



**Issues Paper**  
**AEMO's electricity transmission determination**

October 2013

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## Overview

In Victoria, the Australian Energy Market Operator (AEMO) provides shared transmission services and contracts with direct connect customers for negotiated services.

We, the Australian Energy Regulator (AER), must make a transmission determination for AEMO consisting of a pricing methodology, negotiating framework and negotiating transmission service criteria (NTSC). We do not make a revenue determination for AEMO. Rather, AEMO is required to develop and publish its own Revenue Methodology for the services it provides in Victoria, which is available on its website: [www.aemo.gov.au](http://www.aemo.gov.au).

Our transmission determination for AEMO must be made by 30 April 2014. Before then, certain decision making processes must be followed. Publishing this issues paper is among those requirements. Our intention is that this issues paper will assist stakeholders in their engagement with us and AEMO.

## Upcoming engagement

We are hosting at least one public forum on AEMO's pricing methodology and negotiating framework. The forum(s) will take a workshop format where AEMO representatives will explain their proposal and stakeholders will have an opportunity to ask questions. In this issues paper, we have included text boxes to guide discussions at the public forum to be held at the AER's Melbourne offices:

Level 35  
360 Elizabeth Street  
Melbourne Central

Date: 28 October 2013  
Time: 1:30pm

Information on how to register for the public forum is on our website: [www.aer.gov.au](http://www.aer.gov.au). We may hold a second public forum for stakeholders wishing to engage more with us and AEMO. If this happens, then invitations will be sent electronically and a notice will be published on our website.

Stakeholders may provide written submissions on AEMO's proposed pricing methodology and negotiating framework, and the NTSC. Submissions close COB 25 November 2013 and must be sent electronically to: [AEMOdetermination@aer.gov.au](mailto:AEMOdetermination@ aer.gov.au)

Inquiries should be directed to the Network Regulation Branch (Canberra office) of the AER on (02) 6243 1240. AEMO's proposed pricing methodology, proposed negotiating framework, and our draft NTSC can be accessed at: <http://www.aer.gov.au/node/22265>

# 1 Background

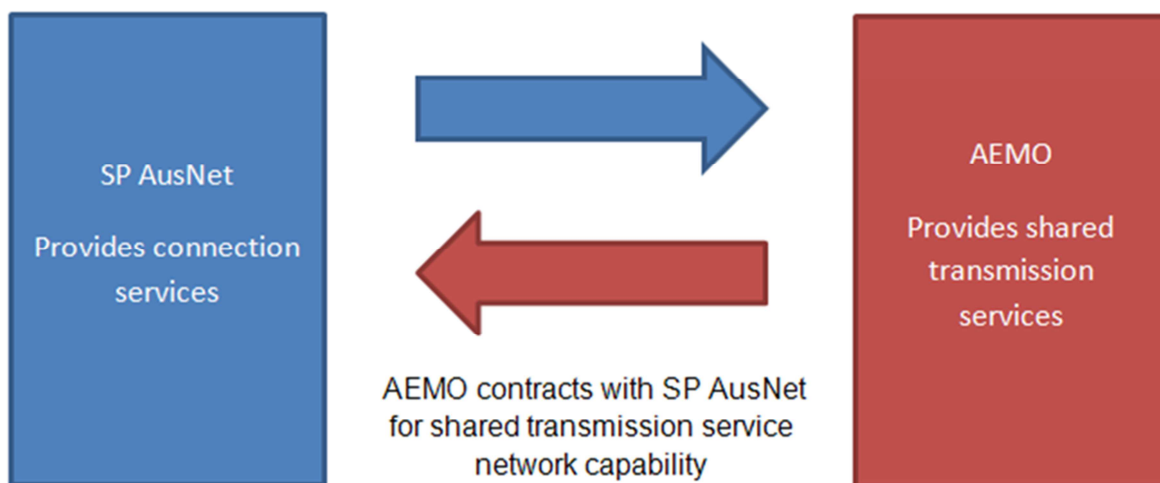
In this section, we provide a broad outline of the Victorian transmission arrangements. They are different to all other regions in the national electricity market (NEM) because of the transmission responsibilities of AEMO.

## 1.1 Victorian transmission arrangements

Under the Victorian transmission arrangements, AEMO is responsible for providing shared transmission services. These consist of prescribed transmission use of system (TUOS) services and prescribed common transmission services. In relation to these services, AEMO is considered to be a transmission network service provider (TNSP) under the National Electricity Rules (NER).<sup>1</sup>

AEMO does not actually own any assets capable of providing transmission services. Rather, it procures network capability under long-term contracts. Additionally, AEMO does not provide connection services to customers. Those are provided by SP AusNet. SP AusNet is also the main source from which AEMO procures shared transmission services under contract. Figure 1.1 provides a basic overview of the Victorian transmission arrangements.

**Figure 1.1 Overview of the Victorian transmission arrangements**



In addition to SP AusNet and AEMO, Murraylink provides transmission services in Victoria. Where there are multiple TNSPs in a region, those providers must appoint a coordinating network service provider responsible for allocating all the AER-determined regulated revenue in that region.<sup>2</sup> Both SP AusNet and Murraylink have appointed AEMO as the co-ordinating network service provider for Victoria.

AEMO has a substantial planning role under the Victorian transmission arrangements. It forecasts demand for prescribed transmission services, identifies network constraints, and commissions network augmentations.

<sup>1</sup> NER, S6A.4.1

<sup>2</sup> NER, clause 6A.29.1(a).

## 1.2 Revenue methodology

Under the NER, AEMO must develop and publish a revenue methodology describing how it calculates its revenue requirement.<sup>3</sup> In its proposed pricing methodology, AEMO states that the majority the revenue it collects is made up of the following:<sup>4</sup>

- AER-determined regulated revenue of SP AusNet and Murraylink
- Augmentations outside SP AusNet's and Murraylink's regulated asset base
- AEMO's planning and procurement costs for the Victorian declared transmission system

In formulating its revenue methodology, or an amendment to its revenue methodology, AEMO must consult with the public.<sup>5</sup> But unlike other TNSPs AEMO is not required to submit a revenue proposal to us.<sup>6</sup>

## 1.3 Pricing methodology

Under the NER, AEMO must submit a pricing methodology to us for approval.<sup>7</sup> A pricing methodology establishes a tariff structure and describes how the maximum allowed revenue (MAR) in a region is to be allocated to transmission services and connection points.

The pricing methodology AEMO proposed seeks to amend AEMO's current practice for calculating certain charges. This issues paper provides further information about AEMO's proposed changes in section 3.

## 1.4 Negotiating framework and NTSC

Our transmission determination for AEMO must specify a negotiating framework and NTSC.<sup>8</sup> The negotiating framework establishes the procedures for negotiating the terms and conditions of access to negotiated transmission services. To be approved, a proposed negotiating framework must specify each requirement in clause 6A.9.5(c) of the NER. The NTSC set out the criteria that are to be applied by AEMO when negotiating with direct connect customers for negotiated services.

The negotiating framework that AEMO submitted is the same negotiating framework that SP AusNet recently proposed. No submissions were received on that negotiating framework, and we accepted it as part of our draft decision for SP AusNet's 2014–17 regulatory control period.<sup>9</sup>

We must develop the NTSC for AEMO. Our draft NTSC adopts the same criteria as the NTSC that apply for ElectraNet's 2013–18 regulatory control period. As required under the NER, we have published our draft NTSC with an invitation for submissions: <http://www.aer.gov.au/node/22265>

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<sup>3</sup> NER, clause S6A.4.2(c)(2)

<sup>4</sup> AEMO, *Proposed pricing methodology for prescribed shared transmission services*, 16 August 2013, p. 6.

<sup>5</sup> NER, clause S6A.4.2(c)(3)

<sup>6</sup> NER, clause S6A.4.2(c)(1)

<sup>7</sup> NER, clause 6A.10.1(a)

<sup>8</sup> NER, clause 6A.9.3 and 6A.9.4(a)

<sup>9</sup> AER, Draft decision for SP AusNet's 2014–17 regulatory control period, 30 August 2013, p. 213–217.

## 2 Transmission pricing

We must specify a pricing methodology for AEMO. In this section, we provide background information on what a pricing methodology is.

### 2.1 Background

Under the NER, a TNSP must periodically apply to the AER to have its MAR set. This limits the amount a TNSP can earn from prescribed transmission services.

A pricing methodology provides a ‘formula, process or approach’<sup>10</sup> for recovering a TNSP’s MAR. In effect, it answers the question ‘who should pay how much’<sup>11</sup> in order for a TNSP to recover its MAR from transmission customers.

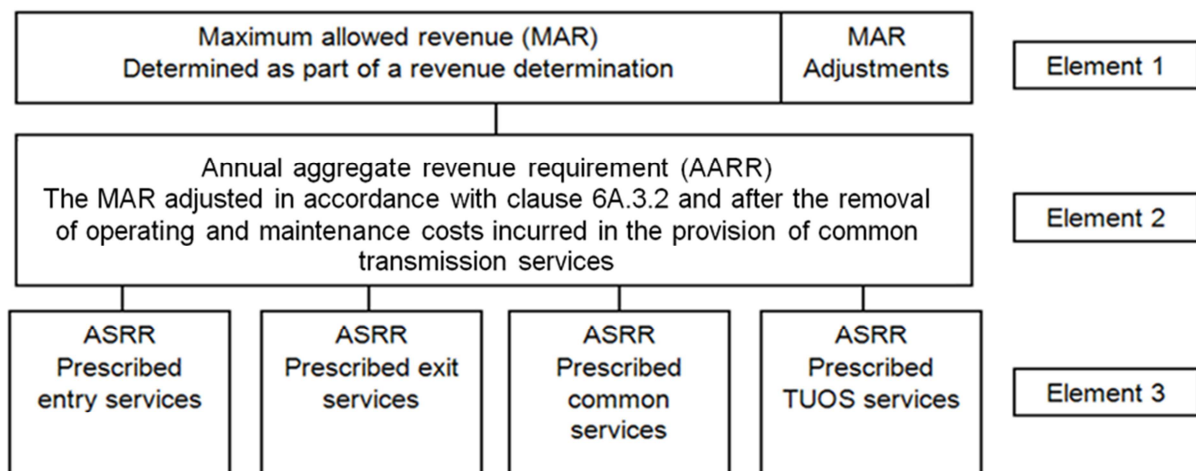
### 2.2 Pricing principles

The transmission pricing principles in the NER are based on three steps. The first two steps are commonly known as ‘cost allocation’.<sup>12</sup> The third step involves developing pricing structures. In the following section, we provide an outline of each step and their respective elements.

#### 2.2.1 Step one – cost allocation between services

The first step required under the NER transmission pricing principles is a cost allocation *between* prescribed transmission services. To do this involves three elements. Figure 2.1 outlines them.

**Figure 2.1 Step one – cost allocation between services**



Source: AER, Final decision, TNSP pricing methodology guidelines, October 2007, p. 30.

The first of the three elements in step one involves an adjustment to the MAR we have set for a TNSP in a transmission determination. The adjustments made are for rewards or penalties received under efficiency and service standard schemes we administer, amongst other things. The outcome of this adjustment is a TNSP’s aggregate annual revenue requirement (AARR). The second element

<sup>10</sup> NER, clause 6A.24.1(b)

<sup>11</sup> AEMC, Rule determination: National electricity amendment (Pricing of prescribed transmission services) rule 2006 No 22, 21 December 2006, p.1

<sup>12</sup> AEMC, Rule determination: National electricity amendment (Pricing of prescribed transmission services) rule 2006 No 22, 21 December 2006, p.29

involves the removal of operating and maintenance costs attributable to common transmission services. These costs are not part of the AARR but they are recovered on a postage stamp basis.

The third element involves specifying a method for allocating a TNSP's AARR based on the cost of assets directly attributable to the provision of those services. In determining whether an asset is attributable to a category of prescribed transmission services, a pricing methodology must apply a 'causation basis' approach. In practice, TNSPs 'make an assessment of which assets were directly attributable on a causation basis to particular services at the date the Proposed Pricing Rule was published (24 August 2006)'.<sup>13</sup>

In some instances, the AARR a TNSP is required to allocate could be attributable to more than one category of prescribed transmission services. Because of this, a TNSP's pricing methodology must provide guidance about a priority ordering methodology.

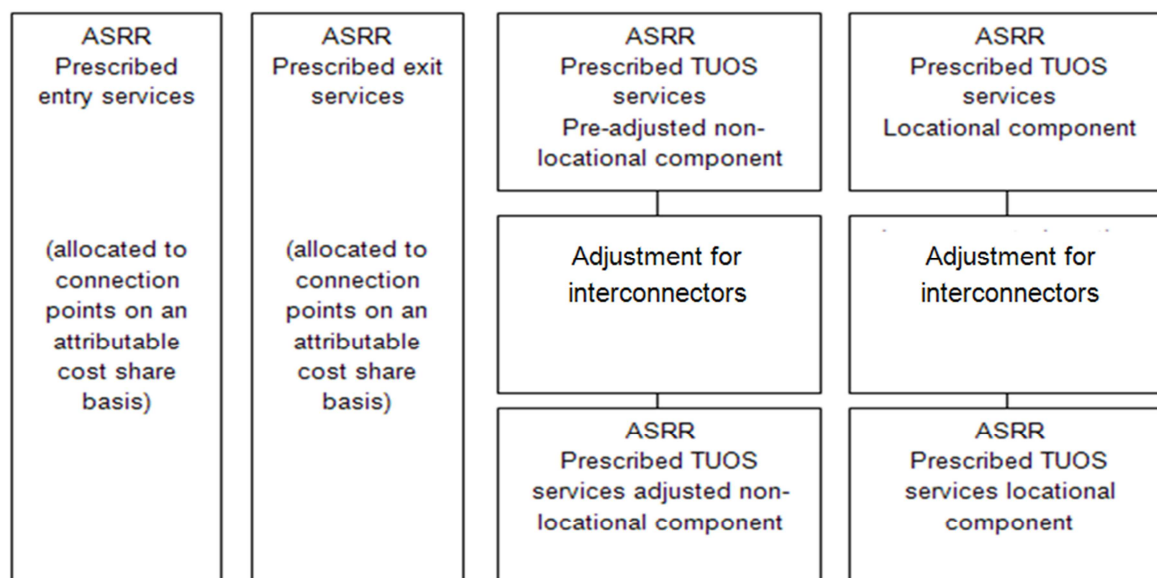
At the completion of step one, a pricing methodology establishes a process for deriving the annual service revenue requirement (ASRR) for each category of a TNSP's prescribed transmission services.

### 2.2.2 Step two – cost allocation within services

The intention of step one is to allocate a TNSP's AARR *between* different categories of prescribed transmission services. This allocated revenue is known as the ASRR.

The second step required under the NER transmission pricing principles involves a cost allocation *within* prescribed transmission services. This involves allocating the ASRR derived in step one amongst network users and connection points. Figure 2.2 sets out the process for this to occur.

**Figure 2.2 Step two – cost allocation with services**



Source: AER, Final decision, TNSP pricing methodology guidelines, October 2007, p. 30.

<sup>13</sup> AEMC, *Rule Determination: National Electricity Amendment (Pricing of Prescribed Transmission Services) Rule 2006 No 22*, 21 December 2006, p. 30.



For prescribed exit and prescribed entry services, the ASRR must be allocated on the basis of an ‘attributable cost share’. This involves determining the relative cost of a service provided to a network user as a proportion of the total cost of providing all prescribed entry and exit services.<sup>14</sup>

The ASRR allocated to prescribed transmission use of system (TUOS) services must be allocated to transmission customer connection points on a locational and non-locational basis.<sup>15</sup> The locational component is based on ‘estimated proportionate use’. The non-locational component is postage stamped, that is, the same \$/MWh or \$MW price is applied throughout the region. The portion of the locational and non-locational components must be a 50 per cent share.<sup>16</sup>

The ASRR allocated to common transmission services must be recovered through a postage price. This is intended ‘to limit any rebalancing of Prescribed Transmission Service charges to Transmission Customers in different locations and help maintain the stability and predictability of the pricing arrangements’.<sup>17</sup>

### 2.2.3 Step three – price structure principles

For the recovery of the ASRR, a TNSP is to develop separate prices for each category of prescribed transmission services in accordance with the NER transmission pricing principles. This is the third step which a transmission pricing methodology must address.

#### **Pricing structure principles**

The pricing principles that guide price structures are:

- For prescribed entry and exit services: TNSPs must determine a fixed annual price at each connection point that recovers the share of the prescribed entry or exit ASRR allocated to that connection point.
- For:
  - Common transmission service ASRR; and
  - Non-locational component of the prescribed TUOS service ASRRprices must be postage stamped.
- For charges recovering the locational component of prescribed TUOS services ASRR, the pricing structure must be based on demand at times of greatest network utilisation for which investment is likely to be contemplated.

Source: NER, clause 6A.23.4

In addition, prices for the recovery of the locational component of prescribed TUOS services ASRR must not change by more than two per cent per annum compared with the load-weighted average price for this component for the relevant region. This is except where the load at a connection point

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<sup>14</sup> NER, clause 6A.22.3

<sup>15</sup> NER, clause 6A.23.3

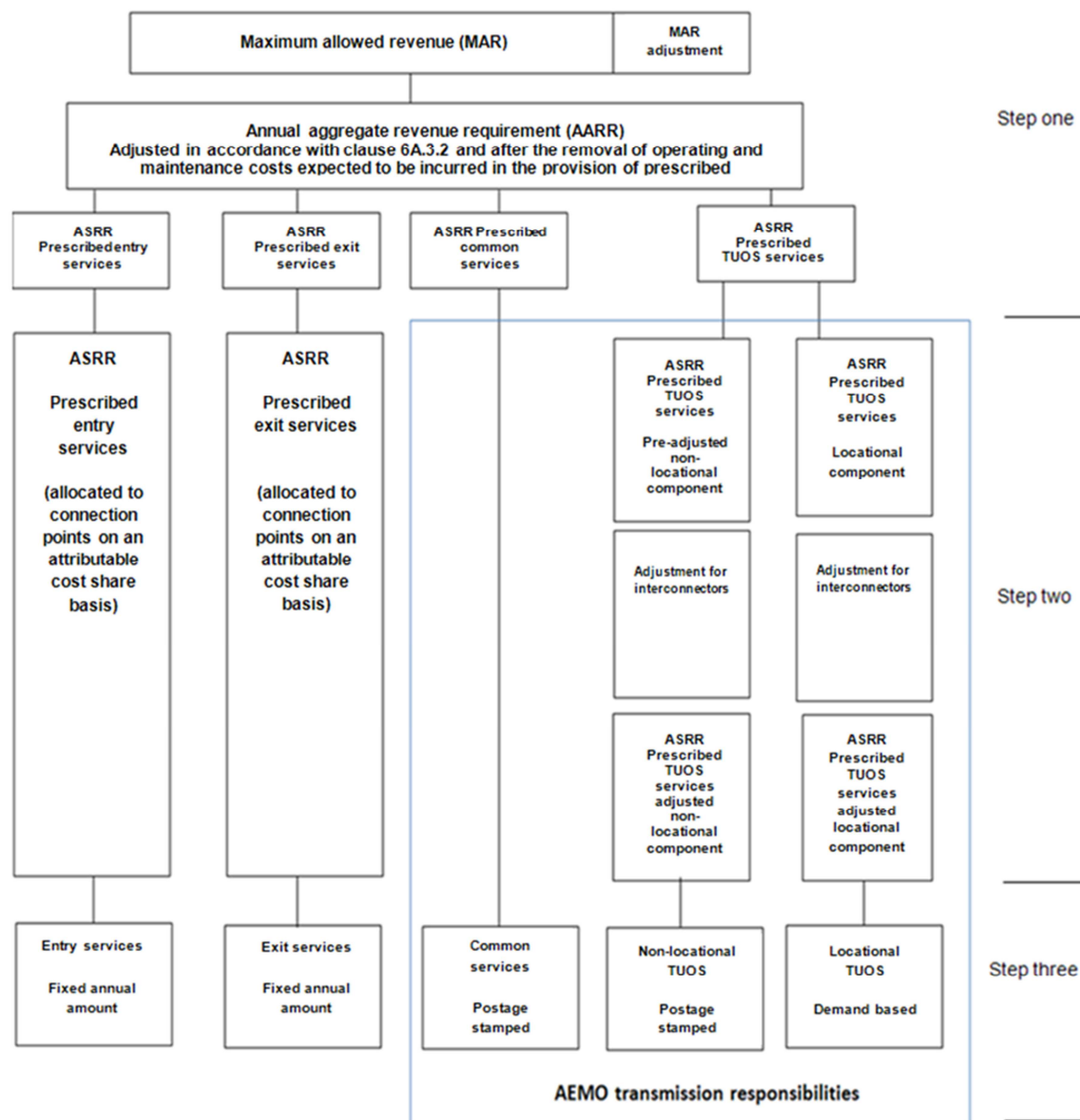
<sup>16</sup> Alternatively, the allocation can be based on a reasonable estimate of future network utilisation and the likely need for future transmission investment with the objective of providing a more efficient locational price.

<sup>17</sup> AEMC, Transmission pricing for prescribed transmission services: Rule proposal report, Proposed national electricity amendment (Pricing of prescribed transmission services) rule 2006, 24 August 2006 p. 61

has materially changes or the transmission customer has requested a renegotiation of its connection point agreement and the AER has approved the change.

The third step, once completed, satisfies all the requirements a pricing methodology must meet under the NER transmission pricing principles. Figure 2.3 provides an overview of each of the three steps and shows the shared pricing responsibilities in Victoria between AEMO and SP AusNet.

**Figure 2.3 The delineation of transmission pricing responsibilities in Victoria**



Source: AER, Final decision, TNSP pricing methodology guidelines, October 2007, p. 30.

## 3 Proposed pricing methodology

We have conducted a preliminary examination of AEMO's proposed pricing methodology and consider it to be consistent with its existing pricing methodology applicable until 30 June 2014. This is with the exception of a proposed change to how locational TUOS charges are calculated.<sup>18</sup>

We consider that AEMO's proposed change to locational TUOS charges would attract the majority of stakeholder interest. In this section, we therefore focus on providing an overview of what AEMO has proposed. We also include questions at the end to guide stakeholder submissions and facilitate discussions at the public forum.

### 3.1.1 Proposed changes to locational TUOS charges

If implemented, AEMO's proposed pricing methodology would lead to uniformity in the way locational TUOS prices *and* charges are calculated. 'Price' is the unit cost of a service. 'Charge' is equal to quantity (MW or MW/h) multiplied by the price of a service.

#### Current approach

Prices for recovering the locational component of prescribed TUOS services must be based on demand at times of greatest network utilisation.<sup>19</sup> Forecast, actual or historical demand can be used for this purpose.<sup>20</sup> For AEMO, its current practice is to use different measures of demand to calculate locational TUOS prices and locational TUOS charges.

More specifically, AEMO uses *historical* average maximum demand from the most recently completed financial year to calculate locational TUOS prices. Expressed in a formula, where "t" is the financial year in which the new prices are billed, AEMO states that it calculates locational TUOS prices using the average maximum demand in "t - 2".<sup>21</sup> AEMO, however, uses *forecast* average maximum demand for the financial year a charge will be incurred to calculate locational TUOS charges. That is, customer charges are derived using a price based on historical demand applied to a quantity based on *forecast* demand.

#### Proposed approach

From 1 July 2014, AEMO proposes to uniformly apply *historical* data to calculate the locational component of TUOS services. In particular, AEMO proposes to use the average maximum demand from the most recently completed financial year (t - 2) to calculate both locational TUOS prices and charges. The catalyst for this appears to be complications involving a reconciliation process that AEMO has been conducting in the 2008–14 regulatory control period.

AEMO's current practice is to derive locational TUOS charges from forecast average maximum demand. It then compares locational TUOS charges based on forecast average maximum demand

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<sup>18</sup> AEMO, *Proposed pricing methodology for prescribed shared transmission services*, 16 August 2013, p. 15.

<sup>19</sup> NER, 6A.23.4(e)

<sup>20</sup> AER, *Pricing methodology guidelines*, October 2007, p. 7

<sup>21</sup> AEMO, *Proposed pricing methodology for prescribed shared transmission services*, 16 August 2013, p. 10.

with charges based on actual average maximum demand.<sup>22</sup> If there are any variances they are reimbursed to, or recovered from, transmission customers on an annual basis.

The current approach to calculating locational TUOS charges can impact on AEMO's customers. In particular the reconciliation process may create volatility in transmission costs and uncertainty in how much customers have to pay for the services they receive.

We understand that if AEMO's proposed approach to calculating locational TUOS charges is approved, it would no longer apply the reconciliation process it currently conducts. In that case historical average maximum demand would be used to calculate both locational TUOS prices *and* charges.

### Flexibility in proposed approach

Using historical rather than forecast average maximum demand could disadvantage some transmission customers. In its proposed pricing methodology, AEMO acknowledges this by providing scope for transmission customers to apply for its locational component of TUOS services to be calculated on the basis of forecasts.<sup>23</sup> This flexibility would only be available in exceptional circumstances.

For example, if there is a decommissioning of significant amounts of load, then AEMO may consider using forecast instead of historical average maximum demand to calculate locational TUOS charges.<sup>24</sup> Where there is a highly variable load resulting in significant deviations between historical average maximum demand and forecast average maximum demand, the option may be available as well.<sup>25</sup>

#### **Public forum questions**

1. How has AEMO engaged with its customers about transmission pricing?
2. What do stakeholders think about using historical maximum demand to calculate TUOS prices and charges?
3. What do stakeholders think about using forecast maximum demand in certain circumstances to calculate TUOS charges?
4. Is the process through which customers can apply to have their locational TUOS charges based on forecast average maximum demand been explained sufficiently? Are stakeholders satisfied with this process?
5. Are there any other changes that stakeholders consider AEMO should include in its pricing methodology?

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<sup>22</sup> AEMO, *Proposed pricing methodology for prescribed shared transmission services*, 16 August 2013, p. 14.

<sup>23</sup> AEMO, *Proposed pricing methodology for prescribed shared transmission services*, 16 August 2013, p. 10.

<sup>24</sup> AEMO, *Proposed pricing methodology for prescribed shared transmission services*, 16 August 2013, p. 10.

<sup>25</sup> AEMO, *Proposed pricing methodology for prescribed shared transmission services*, 16 August 2013, p. 10.