



**Methodology for Incorporating
Regulated Contracted Network Services
into the Revenue Cap Determination**

Discussion Paper

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1 Abbreviations

Abbreviation	Definition
ACCC	Australian Competition and Consumer Commission
Capex	Capital expenditure which is part of the revenue building block
MNSP	Market Network Service Provider
MSORC	Market System Operator Review Committee set up by the NEM Governance and Liability Steering Committee
NCAS	Network Control Ancillary Services
NEC	National Electricity Code
NECA	National Electricity Code Administrator Limited
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company Limited
Opex	Operating expenditure which is part of the revenue building block
SORP	ACCC's Draft Statement of Principles for the Regulation of Transmission Revenues also referred to as the DRP and SRP
TNSP	Transmission Network Service Provider

2 Purpose of Paper

This Discussion Paper has been prepared to assist with the development of a framework which will provide a mechanism for regulated transmission network service providers (TNSPs) to fund costs associated with meeting their obligations associated with contracted network services under the National Electricity Code (NEC). Currently the NEC requires TNSPs to negotiate contracted services, however neither the NEC nor the ACCC's Draft Statement of Regulatory Principles (SORP) provides a framework for incorporating the associated costs into the TNSP's regulated revenue cap. This is a major impediment to being able to deliver the intended outcomes from the Code provision.

In its role as both the revenue regulator for TNSPs and the authorising body for the NEC, it is expected the ACCC will need to resolve this issue, either within the NEC or under its SORP. Because Powerlink Queensland will have its revenue determined by the ACCC commencing 1 January 2002, it is important that this particular issue is resolved prior to the determination.

Additionally, as the NEC is evolving over time, there will always be the prospect of code changes being considered where obligations and related services are shifted between the market and TNSPs. In the event of any such proposal eventuating under mooted changes to the NEC, the revenue cap provisions need to have sufficient flexibility to accommodate such changes without the need to re-open the determination. .

This paper examines a range of regulated contracted network services, those included in the NEC as well as those being considered in a range of public discussion papers, and proposes a way forward.

3 Types of Services

There are 3 broad categories of contracted network services:

- Grid support contracts;
- Generator constraint contracts; and
- Miscellaneous contracts.

3.1 Grid Support Contracts

Grid support contracts are those arrangements TNSPs are required to enter into which provide outcomes equivalent to providing additional grid. The counter parties may be generators, MNSPs or customers who could provide interruptability. Grid support contracts can be further sub-divided into two classes, viz:-

- Alternative to grid augmentation; and
- Risk management support.

3.1.1 Alternative to grid augmentation

Section 5.6 of the NEC requires TNSPs to plan and initiate augmentation options to ensure the network can meet the demands of forecast load growth. In assessing augmentation options, the NEC requires the TNSP to consider generation options and demand side management options, as an alternative to a network augmentation. This is reinforced in the ACCC's Regulatory Test.

For example, Clause 5.6.2 (f) of the NEC states:

“Within the time for corrective action notified in clause 5.6.2(e) the Network Service Provider must consult with affected Code Participants and interested parties on the possible options, including but not limited to demand side options, generation options and market network services provider options to address the projected limitations of the relevant transmission system or distribution system.”

In addition, Clause 5.6.2 (m) states:

“Where the Network Service Provider decides to implement a generation option as an alternative to network augmentation, the Network Service Provider must:

- (1) register the generating unit with NEMMCO and specify that the generating unit may be periodically used to provide a network support function and will not be eligible to set spot prices when constrained on in accordance with clause 3.9.7; and*
- (2) include the cost of this network support service in the calculation of transmission service and distribution service prices determined in accordance with Chapter 6 of the Code.*

Clearly the NEC supports the notion of grid support contracts in lieu of augmentation where such an outcome is cost effective – that is, where that alternative meets the ACCC’s Regulatory test. . Furthermore, the NEC requires that the associated costs are to be factored into the regulated pricing structure. Therefore a suitable mechanism needs to be put into place to ensure adequate revenue is provided to allow this process to occur.

3.1.2 Risk management support

In many instances, customers request (either directly or through NEMMCO) that local generation be operated for short periods during network events, particularly during scheduled network maintenance, in order to reduce the severity of a subsequent network event. This is a security/reliability requirement of NEMMCO or the customer. It is different from the category above in that network augmentation (or alternatives) could not be justified for such sporadic short term events.

3.2 Generator Constraint Contracts

Section 5.5 of the NEC requires that Generators and TNSPs negotiate in good faith to reach agreement on access and constraint issues. Clause 5.5 (f) states:

“The Network Service Provider and the Generator shall negotiate in good faith to reach agreement as appropriate on the:

- (5) compensation to be provided by the Network Service Provider to the Generator in the event that the generating units or group of generating units of the Generator are constrained off or constrained on during a trading interval; and*

There is no framework in the NEC or the ACCC’s SORP to address this compensation. TNSP’s must therefore, at the present time, advise generators, in good faith, that there are no provisions in its revenue cap for such payments.

It is understood that NECA’s proposed code changes emanating from Transmission and Distribution Pricing Review have flagged “constrained off”

generation/access arrangements as being an excluded service but are silent on constrained generation compensation.

3.3 Miscellaneous Contracts and New Code obligations

In addition to the above types of regulated network contracts, there is a view (eg from the Ancillary Services review and from the MSORC recommendations) that TNSPs should procure and provide certain ancillary services, which are currently being provided by NEMMCO (eg Network Control Ancillary Services, or NCAS).

The MSORC process is also recommending that TNSPs undertake, for some parts of their network, the System Operator functions currently being performed by NEMMCO. It is considered important to provide a mechanism to incorporate such future changes to the costs structures, and hence the regulated revenues of TNSPs without the necessity of a new revenue cap determination process.

4 Philosophical Considerations

4.1 Cost Plus vs Incentive-based

In general, consumers, regulators and TNSPs prefer implementation of an incentive-based approach to network regulation. Incentive-based regulation is accepted as the most appropriate form of regulation in terms of seeking out efficiencies and ensuring the ensuing benefits are shared between the TNSPs and the end use consumers. By contrast, cost plus regulation appears to lack mechanisms to drive efficiencies.

However, for incentive-based regulation to be effective, it requires a regulatory framework where inputs and outputs are clearly understood and future outcomes can be realistically predicted. In cases where there is a high degree of uncertainty and where key elements are beyond the control of the regulated TNSP, the very high risk premiums which would be required under an incentive-based scheme could exceed any likely benefits which may result. In such cases, cost plus regulation is considered more appropriate, and this should apply in the early years of implementation.

Inclusion of revenue to cover costs associated with regulated contracted services is proposed, as a cost plus arrangement, at least initially, because:

- Requirements are driven by market outcomes and are unpredictable;
- Little or no history is available to support future estimates;
- NEC changes are likely in the future years;
- Highly utilised networks (particularly Queensland's), and rapidly changing future generation patterns result in greater uncertainty.

4.2 Cost Plus Arrangements

Cost plus arrangements require the regulated revenue cap to include adequate revenue to cover all reasonable costs associated with provision of the contracted service plus a profit margin. The profit margin seeks to reward the provider of the contract for the service. Provision of a profit margin offsets any implicit bias a TNSP might have towards a "network only" solution (which provides the TNSP with a return).

It is proposed that, in order to avoid transmission price shocks, revenue adjustments for actual costs be settled against those for forecast costs on an annual ex post basis (that is, an "unders" and "overs" regime).

4.3 Changes to the NEC and the SORP

Chapter 6 of the NEC would need to be modified such that it provided explicitly for these costs to be incorporated into the TNSPs regulated revenue cap, and the SORP would need to be similarly expanded.

4.4 Powerlink Determination

In order to proceed with finalising Powerlink's revenue cap, the ACCC will need to agree on such arrangements to cover contracted services, even in the absence of an explicit methodology. Without these revenue provisions, Powerlink will be unable to fulfil its NEC obligations.

5 Proposed Methodology

Based on the above philosophical considerations, a methodology for revenue provision for each category of contracted service is outlined below:

5.1 Grid Support Contracts

5.1.1 Alternative to grid augmentation proposal

Presently, TNSPs forecast costs associated with augmenting the network as Capex (capital works expenditure). In line with the NEC obligations, these forward looking projections should also include an Opex allowance for grid support to supplement the Capex forecast. The network planner will need to decide whether to allow for either a network solution or grid support when considering each augmentation proposal. It is expected that, in some situations, a combination of an initial grid support contract and a (deferred) network augmentation would deliver the lowest cost outcome (ie satisfy the Regulatory Test).

Both Capex and Opex provision for grid support will need to be adjusted to ensure the regulatory provision matches the actual expenditure. Adjustment for the Opex provision for grid support is proposed on an annual basis for the first regulatory period, given the uncertainties and the current lack of history.

This reconciliation process prevents any perverse incentives.

Powerlink proposes to include a separate line in the Opex budget to allow for grid support solutions which will be developed as part of the future network investment plan.

5.1.2 Risk management support

An estimate of grid support costs for risk management should be allowed in the Opex provision. At the end of each year in the regulatory period, the revenue for the following year should be adjusted based on actual expenditure for this activity compared with estimate.

Powerlink intends to include a separate line in the Opex budget to allow for risk management support which will be estimated as part of the forward looking operating and maintenance projections.

5.2 Generator Constraint Contracts

An estimate of costs for generator constraints payments should be allowed in the Opex provision. At the end of each year in the regulatory period, the revenue for the following year should be adjusted based on actual expenditure for this activity compared with estimate.

Powerlink would prefer to include a separate line in the Opex budget to allow for generator constraint payments.

However, because there is no well defined code process for negotiation of generator constraint arrangements, Powerlink proposes to request, in its regulatory application, provision to be made for re-opening of the revenue caps for the specific purpose of incorporating additional revenue provisions for such payments should a clear framework subsequently be developed.

5.3 Miscellaneous Contracts/ New code obligations

An estimate of grid support costs for other miscellaneous regulated contract services should be allowed in the Opex provision. At the end of each year in the regulatory period, the revenue for the following year should be adjusted based on actual expenditure for this activity compared with estimate.

Powerlink would prefer to include a separate line in the Opex budget to allow for other contract payments.

However, because these payments represent future obligations arising from NEC changes or other reasons, Powerlink proposes to request, in its regulatory application, provision to be made for re-opening of the revenue caps for the specific purpose of incorporating additional revenue provisions for such payments should requirements subsequently arise.