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Your Ref: ERC0136



24 January 2012

Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

Dear Sir

**CONSULTATION PAPER: NATIONAL ELECTRICITY AMENDMENT  
(OPTIMISATION OF REGULATORY ASSET BASE AND USE OF FULLY  
DEPRECIATED ASSETS) RULE 2011**

Thank-you for the opportunity to provide input to the Consultation Paper, National Electricity Amendment (Optimisation of Regulatory Asset Base and Use of Fully Depreciated Assets) Rule 2011, released on 1 December 2011.

Aurora Energy Pty Ltd, ABN 85 082 464 622 (Aurora) is an incorporated, State Government owned fully integrated energy and network business, with complementary activities in telecommunications and energy-related technologies. Aurora provides electricity generation, retail and distribution services to more than 270,000 customers in the Tasmanian jurisdiction. In this document, reference to Aurora should be taken as reference to Aurora in its capacity as the provider of distribution services licensed by the Regulator under the Electricity Supply Industry Act 1995.

Aurora is keenly aware of the effect of rising electricity prices on its customers. To this end, Aurora has implemented a business-wide strategy to ensure that it provides its services to its customers at the lowest sustainable price. Planning and expansion of the distribution network is a key cost consideration in the provision of Aurora's services and those provided by all Distribution Network Service Providers. Aurora therefore welcomes any changes within the national electricity market that will lead to better and efficient outcomes for its customers.

The Rule Change Proposal submitted by the Major Energy Users Inc. (MEU), which is the subject of this consultation, is directed at reducing the immediate cost to consumers proportional to an undefined "utilisation" of regulated asset base assets. The resultant decreased regulated asset base is expected to return reduced revenue to the DNSP and commensurately decreased costs to consumers.

The AER is similarly concerned as to the ability of the regulated asset base to contribute to an increase in the price of electricity for customers. The AER's position being that a propensity by a DNSP to overspend is created due to the addition of capital expenditure being automatically added to the regulated asset base,<sup>1</sup> although it is conceded that there are other drivers for expenditure than purely a desire for additional revenue.<sup>2</sup>

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<sup>1</sup> AER Pricing Rule Change Proposal, page 14

<sup>2</sup> AER Pricing Rule Change Proposal, page 6

Aurora welcomes the opportunity to provide input to this consultation on an issue that has created concerns within the industry. In brief, Aurora considers that the MEU's proposed rule concerning optimisation of the regulated asset base may not provide an appropriate solution to the issues raised by the MEU.

The MEU's other proposed rule concerning the retention of fully depreciated assets by regulated entities rather than the automatic replacement at the end of the depreciated life raises an interesting issue. The current NER pricing regime incentivises replacement of fully depreciated regulated assets because the regulated revenue stream from an asset is a function of the asset value. Aurora agrees with the MEU that this can potentially lead to the replacement of a serviceable asset solely to retain a revenue stream. As currently drafted, the rule proposal provides a disincentive to replace a fully depreciated asset, but does not provide a mechanism for the regulated entity to obtain a revenue stream from that asset. The addition of a mechanism to provide a regulated entity with a revenue stream from a fully depreciated asset would create alignment between the ability for a regulated entity and a firm operating in a competitive environment to use a fully depreciated asset to produce revenue. Further, such a mechanism would provide a positive incentive to defer the replacement of a serviceable but fully depreciated asset.

Aurora has provided detailed answers to the questions posed in the AEMC's consultation paper in the attachment to this letter.

If you have any questions, please address them to the contact noted above.

Yours sincerely



 Andre Botha  
Chief Operations Officer – Distribution Business  
Aurora Energy

## Attachment: Response to Questions

### *Introduction*

This attachment to Aurora's response to AEMC consultation ERC0136 provides Aurora's answers to the questions posed by the Australian Energy Market Commission (AEMC) in their consultation paper *National Electricity Amendment (Optimisation of Regulatory Asset Base and Use of Fully Depreciated Assets) Rule 2011* published on 1 December 2011 (the Consultation Paper). The Consultation Paper was published in response to a document submitted to the AEMC by the Major Energy Users Inc. (MEU) *Rule Change Proposal, Economic Regulation of Transmission and Distribution Network Service Providers, Proposed Changes to the National Electricity Rules and National Gas Rules*, dated October 2011 (the Rule Change Proposal).

In this paper, Aurora will restrict itself to a discussion of the issues arising from the Consultation paper and the Rule Change Proposal from the point of view of a DNSP.

For ease of identification, the questions posed by the AEMC are presented in boxed text.

Terms used in this attachment are contained within the appendix to this attachment.

### *Rule Change Proposal*

Aurora understands that the MEU has proposed that two new clauses be added to chapter 6 of the NER. The intention of these new clauses is to address issues that the MEU considers that the AER has not addressed<sup>3</sup> in the AER Pricing Rule Change Proposal.

The first, a new clause to be numbered S6.2.1(e)7A<sup>4</sup>, is intended to permit the AER to "optimise" the RAB of a DNSP such that only the value of that portion of the assets in the RAB that is "utilised" is contained within the RAB:<sup>5</sup>

*The previous value of the regulatory asset base must be reduced by the amount determined by the AER reflecting the difference between the actual depreciated value of assets provided and the depreciated replacement value of assets deemed by the AER to be required to provide the services.<sup>6</sup>*

This clause will be referred to as the "Optimisation Clause" in this attachment. The MEU proposes the Optimisation Clause to address perceived "gold-plating" of the networks by DNSPs. In particular, the MEU is of the opinion that DNSPs install outsized assets to enhance the value of the RAB.

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<sup>3</sup> Rule Change Proposal, page 5

<sup>4</sup> Please note that the MEU seems to have a typographical error in their Rule Change Proposal, numbering their proposed clause S6.2.1(c)7A.

<sup>5</sup> Rule Change Proposal, page 4

<sup>6</sup> Rule Change Proposal, page 17

The MEU has stated:

*“... and as a result consumers can be required to pay for assets which are too large for the service and thereby paying an excessive amount for the service provision.”<sup>7</sup>*

The mechanism proposed by the MEU to implement the Optimisation Clause involves an ex post review of DNSP capex.<sup>8</sup> While not explicitly stated, the MEU seems to consider that the value of individual assets would be “optimised”.

The second clause, which is proposed to be numbered 6.5.7(e)(11), is intended to prevent DNSPs from replacing fully depreciated assets if those fully depreciated assets are still serviceable:<sup>9</sup>

*If the proposed capital expenditure is intended to replace an asset which is still used and useful, the expenditure involved in replacing such an the asset (whether partly or wholly depreciated) is not permitted to be added to the regulatory asset base.<sup>10</sup>*

This clause will be referred to as the “Fully Depreciated Asset Clause” in this attachment. The MEU observes that:

*“A firm operating in a competitive business is incentivised to retain fully depreciated assets in its asset base, because the financial cost imposed by a fully depreciated asset is zero and, as the fully depreciated asset still generates a return for its output, the profitability to the firm is higher than from a partly depreciated asset. Firms operating in a competitive environment actively seek to retain fully depreciated assets within their asset base for this very reason.”<sup>11</sup>*

Based upon this observation, the MEU considers that a regulated business should adopt a similar approach because:

*“Regulation is intended to be a surrogate for applying the outcomes that competition would impose.”<sup>12</sup>*

The mechanism proposed by the MEU to implement the Fully Depreciated Asset Clause is as part of the ex ante assessment by the AER of a DNSP’s capex forecast made as part of a building block proposal under part C of chapter 6 of the NER.

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<sup>7</sup> Rule Change Proposal, page 6

<sup>8</sup> Rule Change Proposal, pages 15 & 8

<sup>9</sup> Rule Change Proposal, page 4

<sup>10</sup> Rule Change Proposal, page 17

<sup>11</sup> Rule Change Proposal, page 10

<sup>12</sup> Rule Change Proposal, page 10

## ***Discussion***

The MEU's argument is directed at reducing the immediate cost to consumers proportional to the undefined "utilisation" of RAB assets, with the resultant decreased RAB being expected to return reduced revenue to the DNSP and commensurately decreased costs to consumers. The AER is similarly concerned as to the ability of the RAB to contribute to an increase in the price of electricity for customers. The position of the AER is that a propensity to overspend is created due to the addition of capital expenditure being automatically added to the RAB,<sup>13</sup> although it is conceded that there are other drivers for expenditure than purely a desire for additional revenue.<sup>14</sup>

Aurora is however aware of the impact of rising electricity prices on Tasmanian households and businesses and is focussed on meeting customer needs at the lowest sustainable cost. Following a major review of its Distribution Business strategy in mid-2010, Aurora considers that investment in the network is now at an appropriate level and consolidation in expenditure can occur. In developing the strategy, the Distribution Business has strengthened its focus on the customer, with an aim of improving electricity price outcomes through operational efficiencies and the implementation of a smarter network through the deployment of innovative and new technologies.

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<sup>13</sup> AER Pricing Rule Change Proposal, page 14

<sup>14</sup> AER Pricing Rule Change Proposal, page 6

## Question 1. – Impact on Investment

What would the impact on investment be with the rule change requests? Would this have a positive or negative impact?

### *Optimisation Clause*

Aurora considers that the introduction of the Optimisation Clause would have a negative impact upon investment.

Aurora observes that the premise underlying the building block approach is that a party investing in infrastructure will receive an appropriate return on investment to provide an incentive to invest. The incentive to invest is unlikely to be attractive if a return is provided upon only a portion of the investment, with that portion being proportional to the “utilised” fraction of the infrastructure.

Further, as drafted, the optimisation would occur at the end of the regulatory control period in which the expenditure was incurred when the AER conducts an ex post review of expenditure. The current chapter 6 of the NER permits regulatory control periods of not less than five years, with no maximum term provided. The optimisation of the asset value may, therefore, not occur for in excess of five years after the construction of the infrastructure. Assuming that the investment for the infrastructure was made at the time of construction of the infrastructure, the investor faces a potential, unquantifiable reduction in return a significant period of time after the original investment was made. Aurora considers that such uncertainty does not provide a particularly positive incentive for investment.

Aurora notes that an increase in the equity beta value in the WACC formula may be appropriate to address the increased investment risk introduced by the proposed Optimisation Clause. Aurora is unable to estimate the magnitude of increase in the equity beta that would be have the desired effect, but notes that, above a certain value, the increased return on capital as a result of the increased equity beta may be in excess of the reduction in return on capital effected by the ex post optimisation of assets.

### *Fully Depreciated Asset Clause*

Aurora considers that the Fully Depreciated Asset Clause would have minimal effect on investment. Since investment is only required to fund the construction of new infrastructure, the deferral of the need for new construction should have no impact.

## **Question 2. – Assessment of Network Business Assets**

Is it appropriate for the AER to determine and assess the age and condition of a regulated network business' asset?

Aurora observes, based on its experiences during the current distribution determination process, that the AER already assesses the age and condition of a regulated network business' assets.<sup>15</sup> Aurora considers that such an approach is necessary for the AER to fulfil its functions with regard to ex ante assessment of forecast capex to ensure that the forecast is both efficient and prudent.

Where Aurora has concerns is when the assessment by the AER is biased towards achieving the “price” aspect of the NEO, potentially at the expense of the other aspects. Such concerns are, however, more appropriately aired in other fora.

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<sup>15</sup> AER, Draft Distribution Determination, Aurora Energy Pty Ltd, 2012-13 to 2016-17, November 2011: section 5.4.1

### Question 3. – Administrative Burden vs. Benefits

Does the increase in administrative burden outweigh the benefits of the proposed rule?

Aurora considers that the costs and benefits of the proposed rule are not symmetrically realised. The administrative burden, and therefore cost, would initially fall upon the AER and the DNSP, whereas the benefits would accrue to the network customers. While this is arguably the intention of the NER, with efficient pricing benefitting customers, Aurora notes that any administrative burden placed upon a DNSP must necessarily be passed back to the customers through network tariffs. Similarly, although less obvious, any administrative burden placed upon the AER is recovered through the taxation base.

Aurora considers that the increase in administrative burden as a result of the introduction of the two proposed rules would be not insignificant, with the Optimisation Clause creating the majority of the burden. The costs associated with the administrative burden of the proposed rules will be, however, potentially orders of magnitude less than the benefits realised by customers should the RAB be devalued by a significant fraction, if benefits are considered in terms of reduced DNSP revenues.

#### ***Optimisation Clause***

Aurora considers that the increase in administrative burden as a result of the introduction of the Optimisation Clause would be not insignificant, given that the clause would require an assessment of a DNSPs actual work program against the forecast work program at a very granular level. Aurora makes two observations with regard to this requirement.

Firstly, such an approach would require a paradigm shift in the application of the NER with regards to setting distribution revenues. Currently, the AER assesses whether a DNSP capex forecast for a regulatory control period is reasonable. In particular,

*The AER must accept the forecast of required capital expenditure of a Distribution Network Service Provider that is included in a building block proposal if the AER is satisfied that the total of the forecast capital expenditure for the regulatory control period reasonably reflects:*

- (1) the efficient costs of achieving the capital expenditure objectives; and*
- (2) the costs that a prudent operator in the circumstances of the relevant Distribution Network Service Provider would require to achieve the capital expenditure objectives; and*
- (3) a realistic expectation of the demand forecast and cost inputs required to achieve the capital expenditure objectives.*

*(the capital expenditure criteria)<sup>16</sup>*

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<sup>16</sup> NER, clause 6.5.7(c)

Aurora notes that the assessment criteria relate to the total of the forecast capex, not the individual projects that make up the forecast capex. This broadness of scope is also applied when the constituent decisions that must be made by the AER in making a distribution determination.<sup>17</sup> The MEU, however, are requiring through their proposed Optimisation Clause a complete assessment of all capital infrastructure projects.

Secondly, the Optimisation Clause is a more onerous requirement than perhaps the MEU has contemplated. By way of concrete example, in assessing Aurora's building block proposal submitted in May 2011, the AER performed, or caused to be performed, a detailed review of a major portion of Aurora's capex forecast. This review involved a significant amount of resources and time on the parts of both the AER and Aurora, and yet was necessarily abbreviated due to the time constraints around the determination process contained within the NER. The AER notes similar issues around their assessment of the Victorian DNSPs.<sup>18</sup>

Despite the depth of the review of Aurora's capex forecast, the review was still not to a level required by the MEU's proposed Optimisation Clause. Moreover, the review performed by the AER was only for the ex ante assessment of the capex forecast: in their current rule change proposal before the AEMC, the AER cites the administrative burden of being required to perform an ex ante line-by-line assessment of a building block proposal as being one of the reasons supporting their revisions to chapters 6 and 6A of the NER that would allow them to perform a top-down assessment to develop an ex ante capex forecast.<sup>19</sup> The Optimisation Clause would additionally require an ex post review of the actual project capex. Aurora expects that the ex post review process would need to be no less onerous than the ex ante forecast assessment process.

Aurora expects that the requirement for a more detailed ex ante review of forecast capex coupled with an equally detailed ex post review of actual capex brought about by the Optimisation Clause would more than double the administrative burden currently borne by the AER and the DNSP. Given the already challenging timeframes present in the pricing rules, the magnitude of the proposed added review process would exacerbate the resourcing issues already experienced by both the AER and the DNSP.

Aurora considers that the costs and benefits of the Optimisation Clause are not symmetrically realised. The administrative burden, and therefore cost, would initially fall upon the AER and the DNSP, whereas the benefits would accrue to the network customers. While this is arguably the intention of the NER, with efficient pricing benefitting customers, Aurora notes that any administrative burden placed upon a DNSP must necessarily be passed back to the customers through network tariffs. The costs associated with the administrative burden of the proposed rules will, however, be potentially orders of magnitude less than the benefits (if reduced DNSP revenues be considered benefits) realised by customers should the RAB of the DNSP to which they are connected be optimised by a significant fraction. Aurora notes, however, that there is no methodology presented with the proposed rule, so any comment as to the administrative burden is largely speculative.

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<sup>17</sup> NER, clause 6.12.1(3)

<sup>18</sup> AER Pricing Rule Proposal, page 29

<sup>19</sup> See, for example, the AER Pricing Rule Change Proposal, page 13

In its Rule Change Proposal, in relation to the Optimisation Clause, the MEU observes:

*“There will be increased risks to the NSPs by the re-imposition of optimisation as they risk having an imprudent investment optimised, but this risk is no less than that faced by a firm operating in a competitive environment.”<sup>20</sup>*

Aurora notes that the revenue of a firm operating in a competitive environment is not set by an external party to be a given fraction of the value of its fixed assets. Accordingly, the book devaluation of that firm’s fixed assets is unlikely to have a direct effect upon its revenue. On the other hand, the revenue of a regulated DNSP is intimately connected with the value of its RAB, and a RAB revaluation can have a significant effect on its revenue.

Also in its Rule Change Proposal, the MEU stated:

*“There is an increased risk for consumers in that an NSP might not invest in an asset where there is an expectation that a duplicate investment might be required in a short time after the initial investment is made.”<sup>21</sup>*

Aurora considers that the suggested risk is contrary to the access requirements given in clause 6.1.3 of the NER and the connection requirements of the National Energy Customer Framework package which is expected to commence on 1 July 2012.

### ***Fully Depreciated Asset Clause***

Aurora considers that this proposed clause will add minimal administrative costs. Aurora is unable to quantify the benefits that would be created by the introduction of this clause.

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<sup>20</sup> Rule Change Proposal, page 16

<sup>21</sup> Rule Change Proposal, page 16

## Question 5. – Approach of Optimisation Clause

The proposed rule requires the amount (to be determined by the AER) to reflect the difference between the actual depreciated value of assets provided and the depreciated replacement value of assets (to be deemed by the AER) required for provision of services. Does this provide the appropriate signals for efficient utilisation of assets? If not, is there a better alternative approach?

The MEU has postulated, but provided no evidence, that DNSPs build oversized assets to maximise the value of the RAB and so maximise their revenue.<sup>22</sup> The MEU’s proposed solution, the Optimisation Clause, is to scale the RAB to correct for the putative gold plating so that customers should not have to pay for unused or under-utilised assets<sup>23</sup>, with the proviso that assets built to fulfil a foreseeable need should be permitted.<sup>24</sup>

The MEU has not, however, defined “asset utilisation”, provided an indication of what an efficient level of asset utilisation might be, nor demonstrated that regulated businesses have inefficient levels of asset utilisation.

Given that it has not yet been shown that there is a problem, Aurora considers that discussing a solution is somewhat premature. Accordingly, Aurora proposes that the appropriate alternative solution is to do nothing until the issues noted above have been addressed.

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<sup>22</sup> Rule Change Proposal, page 6

<sup>23</sup> Rule Change Proposal, page 3

<sup>24</sup> Rule Change Proposal, page 16

## Question 6

The proposed rule places a requirement that would disincentivise expenditure for replacement of a fully or partially depreciated asset from being included in the RAB. Does this ensure that fully or partially depreciated assets that are still in use and useful are not replaced? If not, is there a better alternative?

The MEU bases their argument for the Fully Depreciated Asset Clause on the observation that:

*“A firm operating in a competitive business is incentivised to retain fully depreciated assets in its asset base, because the financial cost imposed by a fully depreciated asset is zero and, as the fully depreciated asset still generates a return for its output, the profitability to the firm is higher than from a partly depreciated asset. Firms operating in a competitive environment actively seek to retain fully depreciated assets within their asset base for this very reason.”<sup>25</sup>*

Aurora notes that the revenue that a regulated DNSP can earn from an asset is related intimately to the value of that asset in the RAB. If the asset has a zero value, the DNSP will make no revenue from that asset except an opex allowance which is defined to be equal to the operating costs of that asset.

In a competitive environment, however, as noted by the MEU, a fully depreciated asset can still generate a return for its output, and would continue to be used until “the cost to maintain the asset in working condition exceeds the benefit from retaining the asset in the production processes”.<sup>26</sup>

Aurora suggests that the MEU’s Fully Depreciated Asset Clause would provide an outcome that is inconsistent with that enjoyed by a firm operating in a competitive environment. In consequence, Aurora contends that the MEU’s proposed Fully Depreciated Asset Clause is not appropriate for implementation.

Aurora suggests that a more suitable alternative would be to implement a rule that allows a regulated business to continue to receive a revenue stream analogous to that received by a firm operating in a competitive market from a fully depreciated asset. This would be a revenue equivalent to the return on and of an asset before the asset had been fully depreciated.

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<sup>25</sup> Rule Change Proposal, page 10

<sup>26</sup> Rule Change Proposal, page 10

## Question 7

Should optimisation of the RAB be considered as an alternative to the “40/60 sharing factor” approach when the AEMC is considering the best capex incentive mechanism in response to the AER’s rule change request?

The two mechanisms, being the MEU’s proposed Fully Depreciated Asset Clause and the AER’s “40/60 sharing factor”, are designed to address different issues. They are, therefore, not alternative options. The AER’s approach is intended only to apply to expenditure in excess of the forecast approved by the AER for inclusion into the RAB during the distribution determination process<sup>27</sup>. Aurora noted in its submission to the AER’s Rule Change Proposal that it is considered that the “40/60” sharing factor was an inappropriate mechanism to address a perceived problem. The MEU’s RAB optimisation is intended to reduce the value of the entire asset based, irrespective of whether expenditure has been in excess of forecast made during the distribution determination process.

Aurora’s position is that optimisation of the RAB should not be considered as an alternative to the 40/60 proposal, but neither should it be considered for implementation.

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<sup>27</sup> AER Pricing Rule Change Proposal, page 19

## Question 8

When should any proposed rule commence?

If either the Optimisation Clause or the Fully Depreciated Asset Clause were to be adopted, they should commence for each DNSP at the commencement of the next full Regulatory Control Period following the implementation of the rule by the AEMC. The proposed rules would potentially create significant changes to the annual revenues of DNSPs. It would be appropriate to allow stakeholders time to ascertain how to adjust to the effects of the reduced revenue streams.

Aurora notes that if the rule changes were to apply from the beginning of a current Regulatory Control Period, it would potentially result in a regulatory change event.

## Other Issues with the Optimisation Clause

For the avoidance of doubt, Aurora does not consider the Optimisation Clause to be a suitable approach to address the perceived issue raised by the MEU. Noting, however, that this position may not be held by all stakeholders, in the event that the MEU's Rule Change Proposal is successful, Aurora wishes to raise the following issues associated with the introduction of the Optimisation Clause or an analogous amendment.

For completeness, Aurora has no immediate concerns with the Fully Depreciated Asset Clause proposed by the MEU, given the proviso that the regulated providers have the ability to continue to receive a revenue from a fully depreciated asset. This is discussed further in Aurora's response to question 6.

### *Effect of Optimisation Clause on Annual Prices*

The MEU's intention with the Optimisation Clause is to modify the value of a DNSP's RAB to recognise the utilisation of the assets in the RAB.<sup>28</sup> Even assuming the most simplest definition of utilisation – the ratio of the network peak demand and the network capacity, calculated on an annual basis<sup>29</sup> – the utilisation will vary each year. In consequence, under the MEU's Optimisation Clause, the portion of the RAB applicable for revenue calculations is will vary each year.<sup>30</sup> This variation, which is historically an increase, will increase the revenue that can be recovered by the DNSP. The irregular nature of connections means that the annual variation in revenue will be similarly irregular. This is contrary to the AER's preference, as implemented in their PTRM, for regular revenue increases.<sup>31</sup>

Annual irregular changes in recoverable revenue due to changing network utilisation could be mitigated by requiring the DNSP to forecast the changing utilisation in its building block proposal so that it is considered when determining revenues. Aurora considers, however, that this approach would add considerable complexity to the distribution determination process, commensurate to that surrounding the forecast and application of demand, consumption and customer connection forecasts.

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<sup>28</sup> Rule Change Proposal, page 3

<sup>29</sup> It should be noted that this definition of asset utilisation is presented for the sake of argument. Aurora does not consider this to be an appropriate definition, lacking any consideration of planning levels or regulatory requirements used network planning and operations. Further, because network connections are sized to meet the load forecast by the parties connecting, the potential for introducing outsized assets due to poor customer forecasting has also not been considered.

<sup>30</sup> Strictly, depending upon the definition of asset utilisation, the value for the factor will vary on a time-frame much shorter than a year. Since revenues are calculated annually, consideration of these short period variations confound the discussion.

<sup>31</sup> The variations to revenue caused by the application of the AER's schemes are not considered here, although they may exacerbate the effect of an annual change to network utilisation.

An alternative approach to smoothing the variations due to changes in asset utilisation would be to recognise the changes at the end of the relevant regulatory control period. This approach, however, would result in the DNSP forgoing revenue to which it is entitled for the duration of the regulatory control period. An issue that could be addressed by allowing the foregone revenue being recoverable in the subsequent regulatory control period, suitably indexed by WACC and CPI. Aurora notes that this approach has the potential to add considerably to the step change in revenues between the regulatory control periods, the “P<sub>0</sub>”.

### ***Calculation of a Utilisation Factor for the Optimisation Clause***

Aurora considers that the calculation and application of a “utilisation factor” is potentially the most complex issue surrounding the implementation of the Optimisation Clause or equivalent. Aurora has no firm position on the form of a utilisation factor should one be required, but wishes to note the following issues in relation to the formation of such.

The term “utilisation factor” is, itself, potentially misleading, implying a multiplicative factor applied to the RAB value such that,

$$\text{Utilised RAB Value} = (\text{RAB Value}) \times (\text{utilisation factor}).$$

It may be more appropriate to introduce an adjustment term as a building block rather than to modify by the incorporation of a utilisation factor into two other, already existing building blocks. Simplistically, this would take the form of,

$$\text{Revenue} = \text{Return on RAB} + \text{Return of RAB} + \text{Opex} + \text{Schemes} + \text{Utilisation Factor}.$$

Which aspects of network operation that are used to make up the utilisation factor also need consideration. At the very least, there will need to be a measure of utilisation and a standard against which to measure the utilisation. Aurora notes that the choice of these two components is not necessarily straightforward.

For example, assuming that the percentage of utilised asset capacity is that chosen to be the basis of the utilisation factor, there are several different variants of asset capacity that could be used as a standard against which to measure utilisation, such as emergency capacity and firm capacity. Ideally, a network asset will run at below firm capacity, but will tolerate emergency capacity for a limit amount of time, potentially even exceeding emergency capacity for a period without failure. Using the firm capacity will provide an indication of how the network is utilised against a “safe standard”. It could be argued, however, that the emergency rating should be the standard against which utilisation should be measured, since the assets can be run safely (for a period) at the emergency rating. At the extreme, the standard could be set at a level that ensures in-service asset failure to ensure that the network can be run as hard as possible.

As a further complicating factor, any capacity standard will necessarily involve a temperature term, since the safe capacity of power system assets drops with increasing temperature. Also required will be a method to account for a single asset constraining the operation of a series of assets of which it is a part. For example, a distribution feeder may have theoretical capacity of 5 MVA, say, but is constrained to be loaded at not more than 4 MVA due to the presence of an individual asset – the weak link in the chain, so to speak.

Taking the capacity example further, the choice of quantity to compare with the standard is also not clear cut. Distribution network assets are built to meet peak demand. But peak demand occurs, by definition, only once in a given period; for the rest of the period, demand is below peak and, for the majority of the period demand is significantly below peak.<sup>32</sup> Should the peak demand be measured against capacity, the utilisation factor would appear better than if the average demand were considered against capacity. The former recognises the requirement upon DNSPs to meet demand,<sup>33</sup> but is true only for a small period of time, while the latter recognises the general condition of the network but does not consider the requirement upon DNSPs to meet peak demand.

Aurora again emphasises that it does not present the preceding discussion as a solution, rather to highlight the multitudinous issues surrounding the creation of a “utilisation factor”. Aurora recommends that, in the event that a utilisation factor approach is deemed appropriate, a comprehensive stakeholder consultation is held.

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<sup>32</sup> This issue is behind the move at national level to provide incentive for demand-side management. See, for example, the AEMC Issues Paper *Power of Choice – Giving Consumers Options in the Way They Use Electricity*, published on 15 July 2011, and other publications in preceding it in stages one and two of the same series.

<sup>33</sup> This is one of the issues covered by chapters 5 & 6 of the NER, and the NECF.

## Appendix: Terms Used in this Attachment

The following terms are used in this attachment to Aurora's submission to the AEMC consultation ERC0136.

AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
AER Pricing Rule Change Proposal	AER Rule Change Proposal, <i>Economic Regulation of Transmission and Distribution Network Service Providers, AER's Proposed Changes to the National Electricity Rules</i> , published in September 2011, the subject of AEMC Consultation ERC 0134
Consultation Paper	AEMC Consultation Paper, <i>National Electricity Amendment (Economic regulation of network service providers) Rule 2011, National Gas Amendment (Price and revenue regulation of gas services) Rule 2011</i> , published on 20 October 2011
DNSP	Distribution Network Service Provider
Draft Distribution Determination	<i>Draft Distribution Determination</i> , Aurora Energy Pty Ltd, 2012-13 to 2016-17 published by the AER in November 2011
MEU	Major Energy Users Inc.
NEO	National Electricity Objective
NER	National Electricity Rules
RAB	Regulatory Asset Base
Rule Change Proposal	MEU Rule Change Proposal, <i>Economic Regulation of Transmission and Distribution Network Service Providers, Proposed Changes to the National Electricity Rules and National Gas Rules, dated October 2011</i> , submitted to the AEMC
WACC	Weighted Average Cost of Capital
PTRM	Post Tax Revenue Model
MVA	MegaVolt Amps