or amending of a procedure addressing paragraph (j)(2).

[31] *Anthony Hordern & Sons Ltd v Amalgamated Clothing and Allied Trades Union of Australia* (1932) 47 CLR 1. Where the legislature has provided for a particular outcome to be reached subject to compliance with particular conditions, the legislature should not be taken to have contemplated that the same outcome could be reached by another means not conditioned in the same way. See also *R v Wallis; ex parte Employers Association of Wool Selling Brokers* (1949) 78 CLR 529 at 550 (Dixon J).

112. The Coalition contended that "must" in paragraph (j) imposed a mandatory duty[32] on *AEMO* to determine contribution factors for Market Participants of a *region* or *regions* operating asynchronously in the circumstances described in paragraph (j)(2), differently from the contribution factors ordinarily applicable (as mentioned in paragraph (j)(1)). Alinta in particular disputed this.

113. We very largely accept the Coalition's submission in this regard. Our reasons for doing so can be briefly stated. Paragraph (k) is closely related to paragraph (j). Paragraph (k) clearly prescribes relevant considerations that *AEMO* must take into account[33] in making the procedure for use in paragraph (j), and two of these (considerations (k)(3) and (6)) are specific to the circumstances described in paragraph (j)(2). As a matter of logic, it seems to us, in making the procedure mandated by paragraph (k), when read in combination with paragraph (j), *AEMO* must turn its mind to differentiating between the circumstances described in paragraph (j)(1) and (2), and in doing so must take into account the principles in paragraph (k)(3) and (6). Perhaps this does not mean that contribution factors for the circumstances described in paragraph (j)(2) will inevitably differ from those calculated for ordinary circumstances, but it is difficult to see how they could not. Paragraph (nb) reinforces this conclusion. Alinta, and other parties aligned with AEMO on this point, contended that AEMO had made a procedure addressing paragraph (j)(2), in that the statements made in the Causer Pays Procedure amounted to an indication that the same methodology would apply in the circumstances of both paragraph (j)(1) and (j)(2), and that this was sufficient compliance with the *Rules*. We reject that argument. The key passage in question appears in section 7 of the Causer Pays Procedure. On our reading of that passage, together with the earlier reference to section 7 found in section 5.1(4)(e), *AEMO* seems to have been stating that it would not conduct its *ex ante* calculations of contribution factors by reference to or in light of asynchronous events, and would not attempt to calculate (necessarily, multiple) *ex ante* regional contribution factors because it would be too complex and expensive to do so. If this interpretation is not correct, in any event the consideration given to addressing the duty imposed on AEMO by paragraph (j)(2) and (k) is so scant that we regard it as manifestly falling below the requisite threshold of proper or meaningful consideration.

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[32] Schedule 2 of the Law, clauses 1(2) and 12.

[33] See *Minister for Aboriginal Affairs v Peko-Wallsend Ltd* (1986) 162 CLR 24 at 39-42.

114. However, in our view, it does not follow that in circumstances where *AEMO* determines a *local market ancillary service requirement* outside the circumstances described in paragraph (j)(2) that "TSFCAS" must be regarded as a global, aggregated pool of costs. As explained in more detail in the paragraphs that follow, in our view the regime as whole is directed to the allocation of the costs of meeting *local market ancillary service requirements* to *Market Participants* in the regions in which those requirements apply, and this can readily be, and is to be, effected by the application of the MPF/AMPF ratio to the "TSFCAS" for each such requirement, utilising the ordinary contribution factors calculated by *AEMO* for circumstances other than asynchronous operation. In this regard, asynchronous operation is treated by the *Rules* as a special case, in which *AEMO* is required to have regard in the procedure for calculating contribution factors to the need for normalisation by reference to proportional *energy* use in the manner described in paragraph (k)(3) and (6). The Coalition submitted that it would be odd if a special procedure were to apply for asynchronous operation but that regional allocation could be achieved by application of the ordinary contribution factors through the MPF/AMPF ratio for other forms of *local market ancillary requirements*. We are left to speculate about the reasons for treating asynchronous operation as a special case in this way, but the decisive point in our view is that the scheme created by clause 3.15.6A(h) and (i) refers not to allocation by *region* in cases of "asynchronous operation", but to "*local market ancillary service requirements".* As already mentioned, it is a determination of *AEMO* under clause 3.8.1(e2)(2) that leads to a *local market ancillary service requirement* arising. There is no basis in the text for concluding that *AEMO's* power to make such determinations is limited to instances of asynchronous operation. Indeed, it would be most surprising if such a limitation had been contemplated, given that clause 3.8.1(e2)(2) imposes a requirement on *AEMO* in advance of a given *dispatch interval*, for the purpose of informing the *constraints* that are to apply to the running of the *dispatch algorithm*, and at that point in time it may not be known whether or not the operation or a particular *region* or *regions* might become asynchronous. Clause 3.15.6A(j)(2), by contrast, seems to be directed at the need for *ex post* adjustment arising after it has become known that a *region* has (or *regions* have) operated asynchronously, an impression reinforced by paragraph (nb).

115. The Coalition pointed to the elastic quality of the notion of "relevance" as used in the definitions of MPF and AMPF in clause 3.15.6A(i)(1), as an indication in effect that they were a slender basis on which to suppose a regional allocation of costs could be achieved, especially when contrasted with the far greater particularity attending paragraph (j)(2). We agree that the phrase "for the *region* or *regions* relevant to the

regulating raise service or the *regulating lower service*" (and its variants) that appear in the definitions of "MPF" and "AMPF" in clause 3.15.6A(i)(1), and "MPF" and "AMPF", and "TCE" and "ATCE" in clause 3.15.6A(i)(2), are elastic. It is this very feature of that phrase that lends support to the construction that we prefer, namely a construction by which those definitions are to be adapted to the regional scope that applies to the particular pool of costs denoting "TSFCAS" in the formulae for "PTA".

116. The Coalition contended that any notion of regional nexus in this instance arose not as a matter of the physics of the *power system*, but by reason of *AEMO*'s decision on 8 October 2015 to impose the F-S_LREG_0035 and F-S_RREG_0035 *constraints* for the duration of the planned outages of the AC *interconnector* lines between the Victoria and South Australia *regions*. The Coalition also noted that this was a pre-emptive measure. We accept that imposition of these constraints was pre-emptive, or, as *AEMO* put it, 'pre-contingent". The Coalition also contended that no *generating units* or *loads* in the South Australia *region* were physically responsible for, or physically "caused", actual *frequency* deviation in the *interconnected power system* across the mainland *NEM* over the Disputed Billing Periods at the time the local requirements were imposed. This was also uncontested, and we accept it.

117. The Coalition contended that, because of the physical irrelevance of where a need for *regulation services* arises, and where the *generating units* or *loads* that address it are located, the required nexus of "relevance" for the purposes of the definition of "MPF" and "APMF" in clause 3.15.6A(i)(1) is absent unless the case is one of asynchronous operation.

118. Although the Coalition appears to deploy this argument in relation both to its primary argument (the Global Recovery approach) and alternative argument (the Synchronous Global recovery approach), in our view the point seems more probative in relation to the alternative case.

119. The Coalition's alternative Synchronous Global Recovery approach was explained to us during the hearing, when the Coalition in effect acknowledged that its primary argument could render both paragraph (h) and the words "for the *region* or *regions* relevant to the [regulation services]" in paragraph (i) otiose. That conclusion would, however, not apply if clause 3.15.6A(i) were to be construed as providing for an allocation of costs to the "*region* or *regions* relevant …" in the case of asynchronous operation of one or more such *regions*, within the meaning of clause 3.15.6A(j)(2). Such an approach would accord a proper (albeit contingent) function to paragraph

(h), and likewise to "*region* or *regions* relevant …". This was the essence of what we are calling the Synchronous Global Recovery approach.

120. The Synchronous Global Recovery approach to clause 3.15.6A(h) and (i) on one level has much to commend it. It rests on the uncontroversial factual proposition that while the *NEM* operates synchronously, in terms of the physics of the *NEM,* deviations in *frequency* may be caused anywhere in the *NEM*, and may be redressed by *regulating raise services* or *regulating lower services* obtained from anywhere in the *NEM*. That being the case, so the argument goes, while the *NEM* operates synchronously "the … *regions* relevant to the *regulating raise service* or *regulating lower service*" for the purposes of the definition of MFP in clause 3.15.6A(i) are all *regions*. It is only when the *NEM* operates asynchronously that it is necessary and permissible to identify the *region* (or the relevant combinations of *regions*) "relevant to the *regulating raise service* or *regulating lower service*" for the purposes of the definition of MPF in clause 3.15.6A(i).

121. Further, the argument accommodates well the existence of special principles to be considered by *AEMO* in making a procedure as to how it will calculate contribution factors for groups of *regions* in the event of asynchronous events, set out in clause 3.15.6A(k)(3) and (6).

122. However, there are weaknesses in the argument. Under this argument, as it was explained to us, in spite of the words of aggregation in clause 3.15.6A(h) and (i), working back from the content of "MPF" in cases of asynchronous operation, it may be concluded that "TSFCAS" is to be adapted so as to represent a regional pool of costs (or a pool of costs for a combination of *regions* operating at a *frequency* out of synchronism with other *regions*).[34] This, so the argument goes, means that clause 3.15.6A(h) is not otiose, and nor are the references to "*region* or *regions* relevant to the *regulating raise service* or *regulating lower service"* that appear in the definitions of "MFP" and "AMPF" in 3.15.6A(h). We find the notion of TSFCAS having to be modified by the operation of the words "*region* or *regions* relevant …", and indirectly and ultimately by paragraph (j)(2), counter-intuitive. We consider it far more likely, as a matter of ordinary drafting conventions, that TSFCAS is identifiable from the provisions that are set out before the definition of "TSFCAS" appears, and that by reason of the textual linkage therein to paragraph (h)(2), it is a cost pool attributable to a global or local requirement for *regulation services*. This then drives the identification of the "*region* or *regions* relevant …" as that expression appears in the

[34] Transcript, 27 July 2016, p 431.3 to 433.18.

definitions of "MPF" and "AMPF". We think a significant distortion of ordinary drafting conventions would be involved if this aspect of the Rules were to be read as essentially being controlled by paragraph (j)(2), with the trail leading backwards from that point.

123. We accept that, as a matter of the physics of the power system, during synchronous operation of the South Australia *region* with the remainder of the mainland *NEM*, it is not meaningful to describe that region as having caused or contributed to the immediate correction of *frequency* deviations. However, we do not accept that this controls the meaning to be given to the phrase "*region* or *regions* relevant …" in clause 3.15.6A(i). In our view, that meaning is controlled by the regional scope of each requirement that gives rise to each particular pool of costs (denoted as "TSFCAS") to which the "PTA" formulae are to be applied, and this depends on the determination of *AEMO* that will have been made under clause 3.8.1(e2) and the corresponding information (as to the *region* or *regions* the subject of such determinations) that will have provided by *AEMO* under clause 3.9.2A(b). We refer to our observations in this regard at paragraph 114 above.

124. For these reasons, we are inclined to reject both the primary and alternative arguments advanced by the Coalition.

Textual analysis of Origin's Regional Factor approach

125. As already mentioned, Origin's primary argument (which we have called the Regional Factor approach) is that during the Disputed Billing Periods, the costs of the South Australia *region's local market ancillary service requirements* for *regulation services* were not allocated to *Market Participants* in accordance with the *Rules,* in that *AEMO*'s approach to deriving and applying contribution factors does not comply with the requirements of the *Rules*, including clauses 3.15.6A(i) and (j), the market design principles and the *national electricity objective*.

126. The essence of Origin's argument is that, by reference to the words "contribution factor last set by *AEMO* for the [*Market Participant*] … under paragraph (j) for the *region* or *regions* relevant to [the *regulation service*]" appearing in the definition of "MPF" in clause 3.15.6A(i)(1), and like expressions referring to "*region* or *regions* relevant" appearing in the definition of "AMPF" in paragraph (i)(1), and in the definitions of "MPF", "AMPF", "TCE" and "ATCE" in clause 3.15.6A(i)(2), *AEMO* is under an obligation to determine different contribution factors to address the allocation of the costs of meeting *local market ancillary requirements* for particular

regions or groups of *regions*, and that such contribution factors must be determined not by reference to each *Market Participant's NEM*-wide portfolio performance, but by reference to the performance of the *generating units* and *loads* of that participant that are located in the particular *region* or *regions* concerned.

127. Additional key points advanced in support of the argument are as follows:

a) The formulae in paragraph (i) should be capable of application for asynchronous situations contemplated in sub-paragraph (j)(2) as well as synchronous operation, and therefore must be interpreted to allow for separate regional MPFs in addition to global MPFs.

b) The singular includes the plural, and the reference to "the contribution factor last set by *AEMO*" should be read as "the contribution factors …".

c) "MPF" should be construed in a fashion conformable to those aspects of formulae in clause 3.15.6A(f), (g) and (i)(2) that employ energy ratios.

d) To implement the *Rules*, *AEMO*'s Causer Pays Procedure should give effect to each and every principle listed in 3.15.6A(k). Origin contends that only a contribution factor specific to a relevant *region* could satisfy the requirement imposed on *AEMO* for the Causer Pays Procedure to give effect to the principle in 3.15.6A(k)(1). The procedure should provide for the calculation of individual contribution factors for *generating units* and *loads,* rather than *Market Participants*.

e) In allocating the costs of a *local market ancillary service requirement* among *Market Participants* in the relevant *region* by reference to aggregated portfolio-based contribution factors applicable to the whole of the *NEM*, AEMO dilutes and distorts the "causer pays" price signals that are the purpose of the provisions in question, and more broadly, fails to achieve the market design objectives or advance the *national electricity objective*.

f) The *Rules* prevail to the extent of the inconsistency with the Causer Pays Procedure.

128. Origin submits that a single MPF applied for all *regions* and based on a *Market Participant*'s *NEM*-wide portfolio is inconsistent with the *Rules'* content and intent, the market design principles and the *national electricity objective*. In the circumstances considered in this dispute, Origin contends that *AEMO* was required to, but failed to:

a) determine and apply South Australian-specific contribution factors for the purpose of allocating the costs of the South Australian *local market ancillary service requirements*, with such factors based on the extent to which the *Market Generators*' *generating units* contributed to the need for *regulation services;* and

b) calculate and apply actual contribution factors for the period of asynchronous operation.

129. Origin further contends that, even if *AEMO*'s construction of the *Rules* were accepted, *AEMO* has failed to determine and apply contribution factors for the purpose of allocating the costs of the South Australian *local market ancillary service requirement* in accordance with the *Rules* during the period when both Heywood *interconnector* lines were inoperative. As a minimum, recalculation of *settlement statements* relevant to the period of asynchronous operation of the South Australia *region* must be made under clause 3.15.19.

130. Chapter 3 of the *Rules* is said, in clause 3.1.4(a), to be intended to give effect to nine "market design principles". In advancing the Regional Factor approach, Origin relied in particular on the following principle:

> (8) where arrangements require participants to pay a proportion of *AEMO* costs for *ancillary services*, charges should where possible be allocated to provide incentives to lower overall costs of the *NEM*. Costs unable to be reasonably allocated this way should be apportioned as broadly as possible whilst minimising distortions to production, consumption and investment decisions; …

131. With reference to the first sentence of this principle, and by reference to the *national electricity objective*, Origin persuasively argued that the Causer Pays Procedure, by providing for the calculation of one contribution factor on the basis of the aggregated performance of a *Market Participant's generating units* and *loads* across its entire portfolio, does not provide optimal incentives for behaviour encouraging lower overall costs, because it allows for scenarios in which inadequate or inappropriate price-signalling will occur. This could occur in a range of ways. For example, a *Market Participant* with a perfectly-performing *generating unit* in South Australia but poorly performing units elsewhere might bear a significant share of the costs of a South Australian *local market ancillary service requirement* for *regulation services* even though, in fact, its South Australian *generating unit* has in no sense been a cause of *frequency* deviations at any time. To give another even more pointed example, a *Market Participant* with poorly-performing *generating units* or *loads* in South Australia

might in fact contribute very significantly to *frequency* deviations, including at times when South Australian *local market ancillary service requirements* are determined, but provided that participant has elsewhere in the NEM sufficient well-performing *generating units* and *loads* to offset the poor performance of its South Australian *generating units* and *loads*, the costs of meeting South Australian *local market ancillary service requirements* will not be allocated to that participant, meaning that it will not have any incentive to improve the performance of its South Australian *generating units* and *loads*.

132. As we understood the argument, Origin also sought to enlist the second sentence in market design principle (8), contending that if the provisions for aggregation on a portfolio-wide basis of *generating unit* and *load* performance is inconsistent with the *Rules*, the Causer Pays Procedure might have to be read as if it incorporated the second sentence, thereby resulting in global allocation of the costs of meeting *local market ancillary service requirements*.

133. We have given close consideration to the persuasive points made by Origin concerning the potential imperfections in price signalling that result from AEMO's portfolio-wide approach to the calculation of contribution factors.

134. In the end, however, we consider that the text of clause 3.15.6A permits the approach *AEMO* has taken. A purposive approach in this regard cannot be used to defeat the clear meaning of the text.[35] The clearest indication of the permissibility of *AEMO's* approach is that, in the definition of "MPF" in paragraph (i)(1) and in paragraph (j)(2), the text refers to a contribution factor (in the singular) for each *Market Participant*. While we agree that the singular includes the plural,[36] that does not mean that the singular is to be excluded altogether. Thus while it might be permissible for *AEMO* to prepare a procedure under which multiple contribution factors are to be calculated for the purposes of paragraph (j)(1), it cannot be the case that *AEMO* is precluded from preparing a procedure under which only one such contribution factor is to be determined for each *Market Participant*.

135. Further to this point, we do not think that the phrase "region or regions relevant …" as it appears in clause 3.15.6A(i)(1) and (2) in the definitions of "MPF" is to be regarded as qualifying the antecedent reference to "the contribution factor [last] set" *per se*. It is in our view a phrase that qualifies the entirety of the compound expression that

[35] See footnote 12, above.

[36] Schedule 2 of the Law, clauses 1(1) and 11(4)(a).

precedes it, including the reference to the Market Participant concerned. In the case of clause 3.15.6A(i)(1), the nexus in question is one that attaches to the entire expression, "the contribution factor last set by *AEMO* for the [*Market Participant*] under paragraph (j) for the *region* …". Where the *Market Participant* is present in the region to which a requirement attaches, the nexus is made out. Although it might have been more intuitive to use a different preposition to achieve this, such as "in the *region* …", in our view the language used is adequate to the task.

136. We note Origin's reliance on the presence of energy ratios in clauses 3.15.6A(f), (g) and (i)(2), and accept that regional energy ratios depend upon the location of each relevant *generating unit* and *load*, but we do not consider this to be a foundation for reading any kind of limitation or implication into the "MPF/AMPF" term.

137. It may be accepted, as Origin submits, that the formulae in paragraph (i) should be capable of application for asynchronous situations contemplated in sub-paragraph (j)(2) as well as synchronous operation, but it does not follow that different contribution factors must be calculated for the purpose of addressing *local market ancillary service requirements* in general, arising during synchronous conditions.

138. Clause 3.15.6A(j)(2) does not contemplate the *ex post* calculation of contribution factors in every case where a *local market ancillary service requirement* arises; it is expressly narrower in scope, only relating to instances where a *region* has or *regions* have operated asynchronously. Further, no provision in clause 3.15.6A expressly indicates that *AEMO* must conduct the *ex ante* calculation of all possible permutations and combinations of contiguous *regions*. The mere presence of paragraph (i)(2), and the indication (from paragraph (nb)) that the circumstances in paragraph (j)(2) are exceptional, militates against any implication that *AEMO* is to conduct *ex ante* calculations based on all possible permutations and combinations of contiguous *regions*.

139. Our conclusion that *AEMO* is under no such obligation cannot be characterised as attributing a perverse or irrational operation to the scheme. Under our construction, the allocation of costs of meeting *local market ancillary service requirements* can occur in a mathematically rational manner without the need to calculate different contribution factors (MPFs) for different combinations of *regions*, through the effect on the denominator in the MPF/AMPF ratio of differences in regional scope of the exercise. It is true that this will not result in a proper price signal being given in various scenarios, as we acknowledge above. However, that does not mean there is no rational prospect of a price signal. Some degree of efficient price-signalling will

occur in other scenarios. In short, the portfolio-wide approach adopted in the Causer Pays Procedure is far from perfect, but it is not impermissible.

140. As to Origin's contention that *AEMO*'s Causer Pays Procedure is somehow inconsistent with principle 3.15.6A(k)(1), in our view it is important to characterise accurately the role played in the *Rules* by that principle (and the other principles in paragraph (k)). In our view, those principles are not direct constraints on the content of the procedure *AEMO* is required to prepare; rather they are relevant considerations which *AEMO* must take into account in preparing the procedure.[37] Seen in this light, we do not think it can be said that the Causer Pays Procedure contravenes the *Rules* (or paragraph (k)(1) in particular) by reason of the aggregation of performance data across each *Market Participant's* portfolio.

141. For these reasons, in relation to the application of the Causer Pays Procedure to *regions* that are not operating asynchronously with the remainder of the *NEM*, we do not consider the Causer Pays Procedure to be inconsistent with the *Rules*. It is therefore unnecessary to determine Origin's arguments which flow from the inclusion in the Causer Pays Procedure of a provision to the effect that the *Rules* prevail to the extent of any inconsistency. While we accept that in various scenarios the approach of calculating aggregated portfolio-based contribution factors will dilute and even distort efficient price-signalling, and more broadly, to that extent the Causer Pays Procedure will not tend to advance the market design objectives or the *national electricity objective* as well as it might otherwise have done, we consider the plain meaning of the *Rules* supports *AEMO's* approach.

142. Origin also mounted an argument that the Causer Pays Procedure itself, being an instrument under the *Rules*, was subject to the same imperative that it be accorded a purposive interpretation, and that this could lead to modification of the requirement to aggregate performance data across each *Market Participant's* portfolio. Even if it be accepted that the Causer Pays Procedure must be given a purposive reading, in our view there is no ambiguity, obscurity, or other basis for reinterpretation of the clear meaning of section 5.10 of the document, which states that performance data will be aggregated across each participant's portfolio. We therefore reject this argument.

143. However, on a textual analysis of the relevant provisions, for the reasons already explained in relation to the Coalition's arguments, we are inclined to conclude that

[37] See *Minister for Aboriginal Affairs v Peko-Wallsend Ltd* (1986) 162 CLR 24 at 39-42. This is particularly true of principle (k)(1), which uses less prescriptive language than appears in some of the other principles.

AEMO's Causer Pays Procedure does not answer the description of a procedure prepared under paragraph (k) addressing the circumstances set out in paragraph (j)(2). We have already noted the express statements made in the Causer Pays Procedure (in particular section 7) concerning *AEMO's* approach in the event of regional separation. In taking the position it did, it seems to us that *AEMO* has not turned its mind to principles (k)(3) and (6), which are principles specially directed to the circumstances in paragraph (j)(2). *AEMO* has not given proper or meaningful consideration to preparing a procedure for dealing with asynchronous operation of *regions* other than Tasmania. To that extent, it appears to us that *AEMO* has failed to prepare the procedure required under paragraphs (j)(2) and (k), and has thus not determined contribution factors in accordance with the Rules for application in paragraph (i) in the circumstances described in paragraph (j)(2).

144. On the basis of this preliminary conclusion based on our textual analysis, we are therefore inclined to accept Origin's contention that the *settlement statements* affected by the period of asynchronous operation of the South Australia region on 1 November 2015 should be recalculated. We are otherwise inclined to reject Origin's arguments, and in particular to reject the Regional Factor approach.

145. For these reasons, we incline to the view that the Portfolio-wide Regional Recovery approach is correct, save that AEMO has not in a Rule-compliant manner prepared a procedure that addresses the way in which it will calculate contribution factors when a *region* has operated asynchronously.

146. Origin advanced, in the alternative, an argument to the effect that a global recovery approach was mandated by clause 3.15.6A(i) in respect of costs of meeting the South Australian *local market ancillary service requirements* in the Disputed Billing Periods. For the reasons given above in relation to the Coalition's Global Recovery approach and Synchronous Global Recovery Approach, we are inclined to reject that alternative argument also.

The proper construction of the relevant provisions

147. Consolidating and augmenting the preceding analysis, our view of the correct construction and intended operation of the relevant provisions is as follows.

148. ***First***, it is necessary to note that clause 3.15.6A(h) begins with a reference back to 3.15.6A(a). Under clause 3.15.6A(a), one or more positive *trading amounts* denoted "TA" will have been calculated for each relevant *Market Participant* in each *trading*

interval, by reference to each *enabled ancillary service generating unit* or *enabled ancillary service load*.

149. That *trading amount* "TA" is defined as an aggregate of the product of a formula. On our reading, the aggregation in question involves (at least) summing amounts calculated for the six *dispatch intervals* that comprise the relevant *trading interval*. The formula which produces the *dispatch interval* amounts to be aggregated includes as its two factors the applicable *ancillary service price* for each service in each *trading interval* (denoted "ASP" in $ per MW per hour, and in effect converted to a *dispatch interval* price by dividing by 12) and the amount of service *enabled* in the *dispatch interval*.

150. We note that "ASP" is defined by reference to the *ancillary service price* for the *market ancillary service* for the *dispatch interval* "for the *region* in which the *ancillary service generating unit* or *ancillary service load* has been *enabled*".

151. This in our view reflects the fact that the *ancillary service price* for a *market ancillary service* has a meaning that depends on what occurs under rule 3.9: Chapter 10 defines the *ancillary service price* for a *market ancillary service* as the common clearing price for the relevant *market ancillary service* determined under rule 3.9. In this regard, as we noted in our examination of the contextual provisions:

a) under clause 3.8.1(e2), when *AEMO* determines the quantity of each *market ancillary service* that will be *enabled*, that quantity is made up of the required quantity that *AEMO* determines to be the *global market ancillary service requirement*, and any quantity that *AEMO* determines to be a *local market ancillary service requirement* for a nominated *region* or *regions*;

b) whenever a global or *local market ancillary service requirement* applies, this necessitates the imposition of a *constraint* on the running of the *dispatch algorithm*: clause 3.8.11(a1);

c) clause 3.9.2A(b) applies where a local *ancillary services constraint* has been applied for any *market ancillary service*, and in that case under 3.9.2A(b)(1) and (2), *AEMO* must calculate the marginal price for meeting any *global market ancillary service requirement* for that service and also the marginal price for meeting any *local market ancillary service requirement* for that service;

d) under clause 3.9.2A(b)(3), *AEMO* must identify the *region* or *regions* the subject of the *local market ancillary service requirement*;

e) clause 3.9.2A(a) and (b1) require the determination of an *ancillary service price* for a *region*, and more specifically for a *regional reference node*;

f) clause 3.9.2A(b1) provides that the *ancillary service price* will be determined for a particular *market ancillary service*, for a *region*, and for a *dispatch interval*, by summing the marginal prices of meeting both the *global market ancillary service requirements* and (any) *local market ancillary service requirements* for that service in that *region*.

152. The definition of ASP in clause 3.15.6A(a) confirms that the ASP is referrable to the *region* where the service was *enabled*. The manner in which rule 3.9 contemplates that the ASP will be built up is summarised in paragraph 151, above.

153. ***Second***, the chapeau to 3.15.6A(h) refers to allocating, in a certain way, the total amount so calculated under clause 3.15.6A(a), for each of the *regulation raise service* and the *regulation lower service*, in each *dispatch interval*. The allocation is to be to "each *region*", in accordance with two matters. The first is what is described as "the following procedure", which can only be a reference to the provisions of clause 3.15.6A(h)(1) and (2). The second is the information provided under 3.9.2A(b). As already mentioned, that provision sets out three pieces of information in relation to each *market ancillary service*, the marginal price of meeting any *global market ancillary service requirement* for that service (this will be applicable in, and the same in, all *regions*), the marginal price of meeting each *local market ancillary service requirement* (these will be applicable in the *region* or *regions* to which the particular requirements apply), and *AEMO*'s identification of the *region* or *regions* subject to each such *local market ancillary service requirement*.

154. Before going on, it is worth noting that the chapeau of clause 3.15.6A(h) itself does not create a presumption that each *region* must be allocated a particular total amount of costs as if that *region* were an economic entity. One needs to read further to see how the so-called allocation to each *region* is to occur by reference to what follows.

155. ***Third***, the words in the chapeau suggest that the total amount mentioned in the chapeau is to be so allocated using the two steps or elements that appear in the clause 3.15.6A(h)(1) and (2). The process described in (2) refers back to certain costs determined under (1), so these seem to be sequential steps. We return shortly to the question of whether the words in the chapeau should be read as referring only to those two steps as achieving the allocation "to each *region*" contemplated in the

chapeau, or whether it is permissible that they may only contribute to a process that ultimately results in regional allocation.

156. ***Fourth***, step (h)(1) describes a process carried out for each *region* (and *dispatch interval*), and for each of the *regulating raise service* and the *regulating lower service*.

157. For each *region*, *AEMO* is to "allocate on a pro-rata basis" certain amounts "…between *global market ancillary service requirements* and *local market ancillary service requirements* to the respective marginal prices for each such service".

158. To what does this latter phrase refer? The intervening words in clause 3.15.6A(h)(1) identify what is to be allocated in this way: "the proportion of the total amount calculated by *AEMO* under paragraph (a) for the *regulating raise service* and the *regulating lower service".* The outcome of the allocation is that a proportion will be associated with the *global market ancillary service requirements* in the *dispatch interval*, and another proportion will be associated with any *local market ancillary requirements* that applied in the *region*. The reference to "the respective marginal prices for each such service" provides the basis for the pro-rating exercise into those two portions. In context, this is a reference back to the way in which the *ancillary service price* for each of the *regulation services* is constructed in a given region, as provided for in clause 3.8.2A(b1). In short, these references to marginal price mean the marginal price in the particular *region* of meeting the *global market ancillary service requirement* for the service and the marginal price of meeting the *local market ancillary service requirement* for the service.

159. What is *AEMO* to do in this regard? Let us focus only on the process as it relates to a particular *region*, recognising that this will be repeated for all *regions*. For the particular *region* under examination, *AEMO* is to split the aggregate *trading amounts* calculated under clause 3.15.6A(a) for each of the *regulating raise service* and the *regulating lower service enabled* in that *region* in each *dispatch interval* into two amounts, pro-rata to the marginal price of meeting the *global market ancillary service requirement* for that service and the marginal price of meeting any *local market ancillary service requirement* for that service (to the extent applicable in the *region* under examination).

160. It is noteworthy that, at this point, the resultant amounts are abstractions. All that has occurred is a disaggregation of amounts payable under clause 3.15.6A(a) by price in

each *region* in which the services were *enabled,* and which will be payable to the *Market Participants* whose *generating units* and *loads* were *enabled*.

161. ***Fifth***, the step at clause 3.15.6A(h)(2) refers to the calculation of a sum of certain "costs" of acquisition. At this point, in our view, the focus of the process shifts - in crude terms - from the supply side to the acquisition (or demand) side of the market process. In more precise terms, attention shifts from the *region* where the service was *enabled* to the *region* or *regions* in respect of which a requirement for acquisition of *regulation services* applied (a step which leads, later, to a further step of recovering such costs from the *Market Participants* of that *region* or those *regions*). In the case of amounts for *global market ancillary service requirements* this will be all *regions*. In the case of *local market ancillary service requirements,* this will be only the *region*(s) to which the requirement applied (denoted the "relevant" *region*(s) in 3.15.6A(i)). The step in paragraph (h)(2) now takes the pro-rated amounts attributable to *global market ancillary service requirements* and sums them "for all *regions*" (that is, across all regions), and takes the pro-rated amounts referable to each *local market ancillary service requirement* and sums them "for all *regions*", in the distributive sense. In the case of the latter reference to "for all *regions*" we consider that this means, in context, all *regions* (in the sense of each *region*, or combination of *regions*) to which the particular *local market ancillary service requirement* applies.

162. The Coalition contends that there are intractable words of aggregation that occur in clause 3.15.6A(h), and then carry through to clause 3.15.6A(i). According to this approach, the cost of meeting *global market ancillary service requirements* and the cost of meeting *local market ancillary service requirements* are to be summed together, and this is to be done across "all *regions*".

163. Viewed in isolation, we accept that clause 3.15.6A(h)(2) could bear the literal meaning urged by the Coalition. However, to read step (h)(2) in that way would in effect amount to a negation of the utility of the disaggregation exercise in step (h)(1), transgressing against the principle of statutory construction requiring us to search for a harmonious construction by which utility is accorded to all provisions. Further, on the Coalition's approach, at the conclusion of the process after step (h)(2) there would inevitably, irrespective of the presence of *local market ancillary service requirements*, be a single pool of costs across the entire *NEM* for a particular service in a particular *dispatch interval*. In no sense would that approach to the combined operation of clause 3.15.6A(h)(1) and (2) contribute to an allocation of the amounts calculated under clause 3.15.6A(a) "to each *region*", contrary to the indication in the chapeau of clause 3.15.6A(h). We place weight on the chapeau as a statement of

the intention lying behind clause 3.15.6A(h), and consider that it is necessary to prefer a construction that leads to or at least contributes to a regional allocation of some costs over a construction which does not. For these reasons, we do not accept the Coalition's approach to this clause.

164. At this stage there is still no completed or perfected regional allocation of the entirety of the *trading amounts* payable under clause 3.15.6A(a). However, much has been done to effect a regional allocation of the costs of meeting each particular *local market ancillary service requirement,* because these have been arranged into a pool for the *region* or *regions* to which the requirement applied. Further, to the extent that is not (yet) at this point a regional allocation of the costs of meeting *global market ancillary service requirements*, we do not think clause 3.15.6A(h) should be viewed in isolation from clause 3.15.6A(i) in this regard. The two provisions are clearly intended to operate together. On the view we have taken of the proper construction of clause 3.15.6A(i), outlined below, it can be seen that clause 3.15.6A(h) contributes to a rational scheme for regional allocation of the clause 3.15.6A9(a) amounts.

165. The Coalition drew our attention to the similarities, and the differences, between the drafting in each of clauses 3.15.6A(f) and (g) on the one hand, and clauses 3.15.6A(h) and (i) on the other. In particular, as mentioned above, the Coalition relies on the absence in clause 3.15.6A(h) of any analogue to clause 3.15.6A(f)/(g)(3). The Coalition argues that in the context of the contingency services, it is the step in clause 3.15.6A(f)/(g)(3) that achieves a regional allocation of amount, and that step is deliberately absent from clause 3.15.6A(h).

166. The absence of an analogue to clause 3.15.6A(f)/(g)(3) is unsurprising in our view, and is explained by material differences between the formulae prescribed in each of clause 3.15.6A(f) and (g) on the one hand and the formulae in clause 3.15.6A(i) on the other. The structure of the formulae in clause 3.15.6A(i) rests on the application of a ratio of contribution factors, MPF/AMPF, a feature that does not appear in any form in clauses 3.15.6A(f) and (g). The provisions and formulae in paragraphs (f) and (g) provide for the allocation of amounts first to a *region* based on a ratio of *energy* generated (or, in the case of (g), used by customers) of that *region* compared to the other *regions*, and then to each relevant *Market Participant* based likewise on *energy* generated (or used). Although by the time the step in paragraphs (f)(2) and (g)(2) has been taken, there is a regional allocation of sorts, to the extent that there is an aggregation of the costs of meeting each particular *local market ancillary service requirement* for contingency FCAS, the process of regional allocation has not been completed, and there has been no regional allocation at all of the costs of meeting

global market ancillary service requirements for contingency FCAS. Clause 3.15.6A(i) is different, in that it mandates the use of ratios of contribution factors to achieve the allocation of *global market ancillary service requirements* and of *local market ancillary service requirements* for the two *regulation services*. The use of those ratios does away with the need for a step analogous to clause 3.15.6A(f)(3) and (g)(3).[38]

167. ***Sixth***, the definition of "TSFCAS" in clause 3.15.6A(i) refers to the "total of all amounts" under (h)(2) "for the *regulating raise service* or the *regulating lower service*" in each *dispatch interval*. The Coalition contends that this reference to "total of all amounts" reinforces the impression that "TSFCAS" is intended to be an aggregate across the *NEM*. But, again, if this be so, clause 3.15.6A(h) would be entirely otiose. It would have been a far simpler thing to define TSFCAS as the total of all amounts calculated under clause 3.15.6A(a) for the *regulating raise service* or the *regulating lower service* in respect of a *dispatch interval*, without interposing clause 3.15.6A(h) at all. We should not adopt a construction predicated on a supposition that a provision was inserted in the *Rules* without a rational purpose or function. To do so would transgress against the principle of statutory construction which urges us to arrive at a harmonious interpretation of the whole that accords a function to all the parts.

168. In our view, for these reasons, there is a separate "TSFCAS" for each of the aggregated pools of costs identified in the Fifth step above.

169. We acknowledge that this sits awkwardly with the expression "the total of all amounts" in the definition of "TSFCAS", and that in effect we are reading that expression as "the amounts" or "the totals of all the amounts". In light of the principle of interpretation that, subject to contrary intention, the singular includes the plural,[39] we do not think it impermissible to read the phrase "the total of all amounts" as meaning "the totals of all the amounts".

170. ***Seventh***, it is important to note that, as interpreted by us, "TSFCAS" preserves the demarcations left after the application of paragraphs (h)(1) and (2) between the costs of meeting *global market ancillary service requirements* on the one hand and the

[38] Incidentally, we note that the definitions of "MPF" in both clause 3.15.6A(i)(1) and (2) do not include the words "for the *dispatch interval*", and the definitions of "AMPF" in both clauses do. We do not attach great significance to this, and treat it as an indication that "AMPF" encompasses the "MPF" figures of all the *Market Participants* who in a particular *dispatch interval* have an "MPF" under either of clause 3.15.6A(i)(1) and (2) in respect of a particular "TSFCAS" amount.

[39] See Schedule 2 to the *Law,* clauses 1(2) and 11(4).

costs of meeting *local market ancillary service requirements* applicable only to a particular *region* or *regions* on the other.

171. As we have already mentioned, in paragraph 62 above, these multiplications are carried out in respect of each *dispatch interval* and are then aggregated to arrive at a "PTA", and converted to a negative *trading amount*, which is a figure for a *trading interval*.

172. Further, in our view, it is plain as a matter of mathematical logic that a separate multiplication exercise is required for each such TSFCAS, because the factor by which TSFCAS is to be multiplied, MFP/AMPF, will be different depending on whether TSFCAS represents a global or local requirement. We explain this further as follows.

173. In our view, the steps in paragraphs (h)(1) and (2) have resulted in amounts payable under clause 3.15.6A(a) for each of the *regulation services* being separated, for each relevant *region* or group of *regions*, into a separate pool representing the cost of meeting a *local market ancillary service requirement* for the service in the particular *region(s)*.

174. The next step is to consider the potential implications of this pro-rating exercise for the "MPF/AMPF" ratio within the PTA formula, and to consider whether a construction is available which can be accommodated by the words used in the definitions of "MPF" and "AMPF" and which would result in something that could be described as an allocation of the amounts calculated under clause 3.15.6A(a) "to each *region*", thus giving weight to the statement of intention found in the chapeau to clause 3.15.6A(h).

175. The words used in the definitions of "MPF" and "AMPF", and in particular the words "for the *region* or *regions* relevant to the *regulating raise service* or *regulating lower service*", are elastic or flexible in form and leave the question of identification of the required nexus to *region* ("relevant") to a process of construction based on context. In our view, the nexus is supplied by what appears in clause 3.15.6A(h). For a service that is supplied to meet a global requirement, all *regions* are "relevant"; for a service that is supplied to meet a local requirement, only the *region* or *regions* identified by *AEMO* as being subject to the requirement are "relevant". If the MPF/AMPF ratio is capable of being expressed on either a global or local basis (as we think it can), then it would not make sense to apply a global ratio to the amount derived from the application of the marginal price for meeting the local requirement, or vice-versa. In the case where TSFCAS represents the local requirement, the

words in the definition of "MPF" are capable of bearing a meaning restricted to those *Market Participants* who have a presence in the *region* or *regions* identified by *AEMO* as being subject to the requirement, and AMPF will be the total of the MPFs of all such participants. In a case where TSFCAS represents the global requirement, the definition of "MPF" is capable of bearing a meaning that extends to *Market Participants* anywhere in the *NEM*, and AMPF will be the aggregate of all such MPFs.

176. The construction we have arrived at, explained above, is based on a textual analysis of clause 3.15.6A(i) and its context. In order to test the conclusions based on our textual analysis, we now turn to the available extrinsic material.

Legislative history and extrinsic material

177. The provisions examined above were in many cases introduced by, and in others materially affected by, the *National Electricity Amendment (Cost Recovery of Localised Regulation Services) Rule 2007* (the **Amending Rule**).

178. Before the Amending Rule commenced in effect on 1 January 2009 (starting with version 24), the *Rules*:

a) provided for regional allocation of the costs of contingency FCAS but not of *regulation services* (save in the case of Tasmania);

b) contained a derogation under which the costs of regulation FCAS requirements in the Tasmania *region* were allocated to *Market Participants* in Tasmania;

c) did not provide for AEMO to provide information under clause 3.9.2A(b) as to the *region* or *regions* to which a *local market ancillary service requirement* for *regulation services* applied (but did so for contingency FCAS);

d) included provisions within clause 3.15.6A in substantially similar form to the current regional cost allocation provisions for contingency FCAS, paragraphs (f) and (g);

e) did not include provisions within clause 3.15.6A analogous to either of the steps in current paragraph (h)(1) and (2) in relation to *regulation services*;

f) included provisions that provided for allocation for costs of *regulation services* to appropriately metered *Market Participants* (old clause 3.15.6A(h)) and other *Market Participants* (old clause 3.15.6A(i)), but they did not contain words equivalent to the interstitial words that now appear in clause 3.15.6A(i)(1) and

(2), "for each *dispatch interval* in the *trading interval* for *global market ancillary service requirements* and *local market ancillary service requirements* where: …";

g) did not contain provisions within clause 3.15.6A in relation to *regulation services* and asynchronous operation of one or more *regions* analogous to paragraph (j)(2), (k)(3) or (k)(6); and

h) did not contain provisions within clause 3.15.6A analogous to paragraphs (na) and (nb)

179. As noted above, before 1 January 2009, there was a derogation from the operation of relevant provisions of the *Rules* with respect to the Tasmania *region*. As already mentioned, Tasmania is connected to the rest of the *NEM* through a DC transmission cable (BassLink) and therefore operates asynchronously from other regions of the *NEM* at all times. Although we were informed that some FCAS can be conveyed over BassLink, this situation differs from that of all other *regions* which are *interconnected* by AC transmission links and operate synchronously (unless the AC *interconnectors* are out of service). BassLink commenced operation in 2005. Prior to that time Tasmania did not participate in the *NEM*. A transitional arrangement for *market ancillary services* was introduced to facilitate Tasmania's entry into the *NEM* by way of the aforementioned derogation to the *Rules* (**Tasmanian FCAS derogation**).[40] Under the Tasmanian FCAS derogation, *market ancillary service* costs incurred in Tasmania were recovered from Tasmanian *Market Participants*. The Tasmanian derogation was deleted from the *Rules* as part of the Amending Rule.[41]

180. The genesis of the Amending Rule was a National Generators Forum (**NGF**) *Rule* change proposal dated September 2006. The proposal itself is "Rule extrinsic material"[42], albeit somewhat removed from the actual reasons of the AEMC in making Amending Rule. The covering letter constituting part of the NGF Rule change proposal contained the following:

> The [NGF] wishes to propose a NEM Rule change relating to the cost recovery of localised [FCAS]. The intention is to both replace the current Tasmanian participant derogation and to apply [sic] to any NEM region where

[40] Australian Competition and Consumer Commission, Application for Authorisation: Amendments to the National Electricity Code: Tasmanian Ancillary Services – Chapter 8 Derogation – Determination, 9 March 2005

[41] Amending Rule, Schedule 1, clause 7.

[42] Schedule 2 of the *Law*, clause 8, paragraph (c) of the definition of "Rule extrinsic material".

> abnormal circumstances result in a local requirement for FCAS regulation services.
>
> …
>
> When it was announced that Tasmania would join the National Electricity Market before the completion of the BassLink interconnector, it became apparent to NGF members that the NEM Code applying [at] that time was inadequate to handle the fair recovery of FCAS regulation costs should any part of the NEM interconnected network become islanded. This problem did not arise with FCAS contingency services because the Rules already accommodated local cost recovery of localised FCAS contingency services.
>
> Thus at that time, the cost of FCAS regulation services was being recovered on a NEM wide basis without any recognition that a part or parts of the NEM may have a local requirement such as may occur when a region becomes islanded away. Under such circumstances the islanded part may have extremely high FCAS regulation supply costs however the cost recovery would be from all parts of the NEM based on specific causer pay factors for generators and on a common causer pays factor for most consumers.
>
> …
>
> … there is a need to implement a permanent solution for Tasmanian islanding. Further there is the possibility of other regions or parts thereof becoming separated into an island (due to planned and/or forced outages of transmission elements) thus requiring a more general solution. In addition it is now apparent that limitations on the operation of BassLink necessitate a local requirement for FCAS regulation services under some power transfer conditions.
>
> …
>
> Whilst an islanded region would require the local provision of FCAS regulation services and in our view would then require local cost recovery, it is possible for a local requirement for FCAS regulation services to arise when a region is not islanded. …
>
> As such, it is also proposed to also recover local FCAS regulation services on a regional basis where such local requirement arises for reasons other than regional islanding.

181. As to advancement of what is now called the *national electricity objective*, the proposal said:

> The proposed rule change will ensure that the parties that bear the cost of regulation services are those that have the possibility of influencing the requirement for that service.

182. In our view, this material tends to confirm the construction of the relevant provisions that we have adopted. It supports the conclusion that the purpose of the NGF Rule change proposal extended beyond circumstances that may be described as islanding and was intended to address other local market ancillary service requirements more

broadly. That said, we appreciate that asynchronous operation is not necessarily synonymous with "islanding", because depending on context and usage, "islanding" may refer to the loss of the ability to convey electricity. Where islanding in this sense occurs there will necessarily be asynchronous operation, but not every case of asynchronous operation will be caused by, or accompanied by, a loss of the ability to convey electricity. The present matter is a case in point.

183. The material also supports the construction we have adopted in that it shows very clearly that the NGF Rule change proposal was directed to the purpose of regional cost allocation in relation to local requirements for *regulation services*. It is noteworthy that the proposed amendments attached to the NGF Rule change proposal omitted what have been described as the "interstitial words" in clause 3.15.6A(i)(1) and (2), but the definitions of TSFCAS, MPF and AMPF each referred to "the [that] regulating raise service requirement or the [that] regulating lower service requirement", clearly indicating an intention that cost allocation would occur on a requirement-by-requirement basis, from the regions relevant to the specific requirement concerned.

184. The material also does not overstate the degree to which efficiency objectives would be met, stating only that the proposal would allocate costs to those who could possibly influence requirements. A submission dated 21 February 2007 was received from Flinders Power on this subject, and later noted by the AEMC in its draft and final decisions on the proposal. Flinders Power contended that the proposal was inadequate and would not address cost allocation distortions adequately. The AEMC in its subsequent draft decision in effect stated that this argument was not directly relevant to the current proposal, but in its Final Rule Determination it noted that it was adding more matters to those specified under paragraph (k) that must be taken into account in preparing the procedure for determining contribution factors.

185. NEMMCO (as AEMO was known at the time) supported the NGF Rule change proposal, referring to the proposal as one that involved "scaling up the existing causer pays factors" and describing that as "a pragmatic and sufficiently accurate approach to the regional recovery of regulation FCAS costs in the event of regional islanding".[43] It is difficult to know precisely what is meant by this. It might be a reference to the reduction of the denominator within the PTA formula, "AMPF", but more likely it is a reference to the process contemplated by then proposed paragraph (k)(5) included in the NGF Rule change proposal, which was proposed to read

[43] NEMMCO letter dated 22 February 2007.

"NEMMCO must determine the contribution factors relevant to each region or set of contiguous regions that may be relevant to a regulating raise service requirement or a regulation lower service requirement", and to then proposed paragraph (k)(7), which referred to the normalisation of contribution factors in the case of regions "not generally in synchronism during the calculation period" by reference to energy use.

186. NEMMCO also submitted to the AEMC:

> NEMMCO also understands that the NGF's Rule change proposal will not lead to any changes to the current calculation of causer pays factors. In particular, NEMMCO understands that:
>
> - …
> - causer pays factors will continue to be calculated separately for Tasmania as the power system frequency in Tasmania is not synchronised with the frequency on the mainland.
>
> However, there may be some value in clarifying these issues if there is any doubt.

187. The initial form of the NGF Rule change proposal closely mirrored existing provisions relating to recovery of costs for contingency FCAS, viz., clause 3.15.6A(f) and (g), including a provision analogous to step (f)(3) and (g)(3), and the AEMC's Draft Rule Determination dated 17 May 2007 published a Draft Rule in a form including that provision. The NGF then wrote on 28 June 2007 to the AEMC, submitting that proposed step (3) was appropriate only to recovery of contingency FCAS, not regulation services.

188. Section 3.1.2 of the AEMC's Final Rule Determination dated 23 August 2007 later explained that this corrective submission led to the deletion of proposed clause 3.15.6A(h)(3) from the final Rule, on the basis that it was inadvertently included in the first instance (references omitted):

> The submissions made during the second round of public consultation identified two practical matters concerning the calculation and use of contribution factors under the draft Rule that required clarification. The first matter, canvassed by the NGF, is that clause 3.15.6A(h)(3) of the draft Rule is not properly part of the process for regional allocation of regulation FCAS costs and was inadvertently included in the NGF's Proposed Rule. The NGF noted that clause 3.15.6A(h)(3) is inappropriate because it has the effect of allocating the cost of regulation FCAS requirements on a regional basis:
>
> - To those customers who have metered data for causer pays calculations; and
> - Before FCAS regulation costs are allocated to individual participants.
>
> The NGF noted that these effects were inconsistent with the intention of the Proposed Rule to "allocate localised regulation costs as much as possible to

> causers of localised regulation services." Accordingly, the NGF submitted that clause 3.15.6A(h)(3) should be deleted.
>
> The Commission has reviewed the practical consequence of clause 3.6.15.6A(h)(3) and accepts the NGF's submission. Accordingly, this clause has been deleted from the Rule to be made.

189. The above passage has to be read bearing in mind that proposed clause 3.15.6A(h)(3) referred to regional allocation of costs by reference to pro-rated regional energy consumption, and it was allocation on this basis with respect to metered *Market Participants* and before individual allocation (by use of the MPF/AMPF ratio) that was seen as "inappropriate".

190. Other features of the draft form of the Amending Rule published with the AEMC's Draft Rule Determination are important to our present review of the available Rule extrinsic material. First, the interstitial words in clause 3.15.6A(i)(1) and (2) did not include words describing the PTA formulae as being "for *global market ancillary service requirements* and *local market ancillary service requirements*". The addition of these words, which we consider very significant in the proper construction of clause 3.15.6A, came afterwards. Secondly, the definitions of "MPF" in each of these provisions included the words "set of", in the phrase "*region* or set of *regions* relevant to …". These words also appeared in what was then proposed paragraph (j)(2), which was in very different form to paragraph (j)(2) as ultimately made. Proposed paragraph (j)(2) provided:

> NEMMCO must determine:
>
> …
>
> (2) the contribution factors relevant to each *region* or set of contiguous *regions* that may be relevant to a *regulating raise service* or a *regulation* [sic] *lower service* …

191. It is noteworthy that the proposed paragraph (j)(2) in the above form was not limited to circumstances in which a *region* or *regions* operated asynchronously, and on its face contemplated that NEMMCO would, as a routine matter, calculate *ex ante* contribution factors for all available permutations and combinations of *regions*.

192. Proposed paragraph (k)(3) related to the contribution factors to be determined under proposed paragraph (j)(2) for *Market Participants* without relevant metering. Paragraph (k)(6) related to circumstances where "contributions" (presumably contribution factors) "are aggregated for *regions* that are not generally in synchronism".

193. On 29 June 2007, NEMMCO wrote to the AEMC on the topic of proposed paragraphs (j)(2) and (k)(3), saying that:

> [those provisions] of the new Rule relate to the determination of contribution factors relevant to each region or set of regions. NEMMCO has formed the view that it is not practical to determine the factors for sets of regions in advance, because there are so many possible combinations of regions, many of which are unlikely to be required. It is far more practical to determine the regional contributions as and when required during the settlement calculation process. …

194. Section 3.1.2 of the AEMC's Final Rule Determination noted NEMMCO's position, and then discussed a response from the NGF[44], by which the NGF had accepted that it was impractical to require NEMMCO to publish the contribution factors for each *region* in advance of an islanding event, but had submitted "that it would assist market participants to manage their risks in real time if NEMMCO were to publish information to enable each participant to estimate the cost of its regulation FCAS requirement once a region begins operating asynchronously (i.e., becomes islanded)". The AEMC then decided as follows:

> The Commission accepts NEMMCO's submission that requiring it to prepare contribution factors for each theoretical region or set of regions before an islanding event has occurred is inappropriate. Accordingly, clause 3.15.6A(j)(2) has been amended so that NEMMCO is only required to calculate the factors after an islanding event occurs.

195. Section 3.4 of the Final Rule Determination returned to this point:

> The Rule to be made also amends clauses 3.15.6A(j) and (k) of the current Rules. The insertion of sub-paragraph (j)(2) clarifies that NEMMCO is subject to a positive obligation to determine contribution factors for regulation FCAS on a regional basis. In response to the second round submissions, sub-paragraph (j)(2) has been amended to clarify that this obligation exists only after an event has occurred that causers a region to operate asynchronously."

196. The AEMC also accepted the NGF's submission and decided that "publishing an estimate of the contribution factors for those market participants affected by islanding once the islanding event has occurred will assist participants to manage the financial risks associated with localised regulation FCAS requirements", and explained that this had led to the inclusion of paragraph (nb) into clause 3.15.6A.

197. In a list at the end of the Final Rule Determination, amongst notes made by the AEMC of the differences between the proposed amendments accompanying the NGF

[44] Letter from NGF dated 28 June 2007, which also includes the statement, "The NGF understands that NEMMCO will continue to publish in advance the causer-pays factors for region(s) that are normally in synchronism, as they currently do."

Rule change proposal and the Rule to be made, the AEMC noted that the Rule to be made:

> Deletes the words "requirement" and "requirements" from the defined terms used in the formulae in clauses 3.15.6A(i)(1) and (2) and inserts additional wording in clauses 3.15.6A(i)(1) and (2) to enable the calculation of liability for each global market ancillary service requirement and each local market ancillary service requirement.

198. In other words, the AEMC's intention was that the addition of the words noted in paragraph 190 above, "for *global or local market ancillary service requirements*" to the interstitial words, would enable the application of the PTA formulae to costs on a requirement-by-requirement basis. We consider that this, and the extrinsic material in general, confirms the interpretation we arrived at after textual analysis of clause 3.15.6A.

199. For these reasons, the extrinsic material confirms our views as to the proper construction of the relevant provisions.

Conclusions and next steps prior to disposition

200. We now return to the questions we posed in paragraph 14 above.

201. For the reasons we have explained, we answer those questions as follows:

a) Where a *local market ancillary service requirement* has been determined by *AEMO* in respect of a particular *region*, in circumstances other than asynchronous operation of the *region*, the "TSFCAS" term is to be constituted by an amount referable to only that *region*. In that instance, TSFCAS is not a total or aggregate across all *regions.*

b) Where a *local market ancillary service requirement* has been determined by *AEMO* in respect of a particular *region*, in circumstances other than asynchronous operation of the *region*:

i) the "MPF" term in clause 3.15.6A(i)(1) is only to be populated in the case of a *Market Generator, Market Small Generation Aggregator or Market Customer* that has a *generating unit* or *load* in that *region*, with AMPF being the aggregate of all such MPFs; and

ii) it is permissible for *AEMO* to calculate the contribution factor denoted "MPF" in clause 3.15.6A(i)(1) in accordance with a procedure that requires this to be done by reference to the entire portfolio of the *Market Generator,*

Market Small Generation Aggregator or *Market Customer* comprising all its *generating units* and/or *loads* throughout the *NEM* (with AMPF being the aggregate of all such MPFs).

c) Where the *local market ancillary service requirement* is determined because the *region* or *regions* to which the requirement applies "has operated asynchronously" within the meaning of clause 3.15.6A(j)(2), *AEMO* must calculate contribution factors in accordance with a procedure addressing the circumstances specified in paragraph (j)(2) and which *AEMO* has prepared in accordance with its duty to give consideration to the principles specified in paragraph (k), including (k)(3) and (k)(6). *AEMO* has manifestly not performed the requisite calculations in this case, because it has not prepared a procedure addressing the eventuality in paragraph (j)(2) in accordance with its obligations under paragraph (k). This affects *trading intervals* 22:00 and 22:30 on 1 November 2015.

d) *AEMO's* Causer Pays Procedure is inconsistent with clause 3.15.6A(j)(2) and (k) of the *Rules*, as explained in subparagraph (c) above. For all other relevant purposes, it is consistent with the *Rules*.

e) The contribution factors determined in accordance with *AEMO*'s Causer Pays Procedure are not contribution factors that fail to answer the descriptions or requirements in clause 3.15.6A(j)(1), but they do fail to answer the descriptions or requirements in paragraph (j)(2), as explained in subparagraph (c) above.

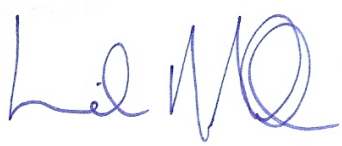
f) *AEMO's* calculations in this case did not fail to conform to the requirements of clause 3.15.6A(i) of the *Rules* save to the extent identified in subparagraph (c) above.

202. Before making any determination, we propose to allow the parties an opportunity to address us on the proper disposition of the dispute in light of these reasons.

Date: 2 September 2016

Peter R D Gray QC
liability limited by a scheme approved
under professional standards legislation

Gregory H Thorpe



Linda M McMillan

Schedule

Agreed Statement of Facts (pages 16-27 of the Hearing Book, Folder D)