

1 Introduction

The National Electricity Code (code) was developed out of a number of resolutions made by the Council of Australian Governments (COAG) in order to reform of the electricity industry and benefit from the resulting efficiency gains.

The code provides the framework for the National Electricity Market (NEM) which establishes:

- a single wholesale market across southern and eastern Australia
- an access regime for the transmission and distribution networks in participating jurisdictions.

The NEM commenced on 13 December 1998.

The code also establishes a regulatory framework which:

- provides that the Australian Competition and Consumer Commission (Commission) will determine the revenue caps to be applied to the non-contestable elements of participating transmission networks
- sets out how those regulated revenues, combined with the networks contestable revenues, will be translated into network charges.

In accordance with its responsibilities under the code, the Commission commenced regulating the revenues of transmission networks in the NEM on 1 July 1999. The timetable outlining the date at which the Commission commences responsibility in each jurisdiction is outlined below.

Table 1.1: NEM transmission network regulation timetable

Jurisdiction	Commission transmission regulation start date
New South Wales	1 July 1999
Victoria	1 January 2003 ¹
Queensland	1 January 2002
South Australia	1 January 2003 ²
Australian Capital Territory	1 July 1999

1 The Commission commenced administration of the Victorian Tariff Order on 1 January 2001

2 The Commission commenced administration of the South Australian Electricity Pricing Order on 1 January 2001

This document sets out the Commission's draft decision in respect of the non-contestable elements of the South Australian transmission network, operated by ElectraNet SA (ElectraNet).

Commencing from 1 January 2003, this decision will apply for a period of five and a half years, bringing ElectraNet's regulatory period in line with the Australian financial year. Alignment with the financial year will simplify, and provide consistency with, reporting and forecasting processes outlined in the Commission's *Statement of*

Principles for the Regulation of Transmission Revenues – Information Requirements Guidelines (Information Requirements), and will minimise the cost of the regulatory process.

It is important to note that this decision does not extend to the parallel network assets owned and operated by ETSA Utilities (ETSA), which is the regulatory responsibility of the South Australian Independent industry Regulator (SAIIR), in accordance with chapter 9 of the code.

The remainder of this chapter sets out:

- the regulatory framework according to which the Commission will determine the revenue caps to be applied to ElectraNet’s transmission assets
- the review and public consultation processes followed by the Commission in reaching its decisions
- an introductory overview of the South Australian transmission network.

1.1 The Commission’s role as regulator of transmission revenues

1.1.1 Scope of the regulatory review

The code outlines the general principles and objectives for the transmission revenue regulatory regime to be applied by the Commission (see Box 1 for further details). It also grants the Commission the flexibility to use alternative methodologies, providing they are consistent with code’s ‘objectives, principles, broad forms and mechanisms, and information disclosure requirements’.

For example, the code requires the Commission to set revenue caps for the non-contestable elements of ElectraNet transmission assets. That is, to determine the maximum allowable revenues (MAR) which the owners of those assets can earn from the use of those non-contestable elements. However, if the Commission considers there is sufficient competition to warrant a more light handed regulatory approach, it may determine and apply such an approach.

Note that, to the extent that those assets also provide contestable services, the revenues associated with those services can be competitively sourced. Such revenues are, therefore, excluded from the revenue capping process and may be determined separately by ElectraNet.

Box 1: Objectives and principles of the transmission revenue regulatory regime

The code establishes that:

1. the transmission revenue regulatory regime must achieve outcomes which:
 - (a) are efficient and cost effective;
 - (b) are incentive based that share efficiency gains between network users and owners and provide a reasonable rate of return to network owners;
 - (c) foster efficient investment, operation, maintenance and use of network assets;
 - (d) recognise pre-existing government policies on asset values, revenue paths and prices;
 - (e) promote competition; and
 - (f) are reasonably accountable, transparent and consistent over time;
2. the regulation of aggregate revenue of transmission networks must:
 - (a) be consistent with the regulatory objectives (see 1 above);
 - (b) address monopoly pricing concerns, wherever possible, through the competitive supply of network services but otherwise through a revenue cap;
 - (c) promote efficiency gains and balance supply and demand side options;
 - (d) promote a reasonable rate of return to network owners on an efficient asset base where:
 - (i) the value of new assets is consistent with take-or-pay contracts or NEMMCO augmentation determinations;
 - (ii) the value of existing assets are determined by jurisdictional regulators and must not exceed their deprival value; and
 - (iii) any asset revaluations undertaken by the Commission are consistent with COAG decisions;
3. the form of the economic regulation shall:
 - (a) be a revenue cap with a CPI-X incentive mechanism;
 - (b) take into account expected demand growth, service standards, weighted average cost of capital, potential efficiency gains, a fair and reasonable risk adjusted return on efficient investment and ongoing commercial viability of the transmission industry;
 - (c) have a regulatory control period of not less than five years; and
 - (d) only apply to those assets not expected to be offered on a contestable basis.

Source: National Electricity Code, clauses 6.2.2 – 6.2.5.

1.1.2 Form of transmission revenue regulation

In assuming its role as the regulator of NEM transmission revenues, the Commission's aim is to adopt a regulatory process which eliminates monopoly pricing, provides a fair return to network owners and creates incentives for managers to pursue ongoing efficiency gains through cost reductions. In achieving these aims the Commission is aware of the need to ensure compliance costs are minimised and that the regulatory process is objective, transparent and as light handed as possible.

As this review was being undertaken, the Commission was also developing its *Statement of the Principles for the Regulation of Transmission Revenues (Regulatory Principles)* which sets out how the Commission proposes to regulate transmission revenues. The draft *Regulatory Principles* (DRP) was released in May 1999 and the Commission is continuing to consult on elements of that document (eg ring-fencing and *information requirements*). While the *Regulatory Principles* have yet to be finalised,

this ElectraNet revenue cap draft decision encompasses the majority of the DRP. For example, the ElectraNet revenue cap has been determined according to the following principles:

- an accrual building block approach based on forecast costs of service;
- for the initial asset value, using the jurisdiction asset value, provided it is below the optimised deprival value (ODV) as part of an optimised deprival valuation assessment
- networks are given the opportunity to identify assets subject to bypass risk - such assets may be subject to accelerated depreciation to compensate the network for that risk prior to their removal from the asset base
- planned capital expenditures being subject to an *ex ante* prudence test and an *ex post* examination of the actual expenditure which has taken place
- the rate of return on the asset base being determined using a post-tax nominal framework
- the required efficiency regime will be of the CPI-X form
- operating and maintenance expenditures will be subject to a single regulatory period glide path while other components of the building block will face a P₀ adjustment
- the revenues determined will be ‘sanity checked’ through the use of financial indicator analysis
- each network will be required to provide a set of service standards for approval by the Commission - those standards will be included in the revenue cap decision and a penalty system will apply if the network fails to comply with those standards.

Consistent with the proposals contained in its DRP, the Commission has adopted an accrual building block approach in the present revenue cap decisions.

In implementing this framework, the ‘post-tax nominal’ accrual building block approach calculates the Allowed Revenue (AR) as the sum of the return on capital, the return of capital, an allowance for operating and maintenance (non-capital) expenditure and income tax payable; that is:

$$\begin{aligned} \text{AR} &= \text{return on capital} + \text{return of capital} + \text{opex} + \text{taxes} \\ &= (\text{WACC} * \text{WDV}) + \text{D} + \text{opex} + \text{taxes} \end{aligned}$$

where: AR = Allowed revenue

WACC = post-tax nominal weighted average cost of capital;

WDV = written down (depreciated) value of the asset base;

D = depreciation allowance;

opex = operating and maintenance expenditure; and

taxes = tax liability allowance.

Furthermore, in implementing the CPI-X incentive mechanism the revenue cap will increase each year in line with inflation but decrease by an efficiency driver (and smoothing factor).

Also included in the *Regulatory Principles* is the proposal for the return of capital to be determined through a competitive depreciation approach that links the long-term depreciation profile of the assets to a measure of the rate of technological change. The Commission has yet to use this approach in the regulation of electricity networks. In this decision, the Commission has relied on straight-line depreciation to calculate ElectraNet's return of capital.

In determining the MAR, the code requires the Commission to take into account the service standards that TNSPs are expected to maintain. Therefore, the Commission will adopt an annual service standard adjustment in the calculation of MAR; that is:

$$\text{MAR}_t = \text{AR}_t + (\text{AR}_{t-1} * \text{S})$$

where: AR = Allowed revenue;

S = Service standards factor.

1.1.3 Structure of this document

The remainder of this document broadly follows the structure inherent in the methodology described above. That is, in relation to the ElectraNet draft decision:

- Chapter 2 concerns the network's weighted average cost of capital (WACC)
- Chapter 3 sets out the Commission's assessment of ElectraNet's opening asset base as at 1 January 2003
- Chapter 4 determines the network's projected future capital expenditure requirements
- Chapter 5 concerns operating and maintenance expenditure
- Chapter 6 summarises the Commission's assessment of each element of the building block (including depreciation), applies the CPI-X incentive regime and discusses options for revenue smoothing to determine the final revenue path
- Chapter 7 sets out the service standards appropriate to the level of the revenue cap determined
- Chapter 8 sets out the relevant financial indicator analysis conducted on the revenue cap determined

1.2 Review and public consultation processes

The key aspects of the review of ElectraNet's revenue cap which have occurred to date are as follows:

- ElectraNet submitted its application outlining its views on key elements of the revenue cap. The application is available on the Commissions website.

- The Commission engaged a consultant, Meritec Pty Limited (Meritec), to ElectraNet’s asset base and its proposed capital expenditure (capex) and its proposed operation and maintenance expenditure (opex). Copies of the Meritec reports are available on the Commissions website
- The Commission conducted a public consultation process by inviting interested parties to provide comments on ElectraNet’s application and the Meritec reports.
- The Commission conducted discussions with ElectraNet, other interested parties and government instrumentalities.

1.3 Overview of the South Australian transmission network

ElectraNet operates over 5,576 circuit kilometres (km) of transmission lines and 68 substations, which include 6,102 Mega Volts Ampere (MVA) of installed transformer capacity throughout South Australia.

ElectraNet’s network spans more than 1000km from the Victorian border near Mount Gambier to Port Lincoln on the Eyre Peninsula, with radial extensions of over 200km each to Leigh Creek, the York Peninsula and the Riverland. Figure 1.1 illustrates ElectraNet’s network and highlights the major load centres in South Australia.

The South Australian system is characterised by long distances, a generally low load factor, low energy density and smaller customer base than the other states. However, South Australia is also one of the peakiest system due to high air conditioning load over the summer months. For example, ElectraNet’s network supplied a maximum demand for electricity of 2832 megawatts (MW) over the 2000-01 summer peak.

Figure 1.1: ElectraNet’s transmission network

