ElectraNet

Transmission determination

2013–14 to 2017–18

April 2013

AUSTRALIAN ENERGY REGULATOR

Inquiries about these guidelines should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001
Tel: (03) 9290 1444
Fax: (03) 9290 1457
Email: AERInquiry@aer.gov.au

Contents

Shortened forms

Shortened form	Extended form
AER	Australian Energy Regulator
capex	capital expenditure
CPI	consumer price index
DRP	debt risk premium
EBSS	efficiency benefit sharing scheme
MAR	maximum allowed revenue
MRP	market risk premium
NER	National Electricity Rules
NTSC	negotiated transmission service criteria
opex	operating expenditure
PTRM	post tax revenue model
RAB	regulatory asset base
STPIS	service target performance incentive scheme
TNSP	transmission network service provider
WACC	weighted average cost of capital

Summary

Clause 6A.13.4 of the National Electricity Rules (NER) requires the Australian Energy Regulator (AER) to make a transmission determination in relation to its final decision for ElectraNet. In accordance with clause 6A.2.2 of the NER, this transmission determination consists of:

- a revenue determination for ElectraNet in respect of the provision of prescribed transmission services
- a determination relating to ElectraNet's negotiating framework
- a determination that specifies the negotiated transmission service criteria that apply to ElectraNet
- a determination that specifies the pricing methodology that applies to ElectraNet.

Revenue determination

In accordance with clause 6A.4.2(a) of the NER, the AER has determined a revenue determination specifying the following matters applicable to ElectraNet for the 2013–18 regulatory control period:

- the method for calculating the total revenue cap and the amount of the estimated total revenue cap
- annual building block revenue requirement for each regulatory year of the regulatory control period
- the method of calculating the maximum allowed revenue (MAR) for each regulatory year of the regulatory control period
- the method for indexation of the regulatory asset base (RAB)
- performance incentive scheme parameter values
- efficiency benefit sharing scheme parameter values
- commencement and length of regulatory control period
- other amounts, values and inputs used by the AER.

Negotiating framework

The NER requires certain transmission services (negotiated transmission services) to be provided on terms and conditions of access that are negotiated between the transmission network service provider (TNSP) and the service applicant.[1] Each TNSP is required to prepare a negotiating framework, which sets out the procedure to be followed during negotiations. The negotiating framework must comply with and be consistent with:

- the applicable requirements of a transmission determination applying to the provider
- the minimum requirements for a negotiating framework, which are set out in clause 6A.9.5(c).

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1 NER, clause 6A.9.5(a).

The document at part 2 of this transmission determination is the negotiating framework that the AER has determined will apply to ElectraNet for the 2013–18 regulatory control period.

ElectraNet may seek to amend or replace its negotiating framework at the time it submits its revenue proposal for the regulatory control period commencing 1 July 2018, by submitting a new proposed negotiating framework in accordance with the NER as in force at that time.

Negotiated transmission service criteria

Clause 6A.9.4 requires the AER to set out the criteria that apply to a TNSP in negotiating the provision of negotiated transmission services, specifically:

- the terms and conditions of access for negotiated transmission services, including the prices that are to be charged
- access charges that are negotiated by the provider during that regulatory control period.

The criteria must also be applied by a commercial arbitrator to resolve disputes about negotiated transmission services, specifically:

- the terms and conditions of access for the negotiated transmission service, including the price that is to be charged for the provision of that service by the TNSP
- access charges that are to be paid to, or by, the TNSP.

The AER has determined that the negotiated transmission service criteria at part 3 of this transmission determination will apply to ElectraNet for the 2013–18 regulatory control period.

Pricing methodology

The NER requires each TNSP to prepare a proposed pricing methodology. The pricing methodology must give effect to and be consistent with the pricing principles for prescribed transmission services, which are set out in rule 6A.23. It must also comply with the requirements of the AER's pricing methodology guidelines.

The document at part 4 of this transmission determination is the pricing methodology that the AER has determined will apply to ElectraNet for the 2013–18 regulatory control period.

1 Revenue

Method for calculating total revenue cap

The value of ElectraNet's total revenue cap will be the sum of its maximum allowed revenues for each year of the 2013–18 regulatory control period. The AER determines an estimated total revenue cap of $1577.5 million ($ nominal) for ElectraNet for the 2013–18 regulatory control period.

ElectraNet's annual building block revenue requirement

The AER determines the annual building block revenue requirements for ElectraNet as shown in table 1.1

Table 1.1 AER final determination on annual building block revenue requirement ($ million, nominal)

	2013–14	2014–15	2015–16	2016–17	2017–18	Total
Return on capital	155.2	169.5	178.2	187.8	194.7	885.3
Regulatory depreciation	27.1	32.8	45.4	54.0	54.1	213.4
Operating expenditure	81.8	87.0	90.8	96.9	100.0	456.5
Efficiency benefit sharing scheme (carryover amounts)	–1.3	–3.6	– 1.4	0.0	4.8	–1.5
Net tax allowance	5.2	5.6	6.0	6.6	5.9	29.3
Annual building block revenue requirement (unsmoothed)	268.1	291.3	319.0	345.2	359.4	1583.0

Source: AER analysis.

Method of calculating ElectraNet's maximum allowed revenue

The AER has determined that the method of calculating ElectraNet's MAR for each year of the 2013–18 regulatory control period will be the sum of its allowed revenue (AR) for that year and adjustments arising from the AER's service target performance incentive scheme (STPIS) and any approved pass through amounts.

The AER determines ElectraNet's AR for 2013–14 is $284.0 million. The 2013–14 AR value may be adjusted for any service standards incentive rewards or penalties carried over from the 2008–13 regulatory control period, as determined in accordance with the AER's 2008 revenue cap decision for ElectraNet.

ElectraNet's AR for subsequent years of the 2013–18 regulatory control period requires an annual adjustment based on the previous year's AR and is calculated using the CPI–X methodology:

$AR_t = AR_{t-1} \times (1 + \Delta CPI) \times (1 - X_t)$

where:

AR	=	the allowed revenue
t	=	time period/financial year (for *t* = 2, 3, 4, 5)
ΔCPI	=	the annual percentage change in the ABS consumer price index (CPI) all groups, weighted average of eight capital cities from March in year *t* – 2 to March in year *t* – 1
X	=	the smoothing factor of –2.69 per cent.

The MAR is determined annually by adding to (or deducting from) the AR, the STPIS revenue increment or decrement, and any approved pass through amounts in accordance with clauses 6A.7.2 and 6A.7.3.[2]

MAR_t = allowed revenue + performance incentive + pass through

$$= AR_t + \left(\frac{(AR_{t-1} + AR_{t-2})}{2} \times S_{ct} \right) + P_t$$

where:

MAR	=	the maximum allowed revenue
AR	=	the allowed revenue
S	=	the revenue increment or decrement determined in accordance with the service target performance incentive scheme
P	=	the pass through amount that the AER has determined in accordance with clauses 6A.7.2 and 6A.7.3 of the NER
t	=	time period/financial year (for *t* = 2, 3, 4, 5)
ct	=	time period/calendar year (for *ct* = 2, 3, 4, 5).

Table 1.2 sets out the timing of the annual calculation of the AR and performance incentive.

[2] A TNSP must also adjust the Annual Service Revenue Requirement for under or over recovery amounts in accordance with clause 6A.23.3(c)(2)(iii).

Table 1.2 Timing of the calculation of allowed revenues and the performance incentive

t	Allowed revenue (financial year)	*ct*	Performance incentive (calendar year)
2	1 July 2014–30 June 2015	2	1 January 2013–31 December 2013
3	1 July 2015–30 June 2016	3	1 January 2014–31 December 2014
4	1 July 2016–30 June 2017	4	1 January 2015–31 December 2015
5	1 July 2017–30 June 2018	5	1 January 2016–31 December 2016

Based on this methodology, the AER's forecast of ElectraNet's annual expected MAR for the 2013–18 regulatory control period (using a forecast CPI, and without revenue increment or decrement in accordance with the STPIS and pass through amounts) is shown in table 1.3.

Table 1.3 AER's forecast of the annual expected maximum allowed revenue for ElectraNet ($ million, nominal)

	2013–14	2014–15	2015–16	2016–17	2017–18	Total
MAR (smoothed)	284.0	298.9	314.7	331.2	348.7	1577.5

Source: AER analysis.

Method for indexation of the regulatory asset base

The AER has determined that the method for indexing ElectraNet's RAB for each year of the next regulatory control period will be the same as that used to escalate its AR for that relevant year—that is, to apply the annual percentage change in the most recently published Australian Bureau of Statistics' (ABS) CPI all groups, weighted average of eight capital cities. For ElectraNet, this will be the March quarter CPI. This method will be used to roll forward ElectraNet's RAB for the purposes of the AER's transmission revenue determination for the regulatory control period commencing on 1 July 2018.

Performance incentive scheme parameters

The AER has determined the values for the performance targets, caps, collars and weightings for each of the parameters for the service component and market impact component of the STPIS applicable to ElectraNet for the 2013–18 regulatory control period. These are shown in table 1.4 and table 1.5.

Table 1.4 ElectraNet service component performance targets, caps, collars and weightings to apply for the 2013–18 regulatory control period

Service component parameters	Collar	Target	Cap	Weightings (per cent of MAR)
Transmission circuit availability parameter				
Transmission circuit availability (per cent)	99.02	99.52	99.68	0.3
Critical circuit availability – peak	97.36	99.12	99.95	0.1
Critical circuit availability – non-peak	98.25	99.37	99.87	0.0
Loss of supply event frequency parameter				
>0.05 system minutes (number of events per annum)	9	7	4	0.2
>0.2 system minutes (number of events per annum)	4	2	0	0.2
Average outage duration parameter				
Average outage duration (minutes)	323.2	203.2	83.2	0.2
Total service component weighting				**1.0**

n/a: Not applicable.
Source: AER analysis.

Table 1.5 ElectraNet market impact component performance target, cap and weighting to apply for the 2013–18 regulatory control period

Market impact component parameter	Collar	Target	Cap	Weightings (per cent of MAR)
Market impact parameter (number of dispatch intervals)	n/a	1585	0	2.0

n/a: Not applicable.
Source: AER analysis.

Efficiency benefit sharing scheme parameters

The AER has determined the values for the efficiency benefit sharing scheme (EBSS) parameters that are to apply to ElectraNet in the 2013–18 regulatory control period, subject to adjustments required by the EBSS. These values are set out in table 1.6.

Table 1.6 AER forecast opex for EBSS purposes ($ million, 2012–13)

	2013–14	2014–15	2015–16	2016–17	2017–18	Total
Forecast opex for EBSS purposes	64.4	67.3	68.8	70.2	70.9	341.5

Source: AER analysis.
Note: Forecast opex for EBSS purposes excludes the categories listed below.

The AER will not adjust the forecast opex used to calculate the EBSS carryover amounts for changes in demand over the 2013–18 regulatory control period.

The AER will exclude the following cost categories from the EBSS for calculating EBSS carryovers:

- debt raising costs
- network support costs
- self insurance costs
- land tax
- additional regulatory reset costs
- superannuation defined benefits contributions.

The AER will also adjust actual opex for the 2013–18 regulatory control period to reverse any movements in provisions, consistent with the approach used to forecast opex for the period.

Commencement and length of regulatory control period

The regulatory control period will be five years, commencing on 1 July 2013 and ending on 30 June 2018.

Other amounts, values and inputs

The AER has also determined the following values that could not be determined before the submission of the revenue proposal or were required to be estimated, approved or otherwise determined by the AER but are not so estimated, approved or otherwise determined before the submission of the revenue proposal. These are shown in table 1.7.

Table 1.7 Other amounts, values and inputs (per cent)

Parameter	Value
Nominal risk free rate	3.51
Inflation forecast	2.50
Debt risk premium	3.18
Effective tax rate	23.50
Cost of equity	8.71
Cost of debt	6.69
Nominal vanilla WACC	**7.50**

Source: AER analysis.

2 Negotiating framework

ElectraNet

Proposed Negotiating Framework for Provision of Negotiated Transmission Service

1 July 2013 – 30 June 2018

ElectraNet Corporate Headquarters
52-55 East Terrace, Adelaide, South Australia 5000 • PO Box, 7096, Hutt Street Post Office, Adelaide, South Australia 5000
Tel: (08) 8404 7966 • Fax: (08) 8404 7104 • Toll Free: 1800 243 853

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Revision Record

Date	Version	Description	Author	Checked By	Approved By
29/5/2012	2.0		A Miller Legal Counsel	S Renner General Counsel	
15/1/2013	2.1	Minor changes to reflect draft decision	S Renner General Counsel	Bill Jackson Pricing Manager	

Contents

BACKGROUND

A. Clause 6A.9.5 of the National Electricity Rules ("NER") provides that:

(a) Transmission Network Service Providers must prepare a document setting out the procedure to be followed during negotiations between that provider and any person who wishes to receive a Negotiated Transmission Service as to the terms and conditions of access for the provision of the service;

(b) the negotiating framework must comply with and be consistent with the applicable requirements of a transmission determination applying to the provider; and

(c) the negotiating framework must comply with and be consistent with the applicable requirements of clause 6A.9.5(c) which sets out the minimum requirements for a negotiating framework.

B. ElectraNet is registered with AEMO as a Transmission Network Service Provider.

C. This document has been prepared in fulfilment of ElectraNet's obligations under clause 6A.9.5 of the NER to establish a negotiating framework.

D. This document applies to ElectraNet and any Service Applicant who applies to receive a Negotiated Transmission Service.

E. According to the terms of the NER, a Negotiated Transmission Service is any of the following services:

(a) a shared transmission service that:

(1) exceeds the network performance requirements (whether as to quality or quantity) (if any) as that shared transmission service is required to meet under any jurisdictional electricity legislation; or

(2) except to the extent that the network performance requirements which that shared transmission service is required to meet are prescribed under any jurisdictional electricity legislation, exceeds or does not meet the network performance requirements (whether as to quality or quantity) as are set out in schedule 5.1a or 5.1;

(b) connection services that are provided to serve a Transmission Network User or group of Transmission Network Users, at a single transmission network connection point, other than connection services that are provided by one Network Service Provider to another Network Service Provider to connect their networks where neither of the Network Service Providers is a Market Network Service Provider; or

(c) use of system services provided to a Transmission Network User and referred to in rule 5.4A(f)(3) in relation to augmentations or extensions required to be undertaken on a transmission network as described in rule 5.4A;

but does not include an above-standard system shared transmission service or a market network service.

ELECTRANET'S NEGOTIATING FRAMEWORK

1. Application of negotiating framework

1.1 This negotiating framework applies to ElectraNet and each Service Applicant who has made an application in writing to ElectraNet for the provision of a Negotiated Transmission Service.

1.2 ElectraNet and any Service Applicant who wishes to receive a Negotiated Transmission Service from ElectraNet should comply with the requirements of this negotiating framework.

1.3 The requirements set out in this negotiating framework are additional to any requirements or obligations contained in Chapters 4, 5 and 6A of the NER. In the event of any inconsistency between this negotiating framework and any other requirements in the NER, the requirements of the NER will prevail.

1.4 Nothing in this negotiating framework or in the NER will be taken as imposing an obligation on ElectraNet to provide any service to the Service Applicant.

2. Obligation to negotiate in good faith

2.1 ElectraNet and the Service Applicant should negotiate in good faith the terms and conditions of access for the provision by ElectraNet of the Negotiated Transmission Service sought by the Service Applicant.

3. Timeframe for commencing, progressing and finalising negotiations

3.1 Paragraphs 3.3 and 3.4 set out the timeframe for commencing, progressing and finalising negotiations in relation to:

3.1.1 applications for Negotiated Transmission Services under Chapter 5 of the NER, and

3.1.2 applications for Negotiated Transmission Services other than under Chapter 5 of the NER respectively.

3.2 The timeframes set out in paragraphs 3.3 and 3.4 may be suspended in accordance with paragraph 9.

3.3 Applications for Negotiated Transmission Services under Chapter 5 of the NER

3.3.1 Where the Negotiated Transmission Service is a service sought under Chapter 5, the specified time for commencing, progressing and finalising negotiations with a Service Applicant for the purposes of clause 6A.9.5 of the Rules is as set out in Chapter 5 of the NER.

3.3.2 ElectraNet and the Service Applicant shall use reasonable endeavours to adhere to the time periods referred to in paragraph 3.3.1 during the negotiation for the supply of the Negotiated Transmission Service.

3.4 Applications for Negotiated Transmission Services other than under Chapter 5 of the NER

3.4.1 Where the application is in respect of a Negotiated Transmission Service other than a service sought under Chapter 5, the specified time for commencing progressing and finalising negotiations with a Service Applicant for the purposes of clause 6A.9.5 of the Rules is as set out in Table 1.

3.4.2 ElectraNet and the Service Applicant shall use reasonable endeavours to adhere to the time periods specified in Table 1.

3.4.3 The timeframes specified in Table 1 may be modified from time to time by agreement of the parties, where such agreement must not be unreasonably withheld. Any such amendment to these timeframes shall be taken to be a reasonable period of time for commencing, progressing and finalising negotiations with a Service Applicant for the provision of the Negotiated Transmission Service for the purposes of 6A.9.5(5) of the NER. The requirement in paragraph 3.4.2 applies to the last amended preliminary program.

Table 1

	Event	**Indicative timeframe**
A	Receipt of written application for a Negotiated Transmission Service	X
B	Parties meet to discuss a preliminary program with milestones for supply of the Negotiated Transmission Service that represent a reasonable period of time for commencing, progressing and finalising negotiations for the provision of the Negotiated Transmission Service	X + 20 business days
C	Parties finalise preliminary program, which may include, without limitation, milestones relating to: the request and provision of commercial information; and notification and consultation with AEMO and / or any affected Transmission Network Users.	X + 30 business days
D	ElectraNet provides Service Applicant with an offer for the Negotiated Transmission Service;	X + 120 business days
E	Parties finalise negotiations	X + 160 business days

3.5 Subject to paragraph 3.3 and 3.4, ElectraNet and the Service Applicant must, following a request by the Service Applicant, use their reasonable endeavours to:

3.5.1 hold a meeting within 20 Business Days of receipt of the application from the Service Applicant, or such other period as agreed by the parties, in order to agree a timetable for the conduct of negotiations and to commence discussion regarding other relevant issues;

3.5.2 progress the negotiations for the provision of a Negotiated Transmission Service by ElectraNet such that the negotiations may be finalised in accordance with paragraph 3.5.1;

3.5.3 adhere to any timetable established for the negotiation and to progress the negotiation in an expeditious manner; and

3.5.4 finalise the negotiations for the provision of a Negotiated Transmission Service by ElectraNet within a time period agreed by the parties.

3.6 Notwithstanding paragraph 3.1, or any other provision of this negotiating framework, the timeframes set out in paragraphs 3.3 and 3.4:

3.6.1 do not commence until payment of the amount to ElectraNet pursuant to paragraph 11; and

3.6.2 recommence if there is a material change in the Negotiated Transmission Network service sought by the Service Applicant, unless ElectraNet agrees otherwise.

4. Provision of Initial Commercial Information by Service Applicant

Obligation to provide Initial Commercial Information

4.1 Within a time agreed by the parties ElectraNet must use its reasonable endeavours to give notice to the Service Applicant requesting Commercial Information held by the Service Applicant that is reasonably required by ElectraNet to enable it to engage in effective negotiations with the Service Applicant in relation to the application and to enable ElectraNet to submit Commercial Information to the Service Applicant.

4.2 Subject to paragraphs 4.3 and 4.4, the Service Applicant must use its reasonable endeavours to provide ElectraNet with the Commercial Information requested by ElectraNet in accordance with paragraph 4.1 within 10 Business Days of that request, or within a time period as agreed by the parties.

4.3 Notwithstanding paragraph 4.1, the obligation under paragraph 4.1 is suspended if a dispute under this negotiating framework arises from the date of notification of that dispute until the conclusion of the dispute in accordance with paragraph 10.

Confidentiality Requirements – Commercial Information

4.4 For the purposes of this paragraph 4, Commercial Information does not include:

4.4.1 confidential information provided to the Service Applicant by another person; or

4.4.2 information that the Service Applicant is prohibited, by law, from disclosing to ElectraNet.

4.5 Commercial Information may be provided by the Service Applicant subject to conditions including the condition that ElectraNet must not disclose the Commercial Information to any other person unless the Service Applicant consents in writing to the disclosure. The Service Applicant may require ElectraNet to enter into a confidentiality agreement, on terms reasonably acceptable to both parties, with the Service Applicant in respect of any Commercial Information provided to ElectraNet.

4.6 A consent provided by the Service Applicant in accordance with paragraph 4.5 may be subject to the condition that the person to whom ElectraNet discloses the Commercial Information must enter into a separate confidentiality agreement with the Service Applicant.

5. Provision of additional Commercial Information by the Service Applicant

Obligation to provide additional Commercial Information

5.1 ElectraNet may give a notice to the Service Applicant requesting the Service Applicant to provide ElectraNet with any additional Commercial Information that is reasonably required by ElectraNet to enable it to engage in effective negotiations with the Service Applicant in relation to the provision of a Negotiated Transmission Service or to clarify any Commercial Information provided pursuant to paragraph 4.

5.2 The Service Applicant must use its reasonable endeavours to provide ElectraNet with the Commercial Information requested by ElectraNet in accordance with paragraph 5.1 within 10 Business Days of the date of the request under paragraph 5.1, or such other period as agreed by the parties.

Confidentiality requirements

5.3 For the purposes of this paragraph 5, Commercial Information does not include:

5.3.1 confidential information provided to the Service Applicant by another person; or

5.3.2 information that the Service Applicant is prohibited, by law, from disclosing to ElectraNet; and

5.4 Commercial Information may be provided by the Service Applicant subject to conditions including the condition that ElectraNet must not disclose the Commercial Information to any other person unless the Service Applicant consents in writing to the disclosure. The Service Applicant may require ElectraNet to enter into a confidentiality agreement, on terms reasonably acceptable to both parties, with the Service Applicant in respect of any Commercial Information provided to ElectraNet.

5.5 A consent provided by the Service Applicant in accordance with paragraph 5.4 may be subject to the condition that the person to whom ElectraNet discloses the Commercial Information must enter into a separate confidentiality agreement with the Service Applicant.

6. Provision of Commercial Information by ElectraNet

Obligation to provide Commercial Information

6.1 ElectraNet shall provide the Service Applicant with all Commercial Information held by ElectraNet that is reasonably required by a Service Applicant to enable it to engage in effective negotiations with ElectraNet for the provision of a Negotiated Transmission Service within a timeframe agreed by the parties, including the following information:

6.1.1 a description of the nature of the Negotiated Transmission Service including what ElectraNet would provide to the Service Applicant as part of that service;

6.1.2 the terms and conditions on which ElectraNet would provide the Negotiated Transmission Service to the Service Applicant;

6.1.3 (a) the reasonable costs and/or the increase or decrease in costs (as appropriate) of providing the Negotiated Transmission Service to the Service Applicant; and

(b) demonstration to the Service Applicant that the charges for providing the Negotiated Transmission Service reflect those costs and/or the increase or decrease (as appropriate).

Confidentiality requirements

6.2 For the purposes of paragraph 6.1, Commercial Information does not include:

6.2.1 confidential information provided to ElectraNet by another person; or

6.2.2 information that ElectraNet is prohibited, by law, from disclosing to the Service Applicant.

6.3 ElectraNet may provide the Commercial Information in accordance with paragraph 6.1 subject to relevant conditions including the condition that the Service Applicant must not disclose the Commercial Information to any other

person unless ElectraNet consents in writing to the disclosure. ElectraNet may require the Service Applicant to enter into a confidentiality agreement with ElectraNet, on terms reasonably acceptable to both parties, in respect of Commercial Information provided to the Service Applicant.

6.4 A consent provided by ElectraNet in accordance with paragraph 6.3 may be subject to the condition that the person to whom the Service Applicant discloses the Commercial Information must enter into a separate confidentiality agreement with ElectraNet.

7. Provision of additional Commercial Information by ElectraNet

Obligation to provide additional Commercial Information

7.1 The Service Applicant may give a notice to ElectraNet requesting ElectraNet to provide the Service Applicant with any additional Commercial Information that is reasonably required by the Service Applicant to enable it to engage in effective negotiations with ElectraNet in relation to the provision of a Negotiated Transmission Service or to clarify any Commercial Information provided pursuant to paragraph 6.

7.2 ElectraNet must use its reasonable endeavours to provide the Service Applicant with the Commercial Information requested by the Service Applicant in accordance with paragraph 5.1 within 10 Business Days of the date of the request under paragraph 7.1, or such other period as agreed by the parties.

Confidentiality requirements

7.3 For the purposes of this paragraph 7, Commercial Information does not include:

7.3.1 confidential information provided to ElectraNet by another person; or

7.3.2 information that ElectraNet is prohibited, by law, from disclosing to the Service Applicant; and

7.4 Commercial Information may be provided by ElectraNet subject to conditions including the condition that the Service Applicant must not disclose the Commercial Information to any other person unless ElectraNet consents in writing to the disclosure. ElectraNet may require the Service Applicant to enter into a confidentiality agreement, on terms reasonably acceptable to both parties, with ElectraNet in respect of any Commercial Information provided to the Service Applicant.

7.5 A consent provided by ElectraNet in accordance with paragraph 7.4 may be subject to the condition that the person to whom the Service Applicant discloses the Commercial Information must enter into a separate confidentiality agreement with ElectraNet.

8. Determination of impact on other Transmission Network Users and consultation with affected Transmission Network Users

8.1 ElectraNet should determine the potential impact on Transmission Network Users, other than the Service Applicant, of the provision of the Negotiated Transmission Service.

8.2 ElectraNet should notify and consult with any affected Transmission Network Users and ensure that the provision of the Negotiated Transmission Service does not result in non-compliance with obligations in relation to other Transmission Network Users under the NER.

9. Suspension of Timeframe for Provision of a Negotiated Transmission Service

9.1 The timeframes for negotiation of provision of a Negotiated Transmission Service as contained within this negotiating framework, or as otherwise agreed between the parties, are suspended if:

9.1.1

(a) within 15 Business Days of ElectraNet providing the Commercial Information to the Service Applicant pursuant to paragraph 6.1 or 7.1, the Service Applicant does not formally accept that Commercial Information and the parties have agreed a date for the undertaking and conclusion of commercial negotiations;

(b) within 15 Business Days of a Service Applicant providing the Commercial Information to ElectraNet pursuant to paragraph 4.1 or 5.1, ElectraNet does not formally accept that Commercial Information and the parties have agreed a date for the undertaking and conclusion of commercial negotiations;

9.1.2 a dispute in relation to the Negotiated Transmission Service has been notified to the AER under clause 6A.30.1, from the date of notification of that dispute to the AER until:

(a) the withdrawal of the dispute under clause 6A.30.1(c) of the NER;

(b) the termination of the dispute by the commercial arbitrator in accordance with clause 6A.30.5(d) or (e) of the NER; or

(c) determination of the dispute by the commercial arbitrator under clause 6A.30.6(b) of the NER;

9.1.3 within 10 Business Days of ElectraNet requesting additional Commercial Information from the Service Applicant pursuant to paragraph 5, the Service Applicant has not supplied that Commercial Information;

9.1.4 without limiting paragraphs 9.1.1 to 9.1.3, either of the parties does not promptly conform with any of its obligations as required by this negotiating framework or as otherwise agreed by the parties;

9.1.5 ElectraNet has been required to notify and consult with any affected Transmission Network Users under paragraph 8.2 or AEMO at any time, from the date of notification to the affected Transmission Network Users or AEMO until the end of the time limit specified by ElectraNet for any affected Transmission Network Users or AEMO, or the receipt of such information from the affected Transmission Network Users or AEMO whichever is the later regarding the provision of the Negotiated Transmission Service.

10. Dispute Resolution

10.1 All disputes between the parties as to the terms and conditions of access for the provision of a Negotiated Transmission Service are to be dealt with in accordance with Part K of Chapter 6A of the NER.

11. Payment of ElectraNet's Costs

11.1 Prior to commencing negotiations, the Service Applicant shall pay an application fee to ElectraNet. Where the application is for a Negotiated Transmission Service under Chapter 5 of the NER, this payment is made in accordance with clause 5.3.3(c)(5) of the NER.

11.2 The application fee lodged pursuant to paragraph 11.1 will be deducted from the reasonable Costs incurred in processing the Service Applicant's application to ElectraNet for the provision of a Negotiated Transmission Service.

11.3 From time to time, ElectraNet may give the Relevant Service Applicant a notice setting out the reasonable Costs incurred by ElectraNet and the off-set of any amount applicable under paragraph 11.1.

11.4 If the aggregate of the Costs exceed the amount paid by the Service Applicant pursuant to paragraph 11.1, the Service Applicant must, within 20 Business Days of the receipt of a notice in accordance with paragraph 11.3, pay ElectraNet the amount stated in the notice.

11.5 ElectraNet may require the Service Applicant to enter into a binding agreement addressing conditions, guarantees and other matters in relation to the payment of on-going Costs.

12. Termination of Negotiations

12.1 The Service Applicant may elect not to continue with its application for a Negotiated Transmission Service and may terminate the negotiations by giving ElectraNet written notice of its decision to do so.

12.2 ElectraNet may terminate a negotiation under this framework by giving the Service Applicant written notice of its decision to do so where:

12.2.1 ElectraNet believes on reasonable grounds that the Service Applicant is not conducting the negotiation under this negotiating framework in good faith;

12.2.2 the Service Applicant consistently fails to comply with the requirements of the negotiating framework;

12.2.3 the Service Applicant fails to comply with an obligation in this negotiating framework to undertake or complete an action within a specified or agreed timeframe, and does not complete the relevant action within 20 Business Days of a written request from ElectraNet; and

12.2.4 An act of Solvency Default occurs in relation to the Service Applicant.

13. Giving notices

13.1 A notice, consent, information, application or request that must or may be given or made to a party under this document is only given or made if it is in writing and delivered or posted to that party at its address set out below.

If a party gives the other party 5 Business Days' notice of a change of its address, a notice, consent, information, application or request is only given or made by that other party if it is delivered or posted to the latest address.

ElectraNet

Name:	ElectraNet Pty Limited
Address:	52-55 East Terrace, Adelaide, SA, 5000

Service Applicant

Name:	Service Applicant
Address:	The nominated address of the Service Applicant provided in writing to ElectraNet as part of the application

Time notice is given

13.2 A notice, consent, information, application or request is to be treated as given or made at the following time:

13.2.1 if it is delivered, when it is left at the relevant address;

13.2.2 if it is sent by post, 2 Business Days after it is posted;

13.2.3 if sent by facsimile transmission, on the day the transmission is sent (but only if the sender has a confirmation report specifying a facsimile number of the recipient, the number of pages sent and the date of transmission);or

13.2.4 if sent by email once acknowledged as received by the addressee.

13.3 If a notice, consent, information, application or request is delivered after the normal business hours of the party to whom it is sent, it is to be treated as having been given or made at the beginning of the next Business Day.

14. Definitions and interpretation

Definitions

14.1 In this document the following definitions apply:

Business Day means a day on which all banks are open for business generally in Adelaide, South Australia.

Commercial Information shall include at a minimum, the following classes of information:

- details of corporate structure;
- financial details relevant to creditworthiness and commercial risk;
- ownership of assets;
- technical information relevant to the application for a Negotiated Transmission Service;
- financial information relevant to the application for a Negotiated Transmission Service; and
- details of an application's compliance with any law, standard, NER or guideline.

Costs means any costs or expenses incurred by ElectraNet in complying with this negotiating framework or otherwise advancing the Service Applicant's request for the provision of a Negotiated Transmission Service.

ElectraNet means ElectraNet Pty Limited, ABN 41 094 482 416.

Solvency Default means the occurrence of any of the following events in relation to the Service Applicant:

(a) An originating process or application for the winding up of the Service Applicant (other than a frivolous or vexatious application) is filed in a court or a special resolution is passed to wind up the Service Applicant, and is not dismissed before the expiration of 60 days from service on the Service Applicant;

(b) A receiver, receiver and manager or administrator is appointed in respect of all or any part of the assets of the Service Applicant, or a provisional liquidator is appointed to the Service Applicant;

(c) A mortgagee, chargee or other holder of security, by itself or by or through an agent, enters into possession of all or any part of the assets of the Service Applicant;

(d) A mortgage, charge or other security is enforced by its holder or becomes enforceable or can become enforceable with the giving of notice, lapse of time or fulfilment of a condition;

(e) The Service Applicant stops payment of, or admits in writing its inability to pay, its debts as they fall due;

(f) The Service Applicant applies for, consents to, or acquiesces in the appointment of a trustee or receiver of the Service Applicant or any of its property;

(g) A court appoints a liquidator, provisional liquidator, receiver or trustee, whether permanent or temporary, of all or any part of the Service Applicant's property;

(h) The Service Applicant takes any step to obtain protection or is granted protection from its creditors under any applicable legislation or a meeting is convened or a resolution is passed to appoint an administrator or controller (as defined in the *Corporations Act 2001*), in respect of the Service Applicant;

(i) A controller (as defined in the *Corporations Act 2001*) is appointed in respect of any part of the property of the Service Applicant;

(j) Except to reconstruct or amalgamate while solvent, the Service Applicant enters into or resolves to enter into a scheme of arrangement, compromise or reconstruction proposed with its creditors (or any class of them) or with its members (or any class of them) or proposes re-organisation, re-arrangement moratorium or other administration of the Service Applicant's affairs;

(k) The Service Applicant is the subject of an event described in section 459C(2)(b) of the *Corporations Act 2001*; or

(l) Anything analogous or having a substantially similar effect to any of the events specified above happens in relation to the Service Applicant.

Interpretation

14.2 In this document, unless the context otherwise requires:

14.2.1 terms defined in the NER have the same meaning in this negotiating framework;

14.2.2 a reference to any law or legislation or legislative provision includes any statutory modification, amendment or re-enactment, and any subordinate legislation or regulations issued under that legislation or legislative provision;

14.2.3 a reference to any agreement or document is to that agreement or document as amended, novated, supplemented or replaced from time to time;

14.2.4 a reference to a paragraph, part, schedule or attachment is a reference to a paragraph, part, schedule or attachment of or to this document unless otherwise stated;

14.2.5 an expression importing a natural person includes any company, trust, partnership, joint venture, association, corporation, body corporate or governmental agency; and

14.2.6 a covenant or agreement on the part of two or more persons binds them jointly and severally.

3 Negotiated transmission service criteria

3.1 National Electricity Objective

1. The terms and conditions of access for a negotiated transmission service, including the price that is to be charged for the provision of that service and any access charges, should promote the achievement of the national electricity objective.

3.2 Criteria for terms and conditions of access

Terms and conditions of access

2. The terms and conditions of access for a negotiated transmission service must be fair, reasonable, and consistent with the safe and reliable operation of the power system in accordance with the NER.

3. The terms and conditions of access for negotiated transmission services, particularly any exclusions and limitations of liability and indemnities, must not be unreasonably onerous. Relevant considerations include the allocation of risk between the TNSP and the other party, the price for the negotiated transmission service and the cost to the TNSP of providing the negotiated service.

4. The terms and conditions of access for a negotiated transmission service must take into account the need for the service to be provided in a manner that does not adversely affect the safe and reliable operation of the power system in accordance with the NER.

Price of services

5. The price of a negotiated transmission service must reflect the cost that the TNSP has incurred or incurs in providing that service, and must be determined in accordance with the principles and policies set out in the Cost Allocation Methodology.

6. Subject to criteria 7 and 8, the price for a negotiated transmission service must be at least equal to the avoided cost of providing that service but no more than the cost of providing it on a stand alone basis.

7. If the negotiated transmission service is a shared transmission service that:

    i. exceeds any network performance requirements which it is required to meet under any relevant electricity legislation; or

    ii. exceeds the network performance requirements set out in schedule 5.1a and 5.1 of the NER

    then the difference between the price for that service and the price for the shared transmission service which meets network performance requirements must reflect the TNSP's incremental cost of providing that service (as appropriate).

8. For shared transmission services, the difference in price between a negotiated transmission service that does not meet or exceed network performance requirements and a service that meets those requirements should reflect the TNSP's avoided costs. Schedule 5.1a and 5.1 of the NER or any relevant electricity legislation must be considered in determining whether any network service performance requirements have not been met or exceeded.

9. The price for a negotiated transmission service must be the same for all Transmission Network Users. The exception is if there is a material difference in the costs of providing the negotiated transmission service to different Transmission Network Users or classes of Transmission Network Users.

10. The price for a negotiated transmission service must be subject to adjustment over time to the extent that the assets used to provide that service are subsequently used to provide services to another person. In such cases the adjustment must reflect the extent to which the costs of that asset are being recovered through charges to that other person.

11. The price for a negotiated transmission service must be such as to enable the TNSP to recover the efficient costs of complying with all regulatory obligations associated with the provision of the negotiated transmission service.

3.3 Criteria for access charges

Access charges

Any access charges must be based on the costs reasonably incurred by the TNSP in providing transmission network user access. This includes the compensation for foregone revenue referred to in clause 5.4A(h) to (j) of the NER and the costs that are likely to be incurred by a person referred to in clause 5.4A(h)

4 Pricing methodology

ElectraNet
electricity transmission

Proposed Pricing Methodology

1 July 2013 to 30 June 2018

May 2012

Version 2.0

ElectraNet Corporate Headquarters
52-55 East Terrace, Adelaide, South Australia 5000 • PO Box, 7096, Hutt Street Post Office, Adelaide, South Australia 5000
Tel: (08) 8404 7966 • Fax: (08) 8404 7104 • Toll Free: 1800 243 853

ElectraNet Pty Ltd (ElectraNet) is the principal electricity *Transmission Network Service Provider* (TNSP) in South Australia.

At ElectraNet we:

- Recognise that a strong and reliable electricity *transmission system* is important to the economy and future security of supply
- Consult with stakeholders and take their views into consideration
- Respond appropriately to our customers' needs
- Provide efficient electricity *transmission services*

Meet the challenge to keep costs down when key drivers are pushing costs up

For information about ElectraNet visit www.electranet.com.au.

Contact

For enquiries about this proposed *pricing methodology* please contact:

Bill Jackson
Pricing Manager
ElectraNet
52-55 East Terrace
Adelaide SA 5000

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Revision Record

Date	Version	Description	Author	Checked By	Approved By
May 07	1.0	Initial Version			
May 12	2.0	Amended Version	Bill Jackson Pricing Manager	Simon Appleby Senior Manager Regulatory Affairs	Rainer Korte Executive Manager Network Strategy & Regulatory Affairs

Contents

Tables

1. Introduction

ElectraNet Pty Ltd (ElectraNet) is the principal electricity *Transmission Network Service Provider* (TNSP) in South Australia.

This proposed *pricing methodology* for the *regulatory control period* from 1 July 2013 to 30 June 2018[1], is submitted to the Australian Energy Regulator (AER) in accordance with the requirements of Chapter 6A of the National Electricity Rules (the Rules) and the AER's *pricing methodology guidelines*.

2. Interpretation

All terms in this proposed *pricing methodology* that are italicised have the meaning given to them in Chapter 10 of the Rules. All other terms which are defined in the *pricing methodology guidelines* or, where no definition is provided in that document, in the Rules will have the same meaning when used in this proposed *pricing methodology*.

A reference to the Rules is taken to be a reference to the current version of the National Electricity Rules, version 49, which commenced operation on 5 April 2012 as that version of the Rules is amended from time to time.

A reference to the old Rules is taken to be a reference to version 9 of the National Electricity Rules which was operative between 27 July 2006 and 15 November 2006.

3. Prescribed Transmission Services

ElectraNet's proposed *pricing methodology* relates to the provision of *prescribed transmission services* in the South Australian region by ElectraNet and Murraylink and any other *Transmission Network Service Provider* who provides *prescribed transmission services* within the South Australian *region*. These services include:

- *Shared transmission services* provided to customers directly *connected* to the *transmission network* and *connected Network Service Providers* (*prescribed TUOS services*);
- *Connection services* provided to *connect* the ETSA Utilities *distribution network* to the *transmission network* (*prescribed exit services*);
- Grandfathered *connection services* provided to *Generators* and customers directly connected to the *transmission network* for *connections* that were in place or committed to be in place on 9 February 2006 (prescribed entry services and prescribed exit services); and
- Services required under the Rules or in accordance with *jurisdictional electricity legislation* that are necessary to ensure the integrity of the transmission network, including the maintenance of power system security and assisting in the planning of the power system (prescribed common transmission services).

[1] Subject to clauses 6A.24.3 and 6A.24.4 of the Rules which set down the basis for setting prices pending approval of *the pricing methodology* and pending the approval of *maximum allowed revenue* respectively.

For the avoidance of doubt the proposed *pricing methodology* does not relate to the provision of *negotiated transmission services* or other *transmission services* provided by ElectraNet (*non-regulated transmission services*) that are not subject to economic regulation under Chapter 6A of the Rules.

4. Rules Requirements

Clause 6A.24.1 of the Rules states that a *pricing methodology* is a methodology, formula, process or approach that, when applied by a TNSP:

1. allocates the *aggregate annual revenue requirement (AARR)* for *prescribed* transmission services provided by that TNSP to:
   (i) the *categories of prescribed transmission services* for that TNSP; and
   (ii) *transmission network connection points* of *Transmission Network Users*; and
2. determines the structure of the prices that a TNSP may charge for each of the *categories of prescribed transmission services* for that TNSP.

The Rules also require that the *pricing methodology* satisfy principles and guidelines established by the Rules. In particular, clause 6A.10.1(e) of the Rules requires that a proposed *pricing methodology* must:

1. give effect to and be consistent with the *Pricing Principles for Prescribed Transmission Services* (i.e. the principles set out in Rule 6A.23 of the Rules); and
2. comply with the requirements of, and contain or be accompanied by such information as is required by, the *pricing methodology guidelines* made for that purpose under Rule 6A.25 of the Rules.

Further, under clause 6A.24.1(d)[2] of the Rules a TNSP must comply with:

- the *pricing methodology* approved by the AER as part of a *transmission determination* that applies to that TNSP, and
- any other applicable requirements in the Rules,

when the TNSP is setting the prices that may be charged for the provision of *prescribed transmission services*.

5. Pricing Methodology Guidelines Requirements

The *pricing methodology guidelines* supplement and elaborate on the *Pricing Principles for Prescribed Transmission Services* contained in Chapter 6A of the Rules in so far as they specify or clarify:

- the information that is to accompany a proposed *pricing methodology*;
- permitted pricing structures for the recovery of the locational component of *prescribed TUOS services*;

[2] The formatting of the actual words used in clause 6A.24.1(d) of the Rules has been changed (by separating out the 2 dot points) in order to emphasise the fact that ElectraNet must comply with both its *pricing methodology* and the other applicable requirements of the Rules.

- permitted postage-stamp pricing structures for the recovery of the adjusted non-locational component of *prescribed TUOS services* and *prescribed common transmission services*;
- the types of *transmission system* assets that are directly attributable to each *category of prescribed transmission services*; and
- the parts of a proposed *pricing methodology*, or the information accompanying it that will not be publicly disclosed without the consent of the TNSP.

All key elements of ElectraNet's *proposed pricing methodology* are permissible under the *pricing methodology guidelines*. These elements include:

- calculation of the locational component of *prescribed TUOS services* costs using the *modified cost reflective network pricing methodology*;
- the locational *prescribed TUOS services* price being based on contract agreed maximum demand and
- the postage-stamp basis of pricing structures for the non-locational component of *prescribed TUOS services* and *prescribed common transmission services* being based on contract agreed maximum demand or historical energy;
- the methodology for implementation of priority ordering (being the priority ordering approach under clause 6A.23.2(d) of the Rules);
- a description of how asset costs which may be attributable to both *prescribed entry services* and *prescribed exit services* will be allocated at a *connection point;*
- a description of billing arrangements under clause 6A.27 of the Rules;
- a description of prudential requirements as outlined in clause 6A.28 of the Rules;
- the inclusion of hypothetical worked examples;
- a description of any differences between the *pricing methodology* applied during the current *regulatory control period* and that proposed for the next *regulatory control period;* and
- a description of how ElectraNet intends to monitor and develop records of its compliance with its approved *pricing methodology*, the *Pricing Principles for Prescribed Transmission Services* (clause 6A.23 of the Rules) and part J of the Rules in general.

6. Proposed Pricing Methodology

6.1 Background

ElectraNet's first published transmission pricing methodology, applicable from 1 January 2003 to 30 June 2008, was developed in accordance with Part C of Chapter 6 of the old Rules and was approved by the *ACCC*. This methodology featured the use of the *modified cost reflective network pricing methodology* provided for under the old Rules and currently permissible under clause 6A.23.3(a)(1) of the Rules.

ElectraNet's *pricing methodology*, applicable from 1 July 2008 to 30 June 2013, was prepared to satisfy the requirements of the *Pricing Principles for Prescribed Transmission Services*, Part J of the Rules and the AER's *pricing methodology*

guidelines. It again featured the use of the *modified cost reflective network pricing methodology* and was approved by the AER in its decision of April 2008.

This proposed *pricing methodology*, applicable from 1 July 2013 to 30 June 2018, proposes minor amendments to:

- reflect the changes to the Rules that have occurred subsequent to the approval of the current pricing methodology, specifically the Rule change of January 2010 which varied the provisions of clause 11.6.11 of the Rules; and
- modifications to the standby provisions of section 6.12 of this proposed *pricing methodology* to encourage customers to better manage their peak demand and reduce their impact on the transmission *network* at times of high network utilisation.

6.2 Coordinating Network Service Provider

In accordance with clause 6A.29.1 of the Rules, ElectraNet is the *Co-ordinating Network Service Provider* for the South Australian *region* and collects both ElectraNet's and the Murraylink Transmission Company (MTC)'s regulated revenue entitlements via ElectraNet's *prescribed transmission service* prices.

MTC is required to advise ElectraNet annually of the *Aggregate Annual Revenue Requirement* (*AARR*) for its *transmission system* assets which are used to provide *prescribed transmission services* within the South Australian *region*. It is also required to provide any other information reasonably required by ElectraNet to ensure the proper calculation of *prescribed transmission service* prices in South Australia[3].

6.3 Aggregate Annual Revenue Requirement

The revenue that a TNSP may earn in any *regulatory year* of a *regulatory control period* from the provision of *prescribed transmission services* is known as the *maximum allowed revenue*[4].

The *AARR* is calculated in accordance with clause 6A.22.1 of the Rules as:

"the *maximum allowed revenue* referred to in clause 6A.3.1 adjusted:

1. in accordance with clause 6A.3.2, and
2. by subtracting the operating and maintenance costs expected to be incurred in the provision of *prescribed common transmission services*."

The adjustments referred in (1) above could relate to a number of factors including:

- reopening of the *revenue determination* for capital expenditure (not being a *pass through event* or a *contingent project)* under clause 6A.7.1 of the Rules;
- *network support pass through* under clause 6A.7.2 of the Rules;
- cost pass through under clause 6A.7.3 of the Rules;

[3] This obligation will also apply to any additional appointing providers requiring the services of the co-ordinating network service provider during the life of this pricing methodology.

[4] Clause 6A.3.1 of the Rules.

- *service target performance incentive scheme* outcomes under clause 6A.7.4 of the Rules;
- *contingent projects* under Rule 6A.8 of the Rules; or
- revocation of *revenue determination* for wrong information or error under clause 6A.15 of the Rules.

The costs referred in (2) above are derived from budget projections and include:

- *network* switching and operations;
- administration and management of the business;
- *network* planning and development; and
- general overheads.

6.4 Categories of transmission services

ElectraNet's and MTC's *AARR*s are recovered from transmission charges for the following *categories of prescribed transmission services*:

- *Prescribed entry services* which include services provided by assets that are directly attributable to serving a *Generator* or group of *Generators* at a single *connection point* and are deemed to provide a *prescribed transmission service* by virtue of the operation of clause 11.6.11 of the Rules;
- *Prescribed exit services,* which include services provided by assets that are directly attributable to serving a *Transmission Customer* or group of *Transmission Customers* at a single *connection point* and: (a) are deemed prescribed by virtue of the operation of clause 11.6.11 of the Rules; or (b) are *exit services* provided to *Distribution Network Service Providers*;
- *Prescribed common transmission services*, which are services that provide equivalent benefits to all *Transmission Customers* without any differentiation based on their location, and therefore cannot be reasonably allocated on a locational basis; and
- *Prescribed transmission use of system (TUOS) services,* which include services that provide benefits to *Transmission Customers* depending on their location within the *transmission system*, that are shared to a greater or lesser extent by all users across the *transmission system* and are not *prescribed common transmission services*, *prescribed entry services* or *prescribed exit services*.

6.5 The pricing process

The determination of *prescribed transmission service* prices involves four steps:

1. Allocation of the costs of *transmission system* assets to the *categories of prescribed transmission service*, to the extent to which assets are directly attributable to the provision of a *category of prescribed transmission services* (Section 6.6);
2. Calculation of the *attributable cost shares* (Section 6.7);
3. Calculation of the *Annual Service Revenue Requirement (ASRR)* by the allocation of the *AARR* to each *category of prescribed transmission services* in accordance with the *attributable cost share* for that *category of prescribed transmission services* (Section 0); and

4. Allocation of the *annual service revenue requirement* (*ASRR*) for *prescribed entry services*, *prescribed exit services* and *prescribed TUOS services* to each *transmission network connection point* in accordance with the principles set out in clause 6A.23.3 of the Rules (Section 0).

Each step is described in further detail below.

6.6 Cost allocation

The **first step** in calculating *prescribed transmission service* prices is to allocate the costs of *transmission system* assets to the *categories of prescribed transmission services* in section 6.4 above, to the extent to which assets are directly attributable to the provision of a *category of prescribed transmission services*.

The delineation between the assets that provide *prescribed entry services*, *prescribed exit services*, *prescribed TUOS services* and *prescribed common transmission services* is set out in clause 2.4 of the *pricing methodology guidelines*.

The ElectraNet cost allocation process assigns the optimised replacement cost (ORC)[5] of all *prescribed transmission services* assets to either *prescribed common transmission services* (assets that benefit all *Transmission Customers*) or individual *network* pricing branches (*transmission lines* and *transformers*). Each *network* pricing branch is then defined as entry, exit or shared network. The pricing branches are used to determine the costs of the *transmission system* assets directly attributable to each *category of prescribed transmission services*, as required under Chapter 6A of the Rules. This cost allocation process is explained in more detail in Appendix B.

6.6.1 Assets attributable to prescribed entry services and prescribed exit services

In the case of a shared *connection asset* (such as a *transformer*) serving multiple *transmission connection points*, which may provide both *prescribed entry services* and *prescribed exit services,* the cost of the shared *connection asset* will be allocated to the appropriate category or categories of *prescribed transmission services* using an appropriate causal cost allocator[6]. For example:

- *generation* or *reactive plant* nameplate rating capacity or agreed maximum demand (AMD) supplied by the specified category of *prescribed transmission services* as a percentage of the total capacity and demand of all categories of *prescribed transmission services* at that location: Costs are attributable based on the capacity and/or AMD agreed upon by the customer(s);
- unit of plant method: Costs are allocated based on the number of units of plant installed (typically circuit breakers) where these units of plant can be attributed to a particular *category of prescribed transmission service*; or
- as negotiated between the connecting parties.

This process would also be adopted to allocate shared costs to individual connection points.

[5] Consistent with clause 6A.22.3(b) of the Rules).

[6] This is consistent with ElectraNet's *cost allocation methodology* which is used to allocate costs between *prescribed transmission services*, *negotiated transmission services* and *non-regulated transmission services*.

6.7 Calculation of the attributable cost share for each category of service

The **second step** in calculating *prescribed transmission service* prices is the calculation of the *attributable cost shares*. The *attributable cost share* for each *category of prescribed transmission services* is calculated in accordance with clause 6A.22.3 of the Rules as the ratio of:

1. The costs of the *transmission system* assets directly attributable to the provision of that *category of prescribed transmission services*; to
2. The total costs of all the TNSP's *transmission system* assets directly attributable to the provision of *prescribed transmission services*,

where these amounts are determined as detailed in section 6.6 above.

For example, if the ORC's of *prescribed transmission services* assets have been allocated to the applicable *categories of prescribed transmission services* as shown in Table 1 then the *attributable costs shares* are calculated as shown in the hypothetical example below:

$$\textit{Attributable cost share}_{EXIT} = ORC_{EXIT} / ORC_{TOTAL}$$
$$= \$4,083,333 / \$43,050,000$$
$$= 0.0.095$$

with the *attributable cost shares* of the other categories of *prescribed transmission services* calculated in the same manner, as shown in Table 2.

Table 1: Hypothetical costs allocated to *categories of prescribed transmission services*

Category	ORC
Exit service	4,083,333
Entry service	716,667
TUOS service	37,500,000
Common Service	750,000
Total	**43,050,000**

Table 2: Hypothetical *attributable cost shares*

Category	ORC	Attributable cost share
Exit service	4,083,333	0.095
Entry service	716,667	0.017
TUOS service	37,500,000	0.871
Common Service	750,000	0.017
Total	**43,050,000**	**1.000**

6.8 Calculation of the Annual Service Revenue Requirement (*ASRR*)

The **third step** in calculating *prescribed transmission service* prices is to allocate the *AARR* to each *category of prescribed transmission services* in accordance with the *attributable cost share* for that *category of prescribed transmission services*.

This allocation results in the *ASRR* for each *category of prescribed transmission services*.

Assuming an *AARR* of $2,504,434 and applying the *attributable cost shares* determined above, the *ASRR* for each *category of prescribed transmission services* is calculated as:

$ASRR_{EXIT}$ = AARR x *Attributable cost share*$_{EXIT}$
= $2,504,434 x 0.095
= $237,548

with the *ASRR*s of the other categories of *prescribed transmission services* calculated in the same manner.

Table 3: Hypothetical Annual Service Revenue Requirements

Category	*Attributable cost share*	*Annual Service Revenue Requirement (ASRR)*
Exit service	0.095	237,548
Entry service	0.017	41,692
TUOS service	0.871	2,181,563
Common Service	0.017	43,631
Total	1.000	2,504,434

6.9 Allocation of the ASRR to transmission network connection points

The **fourth step** in calculating *prescribed transmission service* prices is to allocate the *ASRR* for *prescribed entry services*, *prescribed exit services* and *prescribed TUOS services* to each *transmission network connection* point in accordance with the principles of clause 6A.23.3 of the Rules.

6.9.1 Prescribed entry services

The whole of the *ASRR* for *prescribed entry services* is allocated to each *transmission network connection point* in accordance with the *attributable connection point cost share* for *prescribed entry services* that are provided by the TNSP at that *connection point*.

The *attributable connection point cost share* for *prescribed entry services* is the ratio of the costs of the *transmission system* assets directly attributable to the provision of *prescribed entry services* at that *transmission network connection point* to the total costs of all the TNSP's *transmission system* assets directly attributable to the provision of *prescribed entry services*.

For example, if two *Generators*, Gen A1 and Gen A2, receive *prescribed entry services* and the cost allocation process has allocated the ORCs of assets *directly attributable* to *prescribed entry services* to them as shown in Table 4.

Attributable connection point cost share$_{GEN\ A1}$ = $ORC_{GEN\ A1}$ / ORC_{ENTRY}
= \$250,000 / \$716,667
= 0.349

with the *attributable connection point cost share* of the other *Generator* being calculated in the same manner as shown in Table 5.

Table 4: Hypothetical *prescribed entry services* ORCs

Entry	ORC
Gen A1	250,000
Gen A2	466,667
Total ORC of prescribed entry assets	**716,667**

Table 5: Hypothetical *attributable connection point cost shares*

Entry	ORC	*Attributable connection point cost share*
Gen A1	250,000	0.349
Gen A2	466,667	0.651
Total	**716,667**	**1.000**

The *ASRR* allocated to the Gen A1 *transmission network connection point* is calculated as follows:

$ASRR_{GEN\ A1}$ = $ASRR_{ENTRY}$ x *Attributable connection point cost share*$_{GEN\ A1}$
= \$41,692 x 0.349
= \$14,544

with the *ASRR* for the Gen A2 *transmission network connection point* being calculated in the same manner.

Table 6: Hypothetical *connection point ASRR*s (entry)

Entry	ORC	*Attributable connection point cost share*	*Connection point ASRR*
Gen A1	250,000	0.349	14,544
Gen A2	466,667	0.651	27,148
Total	**716,667**	**1.000**	**41,692**

6.9.2 Prescribed exit services

The whole of the *ASRR* for *prescribed exit services* is allocated to each *transmission network connection point* in accordance with the *attributable connection point cost share* for *prescribed exit services* that are provided by the TNSP at that *connection point*.

The *attributable connection point cost share* for *prescribed exit services* is the ratio of the costs of the *transmission system* assets directly attributable to the provision of *prescribed exit services* at that *transmission network connection point* to the total costs of all the *transmission system* assets directly attributable to the provision of *prescribed exit services*.

The *ASRR*s of the *prescribed exit services connection points* are calculated in the same manner as for the *prescribed entry services connection points*.

Table 7: Hypothetical *Connection point ASRR*s (exit)

Exit	ORC	Attributable *connection point* cost share	*Connection point ASRR*
Load A1	1,050,000	0.257	61,084
Load A2	883,333	0.216	51,388
Load B1	1,550,000	0.380	90,171
Load C1	600,000	0.147	34,905
Total	**4,083,333**	**1.000**	**237,548**

6.9.3 Prescribed Transmission Use of System (TUOS) services

The *prescribed TUOS (shared network) services ASRR* is recovered from:

- *Prescribed TUOS services* (locational component); and
- *Prescribed TUOS services* (the adjusted non-locational component).

Clause 6A.23.3(c)(1) of the Rules requires that:

> "a share of the *ASRR* (the locational component) is to be adjusted by subtracting the estimated *auction amounts* expected to be distributed to the *Transmission Network Services Provider* under clause 3.18.4 from the *connection points* for each relevant *directional interconnector* and this adjusted share is to be allocated as between such *connection points* on the basis of the estimated proportionate use of the relevant *transmission system* assets by each of those customers, and the *CRNP methodology* and *modified CRNP methodology* represent two permitted means of estimating proportionate use".

Consistent with clause 6A.23.3(c)(1) of the Rules, the locational share of the *prescribed TUOS services ASRR* is adjusted for estimated *inter-regional settlements residue* proceeds by converting the estimated proceeds to an equivalent asset replacement cost[7] that is offset against the asset replacement cost of the relevant

[7] Using the same rate of return that is subsequently used to determine *prescribed TUOS* charges – locational component.

interconnector *network* pricing branches for input to the mo*dified cost reflective network pricing methodology* (*modified CRNP methodology*)[8].

The adjusted share of the *ASRR* is allocated between *connection points* on the basis of the estimated proportionate use of the relevant *transmission system* assets by each customer using the *modified CRNP methodology*.

ElectraNet obtained approval from the *ACCC* to use a *modified CRNP methodology* to determine *TUOS service* Usage (locational) charges and prices in conjunction with its 2002 revenue cap decision.

ElectraNet proposes to continue applying the *modified CRNP methodology* as described in section 6.10.

The *CRNP methodology* allocates a proportion of shared *network* costs to individual customer *connection points*. ElectraNet applies the *CRNP methodology* using the TPRICE *cost reflective network pricing* software approved by the AER for use by *TNSPs* in the *NEM*.

The *CRNP methodology* requires three sets of input data:

- an electrical (loadflow) model of the *network*;
- a cost model of the *network* (the results of the cost allocation process described in Appendix B); and
- an appropriate set of *load/generation* patterns.

Appendix C describes the *CRNP methodology* in more detail.

The remainder of the *ASRR* (the pre-adjusted non-locational component) is to be adjusted:

- by subtracting the amount (if any) referred to in clause 6A.23.3(e) of the Rules;
- by subtracting or adding any remaining *settlements residue* (not being *settlements residue* referred to in the determination of the locational component but including the portion of *settlements residue* due to *intra-regional loss factors*) which is expected to be distributed or recovered (as the case may be) to or from the *TNSP* in accordance with clause 3.6.5(a) of the Rules;
- for any *over-recovery amount* or *under-recovery amount* from previous years;
- for any amount arising as a result of the application of clause 6A.23.4(h) and (i) of the Rules (which detail adjustments so that prices for recovering the locational component of the *ASRR* for the provision of *prescribed TUOS services* do not change by more than 2% per annum compared to the load weighted average price for this component for the relevant *region*); and
- for any amount arising as a result of the application of prudent discounts in accordance with clause 6A.26.1(d)-(g) of the Rules.

[8] In this way estimated *settlements residue* auction proceeds recover a portion of the *AARR* allocated to shared *network* costs on a locational basis.

6.10 Modified Cost Reflective Network Pricing Methodology

The essential difference between standard *CRNP methodology* and *modified CRNP methodology* is that in calculating the network costs to be recovered on a locational basis (i.e. *prescribed TUOS services* – locational component):

- The standard *CRNP methodology* allocates shared *network* costs to *connection points* on the basis of optimised replacement costs and assumes a 50-50 split between the locational and non-locational components of *network* charges;
- The *modified CRNP methodology* uses utilisation adjusted replacement costs. An average rate of return[9] is applied to the resulting costs allocated to each *connection point* to determine its share of the locational component of shared *network charges* (i.e. the arbitrary 50 - 50 split used with the standard *CRNP methodology* is removed). *Prescribed TUOS services* – non-locational charges recover the balance of *network costs* (the costs not recovered by *prescribed TUOS services* – locational charges).

The *modified CRNP methodology* is intended to encourage better utilisation of existing assets by discounting the costs allocated to under-utilised elements relative to those that are more heavily utilised.

TPRICE calculates utilisation factors based on the maximum loading of each *network* pricing branch over the range of operating conditions analysed and pricing branch ratings provided as input to TPRICE.

In determining the utilisation factors required by Schedule 6A.3.3(2) of the Rules the *modified CRNP methodology* ensures that asset utilisation is based on the maximum flow allowed on *network elements* within the normal operating constraints of the *network* to prevent inefficient discounting of costs in the meshed *network*.

As TPRICE performs its calculations based on system normal operating conditions (i.e. with all elements in service) and does not carry out contingency analysis that is representative of the normal operating constraints of the *network*, it is necessary to apply an adjustment factor reducing branch ratings for input to TPRICE to ensure that utilisation factors appropriately take into account *network* contingencies.

Appendix D describes the ratings adjustment for calculation of utilisation factors in more detail.

6.10.1 Load and generation data

As noted in Appendix C, the choice of operating conditions is important in developing prices using the *CRNP methodology*. ElectraNet has flexibility in the choice of operating conditions, but notes that the old Rules set out the principles that should apply in determining the sample of operating conditions considered. Of particular note is the requirement that operating conditions to be used are to include at least 10 days with high system *demand*, to ensure that loading conditions, which impose peak flows on all *transmission elements*, are captured.

Schedule 6A.3.2(3) of the Rules is less prescriptive requiring that the allocation of *dispatched generation* to *loads* be over a range of actual operating conditions from the previous *financial year* and that the range of operating scenarios be chosen so as to

[9] The rate of return is calculated so that *prescribed TUOS services* – locational charges would recover the full cost of the shared *network* when all *network elements* are assumed to be 100% utilised.

include the conditions that result in most stress on the *transmission network* and for which *network* investment may be contemplated.

Clause 2.2(a) of the *pricing methodology guidelines* requires that prices for the recovery of the locational component of *prescribed TUOS services* are based on demand at times of greatest utilisation of the *transmission network* and for which *network* investment is most likely to be contemplated in accordance with clause 6A.23.4(e) of the Rules.

The use made of the *network* by particular *loads* and *Generators* will vary considerably depending on the *load* and *generation* conditions on the *network*. For this reason a number of operating scenarios are examined with different *load* and *generation* patterns.

In selecting those operating scenarios it is important to recognise that the operating conditions that impose most stress on particular *network elements* may occur at times other than for system peak demand.

The TPRICE capacity method of cost allocation (used by ElectraNet) automatically captures the peak loading conditions on *network elements* from the sample of operating conditions analysed.

ElectraNet, therefore, uses the full year of operating data (i.e. 365 days of half hourly data) to avoid the need for judgement concerning an appropriate set of operating conditions.

Consistent with clause 2.2(f) of the *pricing methodology guidelines* where actual operating conditions from the previous complete *financial year* are unavailable for a *connection point*, as would be the case for a new *connection point*, an estimate based on the contract agreed maximum demand and other characteristics of the *load* would be used to allocate costs to that *connection point*.

6.10.2 Network support costs

An estimate of *network* support costs is converted to an equivalent asset replacement cost[10] that is added to the asset replacement cost of the *transmission* assets these *network* support services support.

ElectraNet recovers these costs on a locational basis as part of its *modified CRNP methodology*.

Recovery of *network* support service costs on a locational basis is appropriate where the alternative *network augmentation* costs would be recovered on this basis.

6.11 Transmission prices and charges

6.11.1 Prescribed entry and exit services prices and charges

Prescribed entry services and *prescribed exit services* prices are calculated to recover the *prescribed entry* and *prescribed exit services ASRRs* from the *Network Users* who are served by the relevant *connection* assets.

[10] Using the same rate of return that is subsequently used to determine *prescribed TUOS services* charges – locational component (*TUOS* Usage charges under old Rules).

The *prescribed entry services ASRR* is recovered as a fixed annual charge for each relevant *connection point*, which fixed annual charge is in turn recovered on the basis of a fixed $/day entry price.

Similarly, the *prescribed exit services ASRR* is recovered as a fixed annual charge for each relevant *connection point*, which fixed annual charge is in turn is recovered on the basis of a fixed $/day exit price.

6.11.2 Prescribed TUOS services – locational component prices and charges

Consistent with the provisions of clause 2.2(c)(1) of the *pricing methodology guidelines* locational prices will be determined on the basis of contract agreed maximum demand[11].

The *prescribed TUOS services* locational *ASRR* described in section 0 is priced on a contract agreed maximum demand basis ($/MW/day), where the contract agreed maximum demand is specified in, and re-negotiated in accordance with, customer *connection agreements*.

The *modified CRNP methodology* outlined in S6A.3 of the Rules and detailed in this proposed *pricing methodology* describes the process for cost allocation for the locational component of *prescribed TUOS services*, which results in a lump sum dollar amount to be recovered at each *connection point* as described in Appendix C.

This lump sum dollar amount for each *connection point* is divided by the product of the number of days in the forthcoming *financial year* and the contract agreed maximum demand (prevailing at the time *transmission* prices are published) to calculate the locational price for each *connection point*[12] and is expressed as $/MW/day.

As provided for under clause 6A.23.4(f) of the Rules *prescribed TUOS services* locational prices must not change by more than 2% per annum at *connection points* relative to the *load* weighted average *prescribed TUOS services* locational price for the *region*. The balance of any revenue shortfall or *over-recovery amount* resulting from these price caps is recovered or offset as appropriate by adjusting the *prescribed TUOS services* non-locational prices and charges.

As further provided for under clause 6A.23.4(g) of the Rules the change specified above "may exceed 2 per cent per annum if, since the last prices were set:

(1) the *load* at the *connection point* has materially changed;

(2) in connection with that change, the *Transmission Customer* requested a renegotiation of its *connection agreement* with the Tra*nsmission Network Service Provider*; and

(3) the *AER* has approved the change of more than 2 per cent per annum."

[11] Referred to as the Agreed Maximum Demand (AMD) in ElectraNet *transmission connection agreements* (TCA). The methodology for dealing with exceedance of *contract agreed maximum demand* is as specified in *transmission connection agreements* and summarised in section 6.13.

[12] The *connection point* for the purposes of determining the prescribed *TUOS prices* and prescribed *TUOS* charges will be the agreed point (or points) of supply between ElectraNet and the *transmission network user*. This is the point at which *contract agreed maximum demand* is defined in *transmission connection agreements* and historical or current metered *energy measured*.

This provision sets the *prescribed TUOS services* locational price at a *connection point* with a material change in *load* on the same basis as a new *connection point*.

In the event that a *Transmission Customer* requests a material change in contract agreed maximum demand at an existing *connection point*, ElectraNet will seek approval from the AER to set the *prescribed TUOS services* – locational price as intended by clause 6A.23.4(g) of the Rules.

Prescribed TUOS services locational charges are determined for each connection point providing prescribed TUOS services by multiplying the *prescribed TUOS services* locational price by the contract agreed maximum demand (prevailing during the *billing period* concerned) for that *connection point*, determined in accordance with the customer's *connection agreement*, and multiplying this amount by the number of days in the billing period.

For the avoidance of doubt forecast *prescribed TUOS services* locational charges will be calculated using the contract agreed maximum demand prevailing at the time prices are determined as distinct from the actual *prescribed TUOS services* locational charges which will be calculated using the contract agreed maximum demand prevailing during the billing period concerned.

Any *over-recovery amount* or *under recovery amount* arising from variances between forecast contract agreed maximum demands and the contract agreed maximum demands used for calculating *prescribed TUOS services* locational charges will be addressed by way of an *under-recovery amount* or an *over-recovery amount* adjustment when calculating prices for the following *financial year*.

6.11.3 *Prescribed TUOS services* – non-locational component prices and charges

Prices for recovery of the adjusted non-locational component of *prescribed TUOS services* are set on a postage-stamp basis in accordance with clause 6A.23.4(j) of the Rules.

Consistent with the provisions of clause 2.3(c)(1) of the *pricing methodology guidelines* prices on a postage-stamp bases are determined on the basis of contract agreed maximum demand or historical energy and calculated annually as follows.

Each *financial year* ElectraNet will determine the following two prices to apply at every *connection point*:

- an energy based price that is a price per unit of historical metered energy or current metered energy at a *connection point* expressed as $/MWh; and
- a contract agreed maximum demand price that is a price per unit of contract agreed maximum demand at a *connection point* expressed as $/MW/day.

Either the energy based price or the contract agreed maximum demand price will apply at a *connection point* providing *prescribed TUOS services* except for those *connection points* where a *Transmission Customer* has negotiated reduced charges for the adjusted non-locational component of *prescribed TUOS services* in accordance with clause 6A.26.1 of the Rules (prudent discounts).

The energy based price and the contract agreed maximum demand price is determined so that:

- a *Transmission Customer* with a *load* factor in relation to its *connection point* equal to the median *load* factor for *connection points* with *Transmission Customers connected* to the *transmission network* in the *region* or *regions* is indifferent between the use of the energy based price and the contract agreed maximum demand price; and
- the total amount to be recovered by the adjusted non-locational component of *prescribed TUOS services* does not exceed the *ASRR* for this category of *prescribed transmission service*.

When applying the energy based price, the *prescribed TUOS services* non-locational component charge for a *billing period* is calculated for each *connection point* by:

- multiplying the energy based price by the metered energy offtake at that *connection point* in the corresponding *billing period* two years earlier (i.e. historical metered energy offtake); or
- multiplying the energy based price by the metered energy offtake at that *connection point* in the same *billing period* (current metered energy offtake) if the historical metered energy offtake is unavailable; or
- multiplying the energy based price by the current metered energy offtake if the historical metered energy offtake is significantly different to the current metered energy off take. This method of calculation is only expected to be applied where the conditions necessary to enact clause 6A.23.4(g) of the Rules[13] have been satisfied or a *connection point* is operated in a standby arrangement as detailed in section 6.12 of this proposed *pricing methodology*.

When applying the contract agreed maximum demand price, the *prescribed TUOS services* – non-locational component charge for a billing period will be calculated for each *connection point* by multiplying the contract agreed maximum demand price by the contract agreed maximum demand for the *connection point* (prevailing during the billing period concerned) and multiplying this amount by the number of days in the billing period.

For the avoidance of doubt forecast *prescribed TUOS services* non-locational charges will be calculated using the contract agreed maximum demand prevailing at the time prices are determined as distinct from the actual contract agreed maximum demand based charges which will be calculated using the contract agreed maximum demand prevailing during the billing period concerned.

Any *over-recovery amount* or *under-recovery amount* arising from variances between forecast *contract agreed maximum demands* and the contract agreed maximum demands used for calculating charges will be addressed by way of an *under-recovery amount* or *over-recovery amount* adjustment when calculating prices for the following *financial year*.

The energy based price or the contract agreed maximum demand price that applies for the adjusted non-locational component of *prescribed TUOS services* at a *connection point* will be the one which results in the lower estimated charge for that *prescribed transmission service*.

[13] That being the clause which allows for the relaxation of the side constraints on *TUOS* locational prices at a *connection point*.

6.11.4 Prescribed common transmission service prices and charges

Prices for *prescribed common transmission services* are set on a postage-stamp basis in accordance with clause 6A.23.4(d) of the Rules.

Consistent with the provisions of clause 2.3(c)(1) of the *pricing methodology guidelines* postage stamped prices will be determined on the basis of contract agreed maximum demand or historical energy and calculated in a manner identical to that described for *prescribed TUOS services* non-locational charges in the previous section.

In accordance with clause 6A.23.3(f) of the Rules the operating and maintenance costs expected to be incurred in the provision of *prescribed common transmission services*, which are deducted from the *maximum allowed revenue* to form the *AARR*, are added to the *ASRR* for *prescribed common transmission services* and recovered though *prescribed common transmission service* prices and charges.

6.12 Standby service arrangements

This provision addresses the situation where ElectraNet has agreed to provide *prescribed transmission services* on a standby basis (such as to cover the *outage* of onsite *generation*).

If ElectraNet agrees to provide a standby service the customer's *connection agreement* must specify the terms and conditions applying to the provision of this service.

The customer's *connection agreement* would be required to specify the contract agreed maximum demand required to be available to the customer under normal operating conditions and a greater demand that may be sought on a standby basis subject to the operational condition of the *transmission network* at the time the standby arrangements are to be called on. The *transmission network* would be planned and developed to satisfy the contract agreed maximum demand rather than the standby demand.

The conditions to temporally vary from the contract agreed maximum demand must be specified in the customer's *connection agreement* and must ensure that compliance with the South Australian Electricity Transmission Code is maintained.

In this instance the customer will pay *prescribed exit services* charges (if applicable), *prescribed TUOS services* – locational component charges, *prescribed TUOS services* – non-locational component charges and *prescribed common transmission services* based:

- on the contract agreed maximum demand under normal operating conditions; and
- the standby demand and/or actual *energy* consumption during times that the standby service is actually utilised for *energy* delivery to the customer.

For the avoidance of doubt:

- where a standby service arrangement has been agreed between ElectraNet and the relevant customer, the customer's *connection agreement* must specify (amongst other things) a contract agreed maximum demand and the conditions under which an excess demand charge as detailed in section 6.13 will apply;

- where a customer's forecast agreed maximum demand[14] results in the need to augment the transmission network access to the standby service arrangements may be withdrawn; and
- nothing in this section 6.12 obliges ElectraNet to agree to provide a standby service arrangement requested by a customer.

6.13 Excess demand charge

Subject to the provisions of section 6.12 where the customer's actual *maximum demand* exceeds the contract *agreed* maximum demand level at any time during the *financial year* then an excess demand charge applies and the actual *maximum demand* will become the contract agreed maximum demand, in accordance with the customer's *connection agreement*.

In addition, ElectraNet will recover from the customer the incremental charges the customer would have paid to ElectraNet during the entire *financial year* if the contract agreed maximum demand had been the actual *maximum demand*.

The excess demand charge is determined by multiplying the charge rate specified in ElectraNet's published Transmission Service Price Schedule ($/kW) by the amount by which the contract agreed maximum demand has been exceeded (kW) or, where applicable, in accordance with the customer's *connection agreement*.

The charge rate ($/kW) is calculated as three times the maximum revenue which ElectraNet can earn from *prescribed transmission services* during the pricing period ($), divided by the aggregate of all contracted agreed maximum demands for customers *connected* to the *transmission network*.

6.14 Setting of prescribed TUOS services locational prices between annual price publications

In the event that ElectraNet is required to set a *prescribed TUOS services* locational price at a new *connection point* or at a *connection point* where the *load* has changed significantly after *prescribed TUOS service* locational prices have been determined and published, an interim price, not subject to the side constraints of clause 6A.23.4(f) of the Rules, will be determined. This will be calculated using the prevailing pricing models with demands estimated in a manner consistent with clause 2.2(f) of the *pricing methodology guidelines*.

A price subject to the side constraints of clause 6A.23.4(f) of the Rules will be determined and published at the next annual price determination.

[14] As defined in the Electricity Transmission Code

7. Billing Arrangements

7.1 Billing for prescribed transmission services

Consistent with clause 6A.27.1 of the Rules, ElectraNet will calculate the *transmission service* charges payable by *Transmission Network Users* for each *connection point* in accordance with the *transmission service* prices published under clause 6A.24.2 of the Rules.

Where charges are determined for *prescribed transmission services* from *metering data*, these charges will be based on kW or kWh obtained from the *metering data* managed by *AEMO*.

ElectraNet will issue invoices to *Transmission Network Users* for *prescribed transmission services* which satisfy or exceed the minimum information requirements specified in clause 6A.27.2 of the Rules on a monthly basis or as specified in the transmission *connection agreement*.

Consistent with clause 6A.27.3 of the Rules a *Transmission Network User* must pay charges for *prescribed transmission services* properly charged to it and billed in accordance with this proposed *pricing methodology* by the date specified on the invoice.

7.2 Payments between Transmission Network Service Providers

Consistent with clause 6A.27.4 of the Rules, where ElectraNet is the *Co-ordinating Network Service Provider* under clause 6A.29.1 of the Rules, it will pay to each other relevant *Transmission Network Service Provider* the revenue which is estimated to be collected during the following year by ElectraNet as charges for *prescribed transmission services* for the use of *transmission systems* owned by those other *Transmission Network Service Providers*.

Such payments will be determined by ElectraNet as the *Co-ordinating Network Service Provider* for the *region*.

Financial transfers payable under clause 6A.27.4 of the Rules will be paid in equal monthly instalments or as documented in revenue collection agreements negotiated between the parties.

8. Prudential Requirements

8.1 Prudential requirements for prescribed transmission services

Consistent with clause 6A.28.1 of the Rules, ElectraNet may require a *Transmission Network User* to establish *prudential requirements* for either or both *connection services* and *transmission use of system services*. These *prudential requirements* may take the form of, but need not be limited to, capital contributions, pre-payments or financial guarantees.

The requirements for such *prudential requirements* will be negotiated between the parties and specified in the applicable transmission *connection agreement*.

8.2 Capital contribution or prepayment for a specific asset

ElectraNet notes that no capital contributions or prepayments have been made in respect of *prescribed transmission services* assets as at the date of this proposed *pricing methodology*.

Consistent with clause 6A.28.2 of the Rules, where ElectraNet is required to construct or acquire specific assets to provide *prescribed connection services* or *prescribed TUOS services* to a *Transmission Network User*, ElectraNet may require that *Transmission Network User* to make a capital contribution or prepayment for all or part of the cost of the new assets installed.

In the event that a capital contribution is required, any contribution made will be taken into account in the determination of *prescribed transmission service* prices applicable to that *Transmission Network User* by way of a proportionate reduction in the ORC of the asset(s) used for the allocation of *prescribed transmission service* charges or as negotiated between the parties.

In the event that a prepayment is required any prepayment made will be taken into account in the determination of *prescribed transmission service* prices applicable to that *Transmission Network User* in a manner to be negotiated between the parties.

The treatment of such capital contributions or prepayments for the purposes of a *revenue determination* will in all cases be in accordance with the relevant provisions of the Rules.

9. Prudent Discounts

ElectraNet may, but is not required to, agree with a *Transmission Customer* to charge lower prices for the non-locational component of *prescribed TUOS services* and *prescribed common transmission services* provided to that *Transmission Customer*, than the prices determined in accordance with this proposed *pricing methodology*.

ElectraNet notes that none of its *Transmission Customers* currently receive prudent discounts as at the date of this proposed *pricing methodology*.

In the event that a *Transmission Customer* does receive prudent discounts in the future, ElectraNet will, in accordance with clause 6A.26.1(d)-(g) of the Rules, adjust the adjusted non-locational component of *prescribed TUOS services*; and the *prescribed common transmission services* prices and charges to other customers for the amount of any anticipated *under-recovery amount* arising from prudent discounts applied.

10. Monitoring and Compliance

As a regulated business ElectraNet is required to maintain extensive compliance monitoring and reporting systems to ensure compliance with its Transmission Licence, *revenue determination*, the Electricity Transmission Code and the Rules together with numerous other legislative obligations.

In order to monitor and maintain records of its compliance with its approved pricing methodology, the *Pricing Principles for Prescribed Transmission Services*, and Part J of the Rules, ElectraNet proposes to:

- Maintain the specific obligations arising from Part J of the Rules in its compliance management system;
- Maintain electronic records of the annual calculation of *prescribed transmission service* prices and supporting information; and
- Periodically subject its transmission pricing models and processes to functional audit by suitably qualified persons.

11. Differences between current and proposed *pricing methodologies*

This proposed *pricing methodology*, applicable from 1 July 2013 to 30 June 2018, proposes minor amendments to:

- reflect the changes to the Rules that have occurred subsequent to the approval of the current *pricing methodology*, specifically the Rule change of January 2010 which varied the provisions of clause 11.6.11 of the Rules; and
- modifications to the standby provisions of section 6.12 to encourage customers to better manage their peak demand and reduce their impact on the *transmission network* at times of high network utilisation.

12. Additional Information Requirements

A number of additional information requirements arise from the *pricing methodology guidelines* which have not been covered elsewhere in this revised proposed *pricing methodology*. In order to satisfy these requirements ElectraNet notes that it does not:

- consider transitional arrangements are necessary as a result of the implementation of the proposed *pricing methodology*;
- have any applicable relevant *derogations* in accordance with chapter 9 of the Rules; or
- have any applicable transitional arrangements arising from chapter 11 of the Rules.

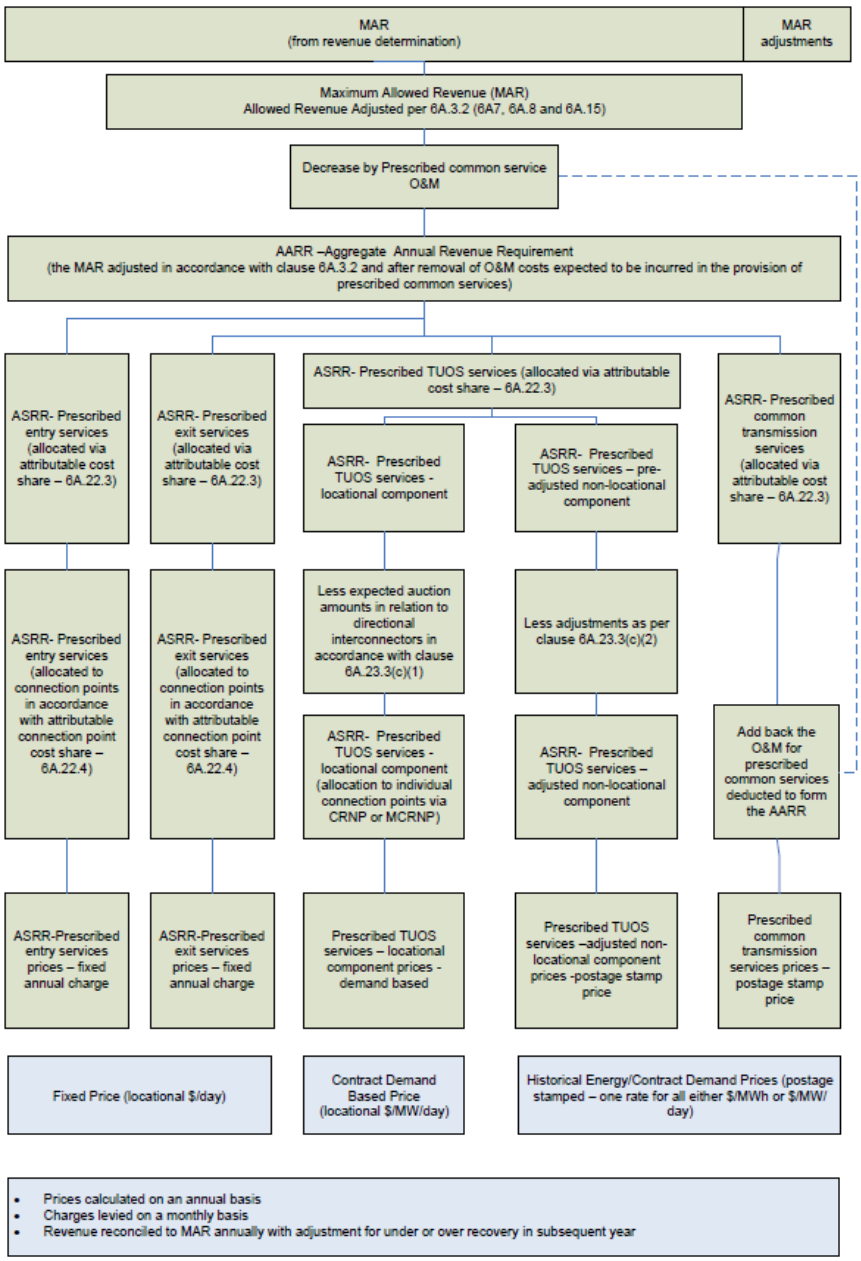
ElectraNet has not provided a confidential version of this proposed *pricing methodology* to the AER in accordance with clause 2.5 of the *pricing methodology guidelines* and hence the provisions of clause 2.1(n) of the *pricing methodology guidelines* are not applicable.

13. Conclusion

ElectraNet's proposed *pricing methodology* for the *regulatory control period* from 1 July 2013 to 30 June 2018 has been submitted to the AER in accordance with the requirements of Chapter 6A of the Rules and the *pricing methodology guidelines*.

ElectraNet is confident that this proposed *pricing methodology* fully satisfies the requirements of the Rules and the *pricing methodology guidelines*.

Appendix A Structure of Transmission Pricing under Part J of Rules



Appendix B Details of Cost Allocation Process

A detailed cost allocation process is used to assign the optimised replacement cost (ORC) of all *prescribed transmission service* assets to either *prescribed common Transmission services* (assets that benefit all *Transmission Customers*), *network* branches (*transmission lines* or *transformers*)[15] and *prescribed entry services* or *prescribed exit services* in a manner consistent with Section 2.4 of the *pricing methodology guidelines*.

The cost allocation process is summarised as follows:

Step 1: Initial Cost Allocation

Assets and their ORCs are assigned to one of the following primary asset categories:

- *transmission lines*;
- *transformers*;
- circuit breakers;
- common service assets (communications, reactive support, office buildings etc.); and
- *substation* local assets (ancillary equipment, civil work, and establishment).

The following plant items are not separately identified in the ORC database and are incorporated into the ORC of the associated primary items above:

- bus work;
- secondary systems including protection and instrument transformers.

Step 2: Allocation to *Categories* of *Transmission Services*

Assets are allocated to the *categories of prescribed transmission services* in accordance with the provisions of Section 2.4 of the *pricing methodology guidelines*. In the case of circuit breakers each circuit breaker has its replacement cost divided evenly between the branches to which it is directly attributable. Any circuit breaker that is not directly attributable to any branch together with *substation* local costs identified in step 1 are subject to the priority ordering process.

In the case of a shared *connection asset*, such as a *transformer*, serving multiple *connection points* which may provide both *prescribed entry services* and *prescribed exit services* the cost of the shared *connection asset* will be allocated to the appropriate category or categories of *prescribed transmission services* using an appropriate cost allocator[16]. For example:

- *Generation* or reactive plant nameplate rating capacity or agreed maximum demand (AMD) supplied by the specified transmission category of *prescribed transmission services* as a percentage of the total capacity and demand of all categories of *prescribed transmission services* at that location: Costs are attributable based on the capacity and/or AMD agreed upon by the customer(s);
- Unit of plant method: Costs are allocated based on the number of units of plant installed (typically circuit breakers) where these units of plant can be attributed to a particular category of *prescribed transmission service*; or

[15] ElectraNet maintains an optimised replacement cost (ORC) model of the *transmission network* to determine the appropriate ORC of individual *transmission lines*, *transformers*, circuit breakers, *common service* assets and *substation* local costs.

[16] This is consistent with ElectraNet's proposed *Cost Allocation Methodology* which is used to allocate costs between *prescribed transmission services*, *negotiated transmission services* and *non-regulated transmission services*.

- As negotiated between the connecting parties.

This process would also be adopted to allocate shared costs to individual *connection points*.

Step 3: Priority Ordering

In the case of those costs which would be attributable to more than one category of *prescribed transmission services*, specifically the *substation* local assets identified in Step 1 and those circuit breakers identified as *substation* local costs in Step 2, costs will be allocated in accordance with the provisions of clause 6A.23.2(d) of the Rules having regard to the *stand-alone amount* costs associated with the provision of *prescribed TUOS services* and *prescribed common transmission services* with the remainder being allocated to *prescribed entry services* and *prescribed exit services*. The implementation of the priority ordering process is detailed in Appendix E.

Conclusion

The shared *network costs* resulting from the cost allocation process are used as input to TPRICE, the *Cost Reflective Network Pricing* software that is approved by the AER for use by TNSPs in the *NEM*.

The *entry cost*, *exit cost* and *common service* costs are used as input to the calculation of *prescribed entry services* prices, *prescribed exit services* prices and *prescribed common transmission services* prices.

Appendix C Cost Reflective Network Pricing Methodology

The *cost reflective network pricing methodology* (*CRNP methodology*) involves the following steps:

- Determining the annual costs of the individual *transmission network* assets in the optimised *transmission network*;
- For a *modified CRNP methodology*, adjusting each asset's cost according to its expected utilisation;
- Determining the proportion of each individual *network element* utilised in providing a *transmission service* to each point in the *network* for specified operating conditions;
- Determining the maximum flow imposed on each *transmission element* by *load* at each *connection point* over a set of operating conditions;
- Allocating the costs attributed to the individual *transmission elements* to *loads* based on the proportionate use of the elements; and
- Determining the total cost (lump sum) allocated to each point by adding the share of the costs of each individual *network element* attributed to each point in the *network*.

Allocation of Generation to Load

A major assumption in the use of the *CRNP methodology* is the definition of the *generation* source and the point where *load* is taken. The approach is to use the "electrical distance" to pair *generation* to *load*, in which a greater proportion of *load* at a particular location is supplied by *Generators* that are electrically closer than those that are electrically remote. In electrical engineering terminology the "electrical distance" is the impedance between the two locations, and this can readily be determined through a standard engineering calculation called the "fault level calculation".

Once the assumption has been made as to the *Generators* that are supplying each *load* for a particular *load* and *generation* condition (time of day) it is possible to trace the flow through the *network* that results from supplying each load (or *Generator*). The use made of any element by a particular *load* is then simply the ratio of the flow on the element resulting from the supply to this *load* to the total use of the *load* made by all *loads* and *Generators* in the *power system*.

Operating Conditions for Cost Allocation

The choice of operating conditions is important in developing prices using the *CRNP methodology* or *modified CRNP methodology*. ElectraNet has flexibility in the choice of operating conditions but notes that the old NER set out the principles that should apply in determining the sample of operating conditions considered. Of particular note is the requirement that the operating conditions to be used are to include at least 10 days with high system demand, to ensure that loading conditions, which impose peak flows on all *transmission elements*, are captured.

Schedule 6A.3.2(3) of the Rules is less prescriptive requiring that the allocation of *dispatched generation* to *loads* be over a range of actual operating conditions from the previous *financial year* and that the range of operating scenarios is chosen so as to include the conditions that result in most stress on the *transmission network* and for which *network* investment may be contemplated.

In selecting those operating scenarios it is important to recognise that the operating conditions that impose most stress on particular elements may occur at times other than for system peak demand.

Appendix D Ratings Adjustment for Calculating Utilisation Factors

When assigning a proportion of shared *network* costs to individual *customer connection points* the *modified CRNP methodology* reduces the ORC of each shared *network* pricing branch (line or *transformer*) by a utilisation factor that reflects the maximum loading of the branch with respect to its rating.

In determining the appropriate branch rating for entry into TPRICE (used to perform the *CRNP* calculations) it is important to understand that TPRICE only considers system normal operating conditions whereas the shared *network* must be able to withstand a single contingency *outage* without overloading any *network element* consistent with the requirements of the Rules and the South Australian Electricity Transmission Code.

This means that utilisation factors calculated with respect to equipment ratings (thermal line ratings and transformer nameplate ratings) under system normal conditions would result in artificially low utilisation factors.

This problem can be overcome by reducing the equipment ratings to reflect the maximum flow on a *network* branch under system normal conditions that would not result in its absolute rating being exceeded in the event of the worst contingency.

The reduced ratings are calculated by examining flows in *network elements* over a range of peak system operating conditions first for system normal conditions, and then with each meshed *network element* out of service one at a time. For each *network element*, the ratio of maximum system normal flow to maximum contingency flow is used to scale down the absolute equipment rating to obtain the reduced rating for input to TPRICE.

This rating adjustment is consistent with Schedule 6.4.1.6(b) of the old Rules, which states in relation to a *modified CRNP methodology* that *"The asset utilisation is to be based on the maximum flow allowed on elements within the normal operating constraints of the network"*.

This process can best be illustrated by an example. A line has an absolute (thermal) rating of 200 MV.A. *Network* analysis over a range of peak operating conditions shows that this line has a maximum system normal flow of 120 MV.A and a maximum single contingency flow of 160 MV.A. The reduced rating of this line (as input to TPRICE) is (120/160) * 200 giving 150 MV.A.

When TPRICE is run, analysis will consider flows on this line over a much wider range of operating conditions (than used in the contingency analysis) some of which may even exceed 120 MV.A. If say the highest usage of this line over the operating conditions assessed by TPRICE is 123 MV.A, then the utilisation factor used by TPRICE with *modified CRNP* will be 0.82 (123/150).

Appendix E Priority Ordering Methodology

Rules Requirements

Clause 6A.23.2 (d) of the Rules requires that:

Where, as a result of the application of the *attributable cost share*, a portion of the *AARR* would be attributable to more than one *category of prescribed transmission services,* that *attributable cost share* is to be adjusted and applied such that any costs of a *transmission system* asset that would otherwise be attributed to the provision of more than one category of *prescribed transmission services*, is allocated as follows:

(1) to the provision of *prescribed TUOS services*, but only to the extent of the *stand-alone amount* for that *category of prescribed transmission services*;

(2) if any portion of the costs of a *transmission system* asset is not allocated to *prescribed TUOS services*, under subparagraph (1), that portion is to be allocated to *prescribed common transmission services*, but only to the extent of the *stand-alone amount* for that *category of prescribed transmission services*; and

(3) if any portion of the costs of a *transmission system* asset is not attributed to *prescribed transmission services* under subparagraphs (1) and (2), that portion is to be attributed to *prescribed entry services* and *prescribed exit services*.

Stand-alone amount is defined as:

For a category of *prescribed transmission services*, the costs of a *transmission system* asset that would have been incurred had that *transmission system* asset been developed, exclusively to provide that *category of prescribed transmission services*.

Transitional Rule 11.6.11(c) states the following:

"For the purposes of new Chapter 6A:

(1) the costs of the *transmission system* assets that from time to time may be treated as:

  (i) directly attributable to the provision of a prescribed connection service; or

  (ii) incurred in providing a prescribed connection service,

  to a *Transmission Network User* or a group of *Transmission Network Users* at a *transmission network connection point* is limited to the costs of the eligible assets which, from time to time, provide that prescribed connection service;

(2) any costs of an existing asset or a replacement asset (or of any portion of an existing asset or a replacement asset) that:

  (i) is not an eligible asset (other than as a result of clause 11.6.11(d)); and

  (ii) is used by a *Transmission Network Service Provider* to provide connection services to a *Transmission Network User* or a group of *Transmission Network Users* at a *transmission network connection point*,

must be treated as costs that are directly attributable to the provision of, or are incurred in providing, *prescribed TUOS services* and, to avoid doubt, the services provided by those assets which would otherwise be *connection services* are taken to be *prescribed TUOS services*; and

(3) the *stand-alone amount* for *prescribed TUOS services* is taken to include any portion of the costs referred to in clause 11.6.11(c)(2) that has not been allocated under clause 6A.23.2(d)(1)."

This transitional provision effectively introduces a fourth step to the priority ordering requirement

Objective and General Approach

The allocation methodology relies on the assumption that *substation* infrastructure and establishment costs are proportionate to the number of *high-voltage* circuit breakers in the *substation*.

Based on this assumption the appropriate allocator for *substation* infrastructure and establishment costs for a stand-alone arrangement is the ratio of the number of *high voltage* circuit breakers[17] in the stand-alone arrangement to the number of *high voltage* circuit breakers in the whole *substation*.

Proposed Methodology

Step 1: Branch Identification

Identify the branches[18], being the lines, *transformers*, major reactive devices and exits/entries in the *substation* which provide *prescribed TUOS services*, *prescribed common transmission services* and *prescribed exit services* or *prescribed entry services*, in the *substation*.

Step 2: Allocation of Circuit Breakers to Branches

For each *high voltage* circuit breaker in the *substation* identify the branches directly *connected* to it. Any circuit breaker that does not directly *connect* to a branch is excluded from allocation and all costs associated with it are added to the *substation* infrastructure and establishment cost.

Count the total number of circuit breakers directly *connected* to branches.

Distribution Network Service Providers (DNSPs) are classified as a *prescribed exit service* while *Generators* are classified as a *prescribed entry service*. *Negotiated transmission services* are not part of the regulated asset base and fall outside the priority ordering process detailed in clause 6A.23.2(d) of the Rules.

[17] Low voltage circuit breakers are not considered in the standalone arrangements.

[18] Described in Definition – Branches.

Step 3.1: Stand-alone arrangements for prescribed TUOS services

With reference to the number of lines providing *prescribed TUOS services* determine the number of circuit breakers required to provide *prescribed TUOS services* of an equivalent standard on a stand-alone basis[19]. The stand-alone configuration is the simplest *substation* configuration (in the absence of development) had it been developed to provide a *prescribed TUOS service*. This may be done by way of a look up of typical stand-alone configurations.

Step 3.2: Stand-alone arrangements for Prescribed common transmission services

With reference to the number of lines providing *prescribed TUOS services* and the devices providing *prescribed common transmission service* determine the number of circuit breakers required to provide *prescribed common transmission services* of an equivalent standard on a stand-alone basis. The stand-alone configuration is the simplest *substation* configuration (in the absence of development) had it been developed to provide a *prescribed common transmission service*. This may be done by way of a look up of typical stand-alone configurations.

Step 4: Allocation of substation infrastructure and establishment costs

Step 4.1 Allocation of prescribed TUOS services

Allocate a portion of *substation* infrastructure and establishment costs to *prescribed TUOS services* according to the ratio of the *high voltage* circuit breakers identified in step 3.1 to the total number of *high voltage* circuit breakers *connected* to branches in the *substation* identified in step 2.

Step 4.2 Calculation of the Unallocated Substation Infrastructure Costs (after prescribed TUOS service Allocation)

Calculate the unallocated substation infrastructure cost (after *prescribed TUOS services allocation*) by subtracting the amount calculated in step 4.1 from the total *substation* infrastructure amount.

Step 4.3 Allocation of Prescribed Common Transmission Service

Allocate a portion of the *substation* infrastructure and establishment costs to *prescribed common transmission services* based on to the ratio of the *high voltage* circuit breakers providing *prescribed common transmission services* identified in step 3.2 to the total number of *high voltage* circuit breakers *connected* to branches in the substation. If the *prescribed common transmission services* portion of *substation* infrastructure is greater than the unallocated costs, then the unallocated portion only is attributed to *prescribed common transmission services*. In this instance, nothing will be attributed to *prescribed entry services* and *prescribed exit services*.

Step 4.4 Calculation of the Unallocated Substation Infrastructure Costs (after prescribed common transmission service Allocation)

Calculate the unallocated *substation* infrastructure cost (after *prescribed common transmission services* allocation) by subtracting the amount calculated in step 4.3 from the amount calculated in step 4.2.

[19] A *substation* would typically not exist to provide *prescribed TUOS* services alone, however this interpretation is inconsistent with the intent of the Rule. Accordingly standalone arrangements for *prescribed TUOS services* are taken to require a level of switching consistent with the prevailing bus arrangements.

Step 4.5 Allocation of Prescribed Entry and Exit Service costs to Prescribed TUOS services per 11.6.11

Allocate the remaining *substation* infrastructure and establishment costs (calculated in step 4.4) to each branch providing *prescribed TUOS services* based on the ratio of the *high voltage* circuit breakers providing the *prescribed TUOS services* to the branch to the total number of *high voltage* circuit breakers providing *prescribed TUOS services* or in accordance with the cost allocation process in Appendix B as appropriate.

Notes

Costs are only allocated in step 4 until fully allocated.

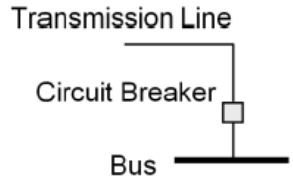
Consistent with clause 6A.23.2(d)(3) of the Rules it is possible that no costs will be attributed to *prescribed entry services* and *prescribed exit services*.

New and existing *negotiated transmission service* assets are excluded from the analysis as any incremental establishment costs associated with them are taken to be included in the *negotiated transmission services* charges on a causation basis.

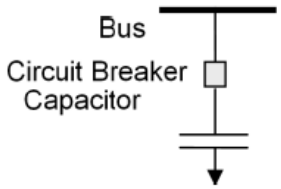
The assessment of standalone arrangements only needs to be conducted once per substation except where changes to the configuration of the substation occur.

Definition – Branches

As illustrated by the diagrams below a "Branch" is a collection of assets (e.g. lines, circuit breakers, capacitors, buses and *transformers*) that provide a *transmission service*.



Branch with Transmission Line, Bus and Circuit Breaker

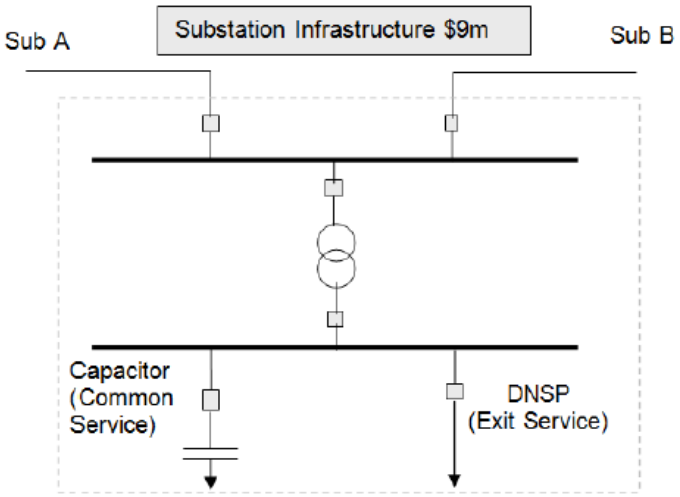


Branch with Capacitor, Circuit Breaker and Bus

Examples

Example A

Substation Configuration



Step 1: The branches are Sub A, Sub B, DNSP, Tie Transformer and *prescribed common transmission services*.

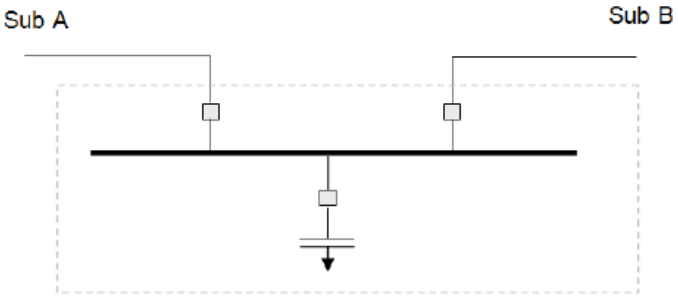
Step 2: The total number of circuit breakers directly *connected* to branches is 6.

Step 3.1: The stand-alone arrangement for the provision of *prescribed TUOS services* to an equivalent standard is shown below and consists of 2 circuit breakers.

Stand Alone Prescribed TUOS Service

Step 3.2: The stand-alone arrangement for the provision of *prescribed common transmission services* to an equivalent standard is shown below and consists of 3 circuit breakers.

Stand Alone Prescribed Common Transmission Service



Step 4:

Assume total Infrastructure cost is $9m.

Costs are allocated to *prescribed TUOS services* in the ratio of the circuit breakers in the stand-alone arrangement to the total circuit breakers.

Infrastructure Cost Allocated to *prescribed TUOS services* = (2/6) x $9m = $3m

Unallocated Substation Infrastructure Costs (after *prescribed TUOS services* allocation) = $9m - $3m = $6m

Costs are allocated to *prescribed common transmission services* in the ratio of the circuit breakers in the stand-alone arrangement to the total circuit breakers.

Infrastructure Cost allocated to *prescribed common transmission services* = (3/6) x $9m = $4.5m

Unallocated *Substation* Infrastructure Costs (after *prescribed common transmission service* allocation)

= $6m - $4.5m = $1.5m

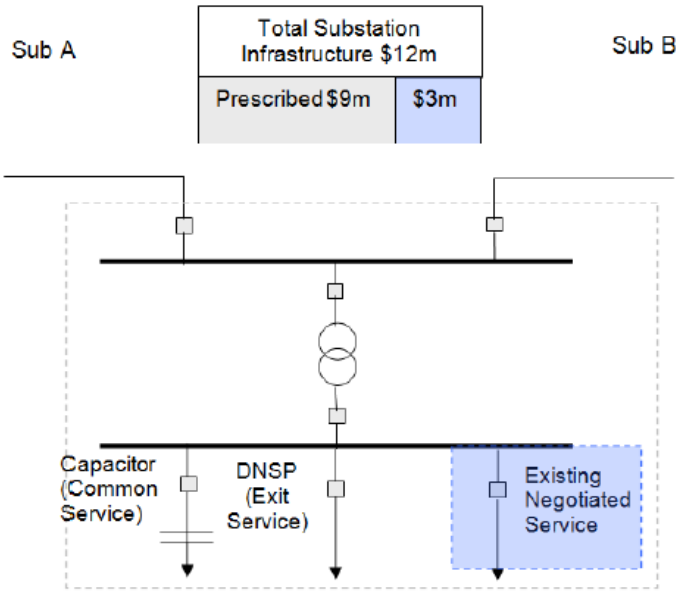
Remainder of unallocated (calculated above) to be allocated to *prescribed TUOS services* per clause 11.6.11 of the Rules

Infrastructure Cost allocated to *prescribed TUOS services* = $1.5m

Item	Number	Allocation	Unallocated
Substation infrastructure costs		9,000,000	9,000,000
Total Breakers	6		
TUOS Stand-alone breakers	2		
Share to TUOS (a)	0.333	3,000,000	6,000,000
Common Service stand-alone breakers	3		
Share to Common Service	0.500	4,500,000	1,500,000
Share to TUOS (b)		1,500,000	
Total Share to TUOS (a) + (b)		4,500,000	
Total Share to Common Service		4,500,000	

Example B

Substation Configuration

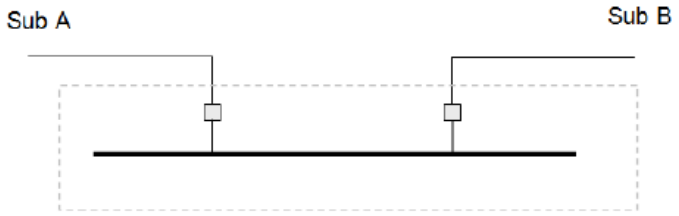


Step 1: The branches are Sub A, Sub B, DNSP, Tie Transformer, *prescribed common transmission services* and an existing negotiated service.

Step 2: The total number of circuit breakers directly *connected* to branches is 6 (no prescribed costs are allocated to the existing *negotiated transmission service*).

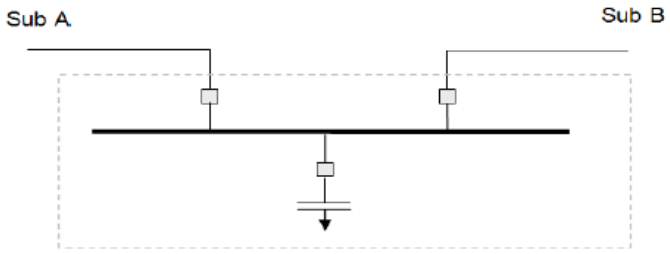
Step 3.1: The stand-alone arrangement for the provision of *prescribed TUOS services* to an equivalent standard is shown below and consists of 2 circuit breakers.

Stand Alone Prescribed TUOS Services



Step 3.2: The stand-alone arrangement for the provision of *prescribed common transmission services* to an equivalent standard is shown below and consists of 3 circuit breakers.

Stand Alone Prescribed Common Transmission Services



Step 4:

Assume total Infrastructure cost is $12m, however $3m is for the existing *negotiated transmission service*, which does not form part of the regulated asset base and is not governed by clause 6A.23.2(d) of the Rules.

Costs are allocated to *prescribed TUOS services* in the ratio of the circuit breakers in the stand-alone arrangement to the total circuit breakers.

Infrastructure Cost Allocated to *prescribed TUOS services* = (2/6) x $9m = $3m

Unallocated Substation Infrastructure Costs (after *prescribed TUOS services* allocation) = $9m - $3m = $6m

Costs are allocated to *prescribed common transmission services* in the ratio of the circuit breakers in the stand-alone arrangement to the total circuit breakers.

Infrastructure Cost allocated to *prescribed common transmission services* = (3/6) x $9m = $4.5m

Unallocated *Substation* Infrastructure Costs (after *prescribed common transmission services* allocation)

= $6m - $4.5m = $1.5m

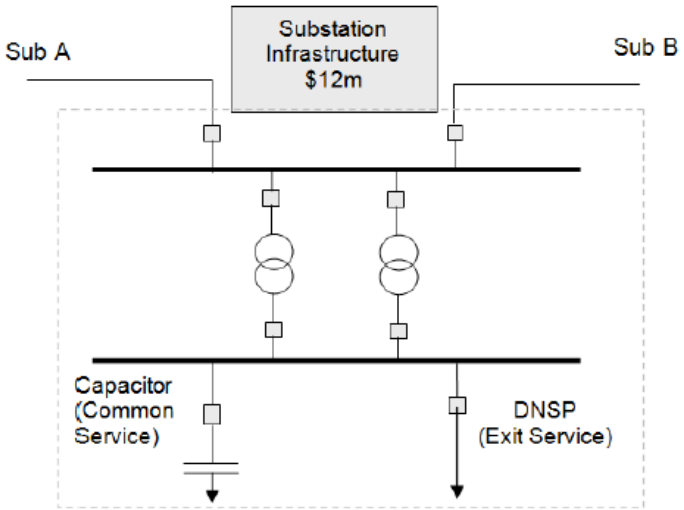
Remainder of unallocated (calculated above) to be allocated to *prescribed TUOS services*.

Infrastructure Cost allocated to *prescribed TUOS services* = $1.5m

Item	Number	Allocation	Unallocated
Substation infrastructure costs		9,000,000	9,000,000
Total Breakers	6		
TUOS Stand-alone breakers	2		
Share to TUOS (a)	0.333	3,000,000	6,000,000
Common Service stand-alone breakers	3		
Share to Common Service	0.500	4,500,000	1,500,000
Share to TUOS (b)		1,500,000	
Total Share to TUOS		4,500,000	
Total Share to Common Service		4,500,000	

Example C

Substation Configuration

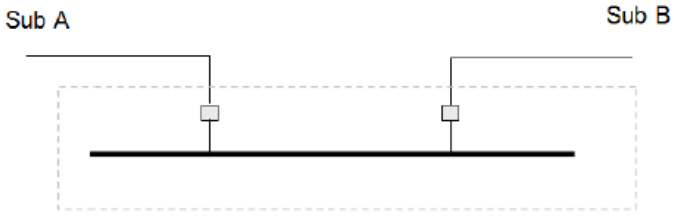


Step 1: The branches are Sub A, Sub B, DNSP, Tie Transformer 1, Tie Transformer 2 and *prescribed common transmission service*.

Step 2: The total number of circuit breakers directly *connected* to branches is 8.

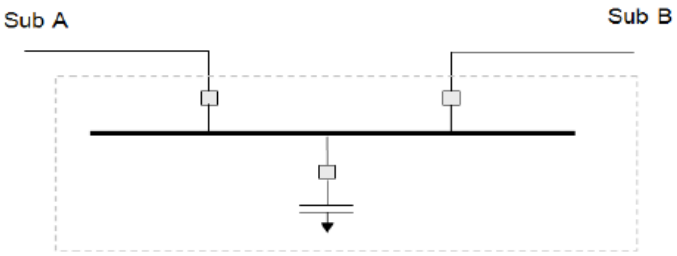
Step 3.1: The stand-alone arrangement for the provision of *prescribed TUOS services* to an equivalent standard is shown below and consists of 2 circuit breakers.

Stand Alone Prescribed TUOS services



Step 3.2: The stand-alone arrangement for the provision of *prescribed common transmission services* to an equivalent standard is shown below and consists of 3 circuit breakers.

Stand Alone Prescribed Common Transmission Service



Step 4:

Assume total Infrastructure cost is $12m.

Costs are allocated to *prescribed TUOS services* in the ratio of the circuit breakers in the stand-alone arrangement to the total circuit breakers.

Infrastructure Cost Allocated to *prescribed TUOS services* (a) = (2/8) x $12m = $3m

Unallocated Substation Infrastructure Costs (after *prescribed TUOS services* allocation) = $12m - $3m = $9m

Costs are allocated to *prescribed common transmission service* in the ratio of the circuit breakers in the stand-alone arrangement to the total circuit breakers.

Infrastructure Cost allocated to *prescribed common transmission services* = (3/8) x $12m = $4.5m

Unallocated Substation Infrastructure Costs (after *prescribed common transmission services* allocation)

= $9m - $4.5m = $4.5m

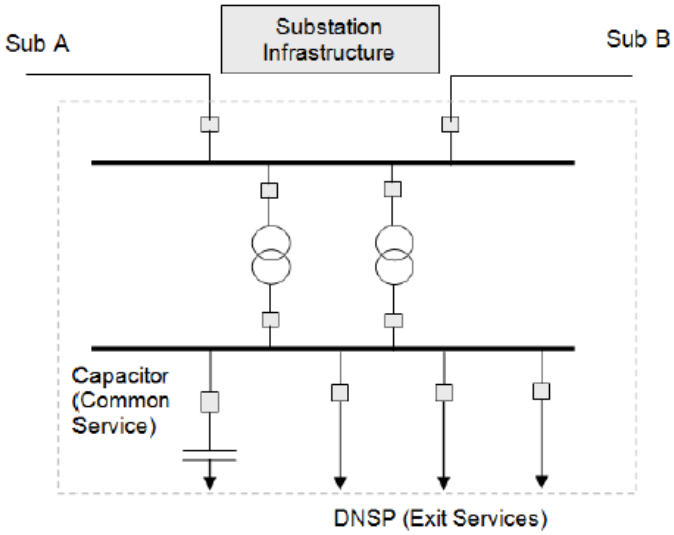
Remainder of unallocated (calculated above) to be allocated to *prescribed TUOS services*.

Infrastructure Cost allocated to *prescribed TUOS services (b)* = $4.5m

Item	Number	Allocation	Unallocated
Substation infrastructure costs		12,000,000	12,000,000
Total Breakers	8		
TUOS Stand-alone breakers	2		
Share to TUOS (a)	0.250	3,000,000	9,000,000
Common Service stand-alone breakers	3		
Share to Common Service	0.375	4,500,000	4,500,000
Share to TUOS (b)		4,500,000	
Total Share to TUOS		7,500,000	
Total Share to Common Service		4,500,000	

Example D

Substation Configuration



Step 1: The branches are Sub A, Sub B, *DNSP*1, *DNSP*2, *DNSP*3, Tie Transformer 1, Tie Transformer 2 and PCS.

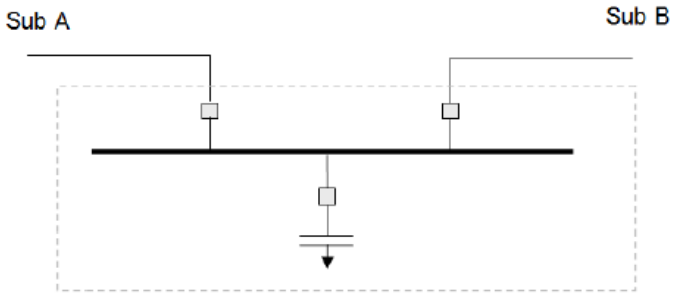
Step 2: The total number of circuit breakers directly *connected* to branches is 10.

Step 3.1: The stand-alone arrangement for the provision of *prescribed TUOS services* to an equivalent standard is shown below and consists of 2 circuit breakers.

Stand Alone Prescribed TUOS services

Step 3.2: The stand-alone arrangement for the provision of *prescribed common transmission services* to an equivalent standard is shown below and consists of 3 circuit breakers.

Stand Alone Prescribed Common Transmission Service



Step 4:

Assume total Infrastructure cost is $15m.

Costs are allocated to *prescribed TUOS services* in the ratio of the circuit breakers in the stand-alone arrangement to the total circuit breakers.

Infrastructure Cost Allocated to *prescribed TUOS services* (a) = (2/10) x $15m = $3m

Unallocated Substation Infrastructure Costs (after *prescribed TUOS services* allocation) = $15m - $3m = $12m

Costs are allocated to *prescribed common transmission services* in the ratio of the circuit breakers in the stand-alone arrangement to the total circuit breakers.

Infrastructure Cost allocated to *prescribed common transmission service* = (3/10) x $15m = $4.5m

Unallocated Substation Infrastructure Costs (after *prescribed TUOS services allocation*) = $12m - $4.5m = $7.5m

Remainder of unallocated (calculated above) to be allocated to *prescribed TUOS services*.

Infrastructure Cost allocated to *prescribed TUOS services* (b) = $7.5m

Item	Number	Allocation	Unallocated
Substation infrastructure costs		15,000,000	15,000,000
Total Breakers	10		
TUOS Stand-alone breakers	2		
Share to TUOS (a)	0.200	3,000,000	12,000,000
Common Service stand-alone breakers	3		
Share to Common Service	0.300	4,500,000	7,500,000
Share to TUOS (b)		7,500,000	
Total Share to TUOS		10,500,000	
Total Share to Common Service		4,500,000	