Australian Energy Market Commission

RULE CHANGE

# DRAFT RULE DETERMINATION

## National Electricity Amendment (Distribution Network Pricing Arrangements) Rule 2014

**Rule Proponents**

COAG Energy Council
Independent Pricing and Regulatory Tribunal of NSW

28 August 2014

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**About the AEMC**

The AEMC reports to the Council of Australian Governments (COAG) through the COAG Energy Council. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the COAG Energy Council.

# Executive summary

This draft determination sets out significant changes to the rules on how distribution network businesses develop and structure their prices. Network prices are responsible for around 50 per cent of the electricity prices paid by residential consumers on average across Australia.

The objective of these changes is that network prices better reflect the costs of providing network services to individual consumers. This will allow consumers to make more informed decisions about how they want to use energy services and the technologies they invest in to help manage their energy use.

The Australian Energy Market Commission has made this draft determination in response to rule change requests from the Council of Australian Governments' (COAG) Energy Council and the Independent Pricing and Regulatory Tribunal of New South Wales (IPART). The Commission's draft rule is a more preferable rule, but contains many of the elements of the rules proposed by the COAG Energy Council and IPART.

Distribution network businesses will be subject to a new pricing objective that network prices should reflect the business' efficient costs of providing services to each consumer. Businesses will be required to comply with new pricing principles when determining the structure and level of their network prices.

The pricing principles address the potential impacts on consumers of a transition to new network prices. They require network businesses to develop price structures that consumers are capable of understanding, and allow network businesses to minimise the impacts of price changes by gradually moving to new network prices over several years.

There will also be more consultation with consumers and retailers in the development of network prices, and the process for setting prices will be more transparent. Network prices will be finalised earlier, allowing consumers and retailers more time to prepare for price changes.

The Australian Energy Regulator (AER) currently sets the maximum amount of revenue that a network business may recover from all consumers over a five year regulatory period. That amount is based on the AER's estimate of the total costs that a benchmark efficient network business would incur to provide network services. In November 2012, the Commission made significant changes to the rules governing how that maximum revenue amount is determined by the AER. For the national electricity objective to be satisfied, these revenues need to be recovered from individual consumers through prices that reflect the costs of providing services to each consumer.

This draft determination does not change the rules regarding how much revenue network businesses may earn in total from consumers. Instead, it is the next step in the reform process and relates to how network businesses divide up that total amount of revenue into network prices that apply to individual consumers. Under the draft rule, the structure of network prices will be consulted on, developed and approved at the same time as network revenues as part of a more integrated process.

## Why is there a need to change the network pricing rules?

There are considerable differences between how individual consumers choose to use energy. Consumers' lifestyles and the various appliances and technologies they use mean that consumers can have very different load profiles, ie the amount of electricity they use at different times of the day.

Because each consumer's network prices currently do not reflect the costs of supplying network services to that consumer, some consumers currently pay more than the costs caused by their usage. Other consumers, in particular those that use a greater proportion of their energy at peak times, pay less than the costs caused by their usage. This is because existing network prices over-recover for off-peak use of the network and under-recover for peak use.

Case studies undertaken by NERA Economic Consulting (NERA) for the Commission and other reports that have recently been published illustrate some of the outcomes of the way that network prices are currently structured. For example:

- NERA undertook a case study on the network prices faced by consumers in Victoria with air-conditioners. Consumers with air-conditioners generally use a greater proportion of their electricity at peak times. NERA's case study shows that a consumer that installs and uses a large 5 kilowatt air-conditioner will cause about an extra $1,000 a year of network costs compared with a similar consumer without an air-conditioner. That consumer will face about an extra $300 a year under current network prices as a result of using that air-conditioner. The remaining $700 will be recovered by the rest of the customer base facing higher network prices.
- NERA's solar case study illustrates that a South Australian consumer with a 2.5 kilowatt north-facing solar panel system currently pays about $200 a year less in network costs than a similar consumer without solar panels. North-facing solar panels generate about 18 per cent of their maximum capacity during the time of peak network demand and as a result the reduction in network costs is about $80. This consumer therefore pays about $120 a year less than the costs of providing the consumer network services. That $120 is recovered by other consumers facing higher prices.
- NERA's solar case study also shows that if this consumer's solar panels faced west, the output of the solar panels would more than double at the time of peak network demand. Even though west-facing panels would produce less total energy, they would produce it at times when it was more valuable. The reduction in network costs would be much higher and the consumer's $200 a year savings in network prices would be about equal to the reduction in network costs from the solar panels. Under current network price structures, consumers have no incentive to face their solar panels west and benefit more from facing them north.

- Recent research by AGL based on data from 160,000 Victorian consumers shows that consumers in a hardship program on average use a greater proportion of their energy at off-peak times compared with other consumer types. As a result of this flatter load profile, AGL's analysis shows that on average consumers in a hardship program are the most likely of all consumer types to pay more than the costs of providing them with network services under current pricing structures.[1]

The structure of network prices has not kept up with the increased diversity in how people use energy. Advances in technology both on the consumer's side of the meter and the network's side of the meter have given consumers and network businesses more options in how energy is provided and consumed.

The way that network prices are structured needs to catch up with these changes and be flexible enough to adapt to further changes in the future. This draft determination seeks to prepare the regulatory regime for the future so that retailers are charged network prices that reflect the different ways in which their customers use the electricity network.

These changes will allow consumers to make more informed decisions about their energy use as new technologies emerge and result in better outcomes for both individual consumers and the overall electricity system.

Consumers do not pay network businesses directly for network services. Instead, retailers pay network charges to distribution businesses and charge consumers a bundled retail price. This retail price includes a component that recovers the network charges paid by the retailer to the distribution business in relation to the consumer's use of the network. Network prices are separately itemised on large commercial and industrial consumers' bills, but residential and small business consumers only see the retail price.

The draft rule does not require retailers to structure their retail prices in a way that matches the structure of network prices. Retailers operate in a competitive market and should be free to design their prices as they see fit in response to consumer preferences and the other costs they face. However, because network charges are retailers' largest cost, they will have a significant incentive to pass on network price signals to consumers when deciding how to structure their retail prices.

The draft rule provides for greater engagement between retailers and distribution businesses. This will allow retailers to provide the businesses with feedback on matters including what network price structures retailers are best able to implement through their retail prices. This increases the likelihood that the benefits of cost reflective network prices will be passed on to consumers through retail price structures.

1 Simshauser, P., Downer. D., *On the inequity of flat-rate electricity tariffs*, AGL Applied Economic and Policy Research, Working Paper No. 41, June 2014.

### Consumer consultation

Network prices should enable consumers to decide if the value of the service to them is greater than the efficient costs of providing it. There is little benefit in sending consumers signals about the costs of their usage decisions if consumers cannot relate their usage decisions to the price structure and respond to those signals.

There is a risk that this is not occurring under the current rules due to a combination of the following factors:

- There is currently no requirement to consult consumers when networks develop the structure of their prices.
- There is no requirement for network businesses to consider whether consumers can relate the price signals that are intended to be sent by network prices to their consumption and investments decisions.
- Network businesses can change their price structures and levels from year to year without considering the impact of this volatility on consumers.
- Final network prices are notified only very shortly before they take effect. This makes it difficult for consumers and retailers to prepare for price changes and take the new prices into account in their decisions.

The current network pricing process also lacks transparency. The current pricing rules only require network businesses to "take into account" the cost of supplying network services when developing their network price structures. This gives network businesses considerable discretion in how they determine the structure of network prices. It is unclear how they exercise that discretion and weigh-up competing considerations.

## What will change under the draft rule?

### A new network pricing objective and principles

The draft rule sets out a new network pricing objective for distribution businesses. This objective is that the network prices that a distribution business charges each consumer should reflect its efficient costs of providing network services to that consumer.

Distribution prices must comply with several new pricing principles:

- Each network tariff must be based on the long run marginal cost of providing the service.

  Long run marginal cost is a measure that includes the future network costs that are incurred by using more energy, or the costs that could be saved by using less energy. Using this measure as the starting point for calculating network prices means that prices will allow consumers to compare the value they place on using the network with the costs of doing so. If consumers choose to take actions that will reduce future network costs, such as by reducing peak demand, then they will be rewarded with lower prices. If consumers value using electricity at peak times more than the costs caused by doing so, network prices will signal to them that they should continue to use it at those times. Network businesses will have flexibility about how they measure long run marginal cost.

- The revenue to be recovered from each network tariff must reflect the network business's total efficient costs of providing services to the consumers assigned to that tariff. Those total efficient costs must be recovered in a way that minimises distortions to price signals that encourage use of the network by consumers when the value to them is greater than the cost. Network businesses will be able to determine the method they use to comply with this principle.

  As noted above, the AER sets the maximum amount of revenue that a network business may recover in total from all consumers, based on an estimate of the total costs that a benchmark efficient network business would incur to provide network services. It is important that network businesses can recover these total efficient costs so that they can continue to provide safe and reliable network services. However, they should recover their total efficient costs in a way that does not distort signals for efficient use of network services.

- Distribution businesses must also give effect to a new consumer impact principle when developing their tariffs.

  This principle is in two parts. The first part requires distribution businesses to minimise the impact on consumers of changes in network prices. Consumers are more likely to be able to respond to price signals if those signals are consistent and apply for a reasonable period of time. Sudden price changes or significant year-to-year price volatility will make it difficult for consumers to make informed consumption decisions. The second part of this principle requires network prices to be reasonably capable of being understood by consumers. Consumers will not be able to respond to price signals if they cannot relate price structures to their usage decisions. Distribution businesses must transparently address these requirements and the cost reflectivity principles described above. They may depart from the cost reflectivity principles to the extent necessary to meet this consumer impact principle.

- Network tariffs must also comply with any jurisdictional pricing obligations imposed by state or territory governments. For example, several states have state-wide uniform pricing requirements. Distribution businesses may depart from the cost reflectivity principles to the extent necessary to comply with these jurisdictional obligations, and must transparently explain how they have addressed the relevant principles.

### More consumer consultation and transparency

The draft rule contains a new process and new timeframes for setting network prices.

New consultation requirements will require distribution businesses to demonstrate to the AER how they have consulted with consumers and retailers in developing their price structures.

Network prices will be set in a more transparent fashion under a new two-stage process:

- The first stage involves the development, consultation on and approval of a new Tariff Structure Statement. This statement will transparently show how the distribution business has applied the pricing principles to develop its price structures and indicative price levels for the five year regulatory period. This statement will be assessed by the AER for compliance with the pricing principles at the same time that it assesses the business' revenue proposal. Once approved, price structures will remain in place for the regulatory period, unless an unexpected event requires a change to be made and the AER approves that change.
- The second stage will occur each year. In this stage, the distribution business will develop its annual price levels based on the already approved price structures. The AER will check the annual prices for compliance with the Tariff Structures Statement, pricing principles and other rules requirements.

The timeframes for the annual pricing process will also be amended so that final network prices are notified to consumers and retailers at least six weeks before they commence.

### The potential impact on consumers of these changes

The impact that the changes contained in the draft rule are likely to have on individual consumers will depend on the types of price structures developed by distribution businesses. This rule change does not determine a single price structure that all networks must adopt.

It is important that distribution businesses develop prices that best suit the particular circumstances of their network and their customers, after consultation with consumers and retailers, and subject to oversight by the AER. The reports from NERA published along with this draft determination provide examples of potential new network price structures and the possible impacts on consumers' prices.

As advanced meters become more common, network businesses will be able to offer residential consumers more tailored pricing options. The Commission is currently assessing another rule change proposal from the COAG Energy Council in relation to expanding competition in metering and related services, based on recommendations in the Commission's *Power of Choice* review. The metering rule change aims to expand competition in metering and the value added services that advanced metering can provide, with more consumers being able to choose to avail themselves of the services this technology provides.

An important principle underlying all of the Commission's decisions is technological neutrality. The draft rule is neutral with regard to the technology used by consumers. It aims to be flexible enough to result in efficient outcomes for any current or future technology.

The key factor that affects the network costs driven by a consumer's use of energy services is that particular consumer's load profile. The technology choices made by a consumer are only relevant to network prices to the extent that they change the consumer's load profile. For example, installing and using an air-conditioner usually results in a consumer using a greater proportion of its energy at peak times.

NERA undertook several case studies on the impact of cost reflective network prices on consumers with various new and emerging technologies. NERA's report has been published with this draft determination and contains case studies on consumers with air-conditioning, solar panels, batteries and electric vehicles. NERA's report discusses how those different technologies affect consumers' load profiles, and how those resulting load profiles lead to different outcomes in terms of the costs caused by the consumer's use of the network and the network prices that the consumer is likely to pay.

Moving to network prices that better reflect the way that individual consumers use network services will result in some consumers facing lower network prices and some consumers facing higher prices in the future.

The majority of consumers are expected to benefit from these changes though lower network prices in the medium to longer term. Some consumers will choose to respond to new network price structures by reducing their use of the network at peak times, which will reduce overall network costs. Those cost savings will be passed through to consumers through lower future network prices.

NERA's case studies estimate that up to 81 per cent of consumers would face lower network charges in the medium term under a cost reflective capacity price and up to 69 per cent would face lower charges under a critical peak price. The average annual reductions in network charges were estimated at between $28 and $57 a year.

Concerns about the potential impacts on those consumers that will face higher prices will be partly addressed by the new requirements to consult with consumers when developing prices. If network price changes are likely to be significant for some consumers, the consumer impact principle expressly allows distribution businesses to gradually phase-in the new prices over five years or more.

During our consultation process, some stakeholders also expressed concerns that cost reflective network prices could result in lower usage charges and higher fixed charges, which could adversely impact consumers that have lower than average total electricity use.

Network prices that are developed under the new pricing principles will not necessarily involve higher fixed charges. Network businesses will have a number of options on how they structure their prices. We have published a report from The Brattle Group that considers options for implementing cost reflective prices, including options that do not involve higher fixed charges and options that minimise the impact of any increases in fixed charges.

We acknowledge that there may be concerns that some of the consumers that may face higher network prices could be vulnerable consumers. However, we caution against making generalisations about which types of consumers may face higher or lower network prices under these changes. The key factor that will decide how much consumers pay will be their individual load profiles.

We recommend that governments review the structure of their energy concession and hardship schemes so that they deliver on their purpose in an efficient and targeted way. This review should occur at the same time as network businesses develop their new network prices over the next 12-18 months. Appendix C summarises the existing concession and hardship schemes.

## Consultation on this draft determination

This is a draft determination. We welcome views on it and will consider them before making our final determination in late November 2014. Submissions close on 16 October 2014.

We will also hold a public forum on this draft determination in Sydney on 22 September 2014.

## Summary of key differences between existing and draft rules

| | Existing rule | Draft rule |
|---|---|---|
| **Pricing principles** | | |
| **Network pricing objective** | No current objective | Each network tariff should reflect the efficient costs of providing network services to the consumers assigned to the tariff |
| **Long run marginal cost** | Distribution network service providers (DNSPs) must take into account long run marginal cost (LRMC) when setting network prices | DNSPs must base network prices on LRMC |
| **Total efficient cost recovery** | DNSPs must recover their allowed revenue with minimum distortion to efficient patterns of consumption | The revenue recovered from each network tariff must reflect the DNSP's total efficient costs of serving the consumers assigned to that tariff. DNSPs must recover their allowed revenue in a way that minimises distortions to the price signals for efficient usage provided by LRMC based prices |
| **Consumer impact principles** | No specific principle | DNSPs must manage the impact of annual changes in network prices on consumers, eg by transitioning consumers to new network prices over one or more regulatory periods. DNSPs must set network prices which consumers are reasonably capable of understanding, ie consumers are able to relate their usage decisions to the price structure |
| **Jurisdictional obligation principle** | No current principle, but the other pricing principles are not binding | DNSPs may depart from network prices that meet the LRMC and total efficient cost recovery principles to the extent necessary to meet jurisdictional pricing obligations |
| **Network pricing process** | | |
| **Process to develop network prices** | Network prices are developed by DNSPs and approved by the AER on an annual basis | DNSPs must develop a tariff structure statement (TSS) that sets out their network price structures. The TSS is approved by the AER as part of the regulatory determination process and applies for the five year regulatory control period. Price levels are approved by the AER on an annual basis |
| **Consultation** | Neither DNSPs nor the AER are required to consult with stakeholders on network price structures | DNSPs are required to describe how they have consulted with retailers and consumers on the design of network prices and sought to address their concerns. The AER must invite stakeholder submissions on the TSS |
| **Timing** | No set timeframe by which network prices are to be approved and notified | Binding timeframes are included so that network prices are generally approved at least six weeks before they commence, except in the first year of a regulatory period. To allow this to occur, DNSPs must submit their annual pricing proposals earlier; TNSPs (other than those in Victoria) must publish their prices earlier; and the AER must approve network prices within 30 business days |

# Contents

# 1 Distribution network pricing rule change requests

## 1.1 Rule change requests

On 12 September 2012, the Independent Pricing and Regulatory Tribunal (IPART) submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission). This rule change request seeks to modify the annual network pricing arrangements for distribution network service providers (DNSPs) under the National Electricity Rules (NER or rules).

In response to the AEMC's *Power of Choice Review*, on 18 September 2013, the Council of Australian Governments (COAG) Energy Council (formerly Standing Council on Energy and Resources (SCER)) submitted a rule change request to address the incentives and level of guidance in the NER for DNSPs to set cost reflective network prices, as well as the consultation process with consumers.

## 1.2 Rationale for the rule change requests

This section sets out, at a high level, the key problems identified by the rule proponents in their rule change requests.

### 1.2.1 IPART's rule change request

IPART's rule change request identified a number of issues with the current annual network pricing process, including that it:

- does not provide for adequate notification of network prices creating difficulties for retailers in passing on annual network price changes to consumers;
- lacks consultation with retailers and consumers in the development of network prices; and
- does not provide certainty for retailers and consumers with regard to network price changes.

To address these issues, IPART proposed that:

- the annual network pricing process timeframe for transmission and distribution network service providers be moved forward to allow the annual approval and notification of distribution network prices to occur at least two months prior to taking effect (this also entails transmission network prices being notified two months earlier, ie by 15 March). IPART also raised the issue of changes to initial year network pricing processes, but deferred the solution to the AEMC;
- the Australian Energy Regulator (AER) be required to develop guidelines that outline how DNSPs should consult with retailers and consumers in developing and changing their statement of expected price trends. As part of developing the guidelines, the AER would establish what information DNSPs should include in their statement of expected price trends and the timing of the statement; and

- to provide certainty about changes to future network prices, the AER should be required to consider whether DNSPs' annual pricing proposals are consistent with their statement of expected price trends before the AER approves their network price changes each year.

Further details on IPART's rule change request are set out in the consultation paper published on 6 June 2013, which is available on the AEMC's website.

### 1.2.2 COAG Energy Council's rule change request

The rule change request from the COAG Energy Council identified a number of issues in the current distribution network pricing framework and proposed a number of significant amendments to the NER to address the problems it has identified.

The COAG Energy Council proposed changes can be summarised as follows:

- *Consultation on network prices* - Require DNSPs to develop a Pricing Structure Statement (PSS) that sets out their proposed network price structures for the regulatory control period. The PSS would need to be consistent with the distribution pricing principles and approved by the AER as part of the regulatory determination process. Price structures in the approved PSS are to be applied by DNSPs in their annual pricing proposals. DNSPs can seek variations to the PSS within a regulatory control period from the AER if appropriate consultation is undertaken. An AER guideline would outline how DNSPs should consult in developing and amending the PSS. The annual pricing process timing is to be brought forward as appropriate to allow earlier notification of approved network prices.
- *Long run marginal cost (LRMC) as the basis of setting cost reflective network prices* - Amend the distribution pricing principles to require that network prices are based on LRMC and determined having regard to their impact on consumers and the additional costs associated with peak demand; allow LRMC to vary depending on customer location; and require unnecessary transaction costs to be avoided.
- *Consumer impacts to be considered* - Require DNSPs to have regard to how their proposed price structures and pricing levels may impact on different classes of consumers.
- *Allow recovery of residual network costs* - Allow for a mechanism for recovering residual costs in an economically efficient and non-distortionary manner.
- *Determining tariff classes* - Require DNSPs to constitute a tariff class of customers on an economically efficient basis and avoid unnecessary transaction costs.
- *Side constraints* - Clarify that the side constraint provisions apply to consumers regardless of whether they have interval meters or traditional accumulation meters and apply the side constraint provisions between, as well as within, regulatory control periods.

Further details on COAG Energy Council's rule change request are set out in the consultation paper published on 14 November 2013, which is available on the AEMC's website.

## 1.3 Consultants

The AEMC has engaged NERA Economic Consulting (NERA) and The Brattle Group (Brattle) to assist it with the analysis of issues raised in the rule change requests.

NERA was engaged to:

- explain the economic pricing concepts and their practical application to setting efficient network prices;
- investigate case studies to illustrate potential impacts on consumers from a shift to more cost reflective network prices; and
- undertake modelling to examine the impact of more cost reflective prices on network costs and retail bills of consumers with a number of current and emerging technologies. The technologies were air-conditioning, solar photovoltaics (PV) systems, battery storage and electric vehicles.

Since LRMC based network prices would not provide sufficient revenues to recover total costs, the Commission has considered ways in which DNSPs can structure their network prices to recover their total costs. Advice was sought from Brattle to investigate some options for how DNSPs could structure their network prices in order to recover their total costs of providing network services where network prices are based on LRMC. Brattle was specifically requested to consider alternative approaches that can be used by DNSPs given the current constraints on implementation of more sophisticated price structures due to the widespread existence of accumulation meters. In addition, Brattle was asked to explore price structures that did not involve higher fixed charges.

NERA and Brattle's reports have been published with this draft rule determination.[2]

## 1.4 Commencement of rule making process and extension of time

On 6 June 2013, the Commission published a notice under section 95 of the National Electricity Law (NEL) advising of its intention to commence the rule making processes and first round of consultation on the *Annual Network Pricing Arrangements* rule change request submitted by IPART. A consultation paper prepared by AEMC staff identifying specific issues and questions for consultation was also published with the rule change request.

On 29 August 2013, the AEMC issued a notice under section 107 of the NEL to extend the length of the rule change process. At that time, the AEMC had not received COAG Energy Council's rule change request. The reason for the extension was to allow consideration of the AEMC's recommendations in its *Power of Choice review* as potential alternative solutions to some of the issues raised by IPART. Consequently, the *Annual Network Pricing Arrangements* rule change draft determination timeframe was extended by eight months to 31 May 2014.

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2 See NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014; NERA, *Efficiency of Tariffs for Current and Emerging Technologies*, A Report for the AEMC, 21 July 2014; and The Brattle Group, *Structure of Electricity Distribution Network Tariffs: Recovery of Residual Costs*, Report Prepared for the AEMC, August 2014.

On 18 September 2013, the COAG Energy Council submitted its rule change request on distribution network pricing in response to the AEMC's *Power of Choice review*.

Having regard to the fact that IPART's rule change request on the *Annual Network Pricing Arrangements* raised issues that overlapped with the COAG Energy Council's rule change request in respect of consultation on the development of network prices and improving the existing annual network pricing process, the Commission decided to consolidate the two rule change requests into one rule change process. The Commission considered that consolidation would make it easier for stakeholders to engage in the rule change processes and not have to engage separately on two rule processes dealing with very similar issues.

In commencing the rule making process for the consolidated *Distribution Network Pricing Arrangements* rule change request on 14 November 2013, the AEMC issued a notice under section 107 of the NEL to extend the timeframe for making the draft rule determination to 29 August 2014. A consultation paper prepared by AEMC staff was also published, seeking specific comments on aspects of the COAG Energy Council's rule change request.

## 1.5 Consultation on the rule change requests

On 6 June 2013, the AEMC published a consultation paper on IPART's rule change request and on 14 November 2013 a consultation paper on the COAG Energy Council's rule change request was published. A public forum was held on 27 November 2013 in Melbourne to facilitate discussions on the rule change requests. Submissions on the IPART rule change request consultation paper closed on 4 July 2013 and submissions closed on the COAG Energy Council's rule change request consultation paper closed on 19 December 2013. A total of 62 submissions were received. Where appropriate, issues raised by stakeholders in their submissions have been addressed throughout this draft rule determination. A summary of issues that have not been explicitly addressed and the Commission's response to these is provided in Appendix D.

A series of four workshops were also held between February and May 2014 in Sydney, Brisbane and Melbourne to discuss some of the key issues including NERA's approach to its case studies on cost reflective network prices. Materials from these workshops are available on the AEMC's website. Over 120 stakeholders attended the forum and workshops.

The AEMC also met individually with many stakeholders, including DNSPs and consumer representative groups in most jurisdictions.

## 1.6 Consultation on the draft rule determination

In accordance with the notice published under section 99 of the NEL the Commission invites submissions on this draft rule determination by 16 October 2014. In order for the AEMC to meet the statutory deadline for publication of the final rule determination in November 2014, it is important that submissions are provided by this date.

The Commission will hold a public forum on the draft rule determination on 22 September 2014. Details of the forum will be made available on the AEMC's website.

In accordance with section 101(1a) of the NEL, any person or body may request that the Commission hold a hearing in relation to the draft rule determination. Any request for a hearing must be made in writing and must be received by the Commission no later than 4 September 2014.

Submissions and requests for a hearing should quote project number "ERC0161" and may be lodged online at www.aemc.gov.au or by mail to:

Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

# 2 Draft rule determination

## 2.1 Commission's draft determination

In accordance with section 99 of the NEL the Commission has made this draft determination in relation to the rules proposed by IPART and the COAG Energy Council.

The Commission has determined it should make a more preferable rule.[3]

The Commission's reasons for making this draft rule determination are set out in chapters 3 to 5 and Appendix A1 to A7.

A draft of the rule that the Commission proposes to make (draft rule) is attached to and published with this draft determination.

## 2.2 Rule making test

### 2.2.1 Assessment of the draft rule against the NEO

Under section 88(1) of the NEL the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the National Electricity Objective (NEO).

The NEO is set out in section 7 of the NEL as follows:

> "The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system."

For the consolidated rule change requests, the Commission considers that the relevant aspect of the NEO is the promotion of efficient investment in and use of electricity services for the long term interests of consumers with respect to price.[4]

The long term interests of consumers are best met when network prices accurately reflect the efficient costs of providing network services to consumers. Where cost reflective network pricing signals are provided to consumers, it gives them better opportunities to actively participate in the market.

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3 Under section 91A of the NEL the AEMC may make a rule that is different (including materially different) from a market initiated proposed rule (a more preferable rule) if the AEMC is satisfied that, having regard to the issue or issues that were raised by the market initiated proposed rule (to which the more preferable rule relates), the more preferable rule will or is likely to better contribute to the achievement of the National Electricity Objective.

4 Under section 88(2), for the purposes of section 88(1) the AEMC may give such weight to any aspect of the NEO as it considers appropriate in all the circumstances, having regard to any relevant MCE Statement of Policy Principles.

Over the longer term, more efficient pricing of network services can minimise overall electricity network costs borne by consumers due to better utilisation of the network and deferral of peak demand driven network investment.

The Commission is satisfied that the draft rule will, or is likely to, contribute to the achievement of the NEO for the reasons set out below.

### New network pricing process

The draft rule establishes a new network pricing process that will allow for more meaningful engagement between consumers and DNSPs, allowing consumers to have a say in how they are charged for use of the network. Consumer input into network pricing decisions will allow DNSPs to design network price structures that consumers can understand and respond to. If consumers can relate their usage decisions to network price structures, they will be able to make better decisions about how they want to use energy services.

The draft rule also provides for greater engagement between retailers and DNSPs. This will allow retailers to provide DNSPs with feedback on matters including what network price structures retailers are best able to implement through their retail prices. This increases the likelihood that the benefits of cost reflective network prices will be passed on to consumers through retail prices.

The draft rule will also provide consumers and retailers with more certainty and transparency in relation to how and when network prices will change. Access to better information about likely future trends in network prices will assist in developing better consumer understanding of their network prices and enable consumers to make better decisions in relation to their own consumption and investments in energy efficiency measures.

The new network pricing process in the draft rule will lead to further strengthening of positive outcomes in competitive retail markets. The draft rule gives retailers earlier notification and increased certainty with respect to changes to network prices. This reduces the level of risk that retailers face in relation to network prices. As this risk can potentially be passed on to consumers in the retail prices they pay, reducing the level of this risk will ultimately result in better retail pricing outcomes for consumers.

### New pricing principles

The draft rule makes a number of significant changes to the distribution pricing principles to require DNSPs to set network prices that send price signals to consumers about the efficient cost of providing network services. The changes include requirements to base network prices on the LRMC, to recover total efficient costs in ways which do not distort efficient pricing signals and to meet a new consumer impact principle.

LRMC is a measure of the network costs caused by using more energy, or the costs that could be saved by using less energy. Network prices based on this measure send consumers signals about the costs of using the network. By sending these signals, consumers are able to make efficient consumption and investments decisions about their network usage by comparing the value they place on using the network against

the costs of providing network services. If consumers choose to take actions that will reduce network costs, such as by reducing peak demand, then they will be rewarded with lower prices. If consumers value using electricity at peak times more than the costs caused by doing so, network prices will signal to them that they should continue to use it at those times.

The draft rule also requires that the revenue to be recovered from each network tariff must reflect the DNSP's total efficient costs of providing network services. Those total efficient costs must be recovered in a way that minimises distortions to price signals that encourage efficient use of the network by consumers. Consumers will benefit from this change because network businesses will continue to recover their total efficient costs so that they can continue to provide safe and reliable network services, but they will do so in a way that does not reduce the benefits of the efficient usage price signals sent by the LRMC based network prices.

DNSPs must also give effect to a new consumer impact principle when setting their network prices under the draft rule. This principle is in two parts.

The first part requires DNSPs to minimise the impact on consumers of changes in network prices. The purpose of cost reflective network prices is to send pricing signals to consumers. Consumers are more likely to be able to respond to price signals if those signals are consistent and apply for a reasonable period of time. Price shocks or significant year-to-year price volatility will make it difficult for consumers to respond to price signals.

The second part requires network prices to be reasonably capable of being understood by consumers. Consumers will not be able to respond to the price signals that network prices are intended to send if they cannot relate their usage decisions to the price structure.

### 2.2.2 More preferable rule

Under section 91A of the NEL, the AEMC may make a rule that is different (including materially different) from a market initiated proposed rule if the AEMC is satisfied that, having regard to the issues or issues that were raised by the market initiated proposed rule, the more preferable rule will or is likely to better contribute to the achievement of the NEO.

While the Commission's draft rule is a more preferable rule, it incorporates many elements of the rules proposed by IPART and the COAG Energy Council in their rule change requests.

Having regard to the issues raised by the rules proposed in the consolidated rule change requests, the Commission is satisfied that the draft rule will, or is likely to, better contribute to the NEO than the rules proposed by either IPART or the COAG Energy Council. There will be more consultation with consumers and retailers in the development of network price structures, and the process for setting network prices will be more transparent. DNSPs will be subject to a new pricing objective that network prices should reflect the business's efficient costs of providing services to each of its customers. Businesses will also be required to comply with new pricing principles designed to give effect to the network pricing objective, including

obligations to consider impacts on consumers from any changes to their network prices. Annual changes to network prices will also be finalised earlier, allowing consumers and retailers more time to prepare for price changes.

Chapter 5 and Appendix A1 to A7 explain in greater detail how the draft rule differs from the rules proposed by IPART and the COAG Energy Council and the respects in which the Commission considers that the draft rule is likely to better contribute to the achievement of the NEO than those proposed rules.

### 2.2.3 Implementation costs

The draft rule provides for a range of significant changes to DNSPs' obligations under Chapter 6 of the NER. There is also a change to the timing of when the transmission network service providers (TNSPs) must publish their annual transmission prices. There will be implementation costs for the DNSPs, TNSPs, and other stakeholders, including consumers and retailers, in adjusting to these changes.

For the AER, there will be implementation costs as it will need to undertake a more comprehensive periodic review of DNSPs' proposed network prices against the new network pricing objective and the pricing principles under the new Tariff Structure Statement (TSS). The AER will also need to approve annual pricing proposals under a limited timeframe.

These implementation costs are necessary for the significant expected benefits of the draft rule to be realised. These costs are minor when compared with the potential benefits associated with the draft rule. The costs are expected to be outweighed by the expected benefits for consumers.

As explained in chapter 6, network businesses, the AER, retailers and consumers will be given significant time to prepare for these changes under transitional arrangements.

## 2.3 Assessment framework

This section describes the analytical framework that the Commission has applied to assess the rule change requests.

The Commission's assessment approach is based on the NEO. The NEO refers to the three fundamental limbs of efficiency: allocative (efficient use of electricity services), productive (efficient operation) and dynamic efficiency (efficient investment). The Commission has balanced all three aspects of efficiency to reach the decision that best promotes the long term interests of consumers.

Having regard to these concepts of efficiency, the Commission has assessed whether the proposed rules and the draft rule promote the long term interests of consumers using the following criteria:

- efficient pricing;
- efficient allocation of risks;
- consumer and retailer engagement;
- predictability; and
- regulatory burden.

The Commission's application of each of these criteria is briefly described below.

### 2.3.1 Efficient pricing

The Commission has assessed whether the proposed rules and the draft rule will promote efficiency by having regard to two important objectives of a pricing framework in relation to network services.

First, prices should signal to consumers the future costs of providing network services, as it is these costs that consumers can influence by making informed choices about their consumption and investment decisions in how they use electricity. A price signal based on future costs provides opportunities for consumers to respond if they wish to do so by adjusting their consumption in ways that can reduce their own cost of using the network as well as contribute to reducing future network costs and prices for all consumers.

In order for price signals to be effective, consumers need to be able to relate their usage decisions to the structure of network prices. The draft rule's consumer impact principle requires DNSPs to set network prices that are capable of being understood by consumers, and to minimise the impacts of price changes on consumers. This will facilitate consumers' ability to receive and respond to future cost price signals by providing clear, understandable and stable network prices.

Second, efficient prices should also allow the DNSPs to recover the total efficient cost of providing network services. If the DNSPs are not assured of recovering their total efficient costs that they have already incurred, then this may diminish their incentives to undertake future investment in the network in a timely and efficient manner to maintain network reliability and security. Such an outcome would be inconsistent with achieving dynamic efficiency under the NEO.

The draft rule on the pricing principles aims to provide sufficient flexibility and guidance to encourage DNSPs to structure network prices and set network price levels that achieve these objectives.

### 2.3.2 Efficient allocation of risks

The rule change requests in relation to the network pricing process involve changes to the nature and allocation of risks faced by the DNSPs, TNSPs, retailers and consumers.

The existing arrangements create risks for retailers and consumers due to network prices not being finalised until shortly before they commence. If retailers do not have sufficient time to incorporate published network prices into their retail prices, they will need to use estimated network prices. This could lead to inefficient pricing outcomes for consumers. The effect of IPART's proposed rule to bring forward the timing of the network pricing process shifts some of this risk from retailers and consumers to the TNSPs and DNSPs.

The existing arrangements also create risks for DNSPs through misalignment of network prices and network costs. By providing for a closer alignment of network prices and network costs, the COAG Energy Council's proposed rule will place DNSPs in a better position to manage variations between forecast and actual demand.

As a general principle, risks should be allocated to those people who are best able to manage them. This allows the costs of managing the risk to be minimised, which supports productive efficiency. Dynamic efficiency is also supported because if the environment in which businesses operate becomes riskier, this is likely to reduce incentives for them to invest and innovate.

The Commission has assessed the draft rule in relation to the new network pricing process in terms of the nature and appropriate allocation of risks that may be created for all relevant stakeholders.

### 2.3.3 Consumer and retailer engagement

In order for network prices to be effective in their role in allocating resources and reducing overall electricity system costs, consumers must be able to respond to them. Without the ability of consumers to understand and respond to price signals there is no increase in efficiency because outcomes will not change.

The draft rule builds on IPART's and the COAG Energy Council's proposals on consumer and retailer engagement in the network price setting process. It allows their views to influence the development of network prices, which will promote efficiency.

For example, the new network pricing process will require the DNSPs to demonstrate in their TSS how they have engaged with retailers and consumers on developing their network prices and how their views have been taken into account. In addition, incorporating the TSS approval process into the five yearly revenue determination process provides a coordinated opportunity for stakeholders to participate in the regulatory process.

### 2.3.4 Predictability

A regulatory framework that promotes predictability by minimising uncertainty will support allocative and dynamic efficiency in a number of ways.

Changes to the rules should be transparent and easily understood, with obligations clearly specified. This will lead to more predictable outcomes for network businesses, the regulator, consumers, retailers and investors.

For network businesses, predictability supports confidence in markets and supporting regulatory arrangements. If businesses have confidence in the regulatory arrangements, it will encourage them to continue to participate and invest, which promotes dynamic efficiency.

Predictability is also important for consumers. Network prices can only elicit efficient outcomes if consumers understand them and have a reasonable opportunity to respond to them in ways that help manage their costs. Network prices should be relatively simple, transparent and predictable. To achieve this requires effective consumer engagement and involvement. Further, large changes in prices, particularly where they are unanticipated, are likely to undermine consumer confidence.

In light of these considerations, the pricing principles in the draft rule require DNSPs to minimise the impact on consumers of changes in network prices. The new network pricing process with a TSS will support predictable outcomes for the retailers, DNSPs,

TNSPs and consumers. The new annual pricing process will also mean that consumers and retailers have much more certainty about when network prices will change.

### 2.3.5 Regulatory burden

Productive efficiency applies equally to regulatory and administrative arrangements as much as it does to market processes. Changes to the rules should be the minimum required to achieve their intended objectives and changes should not create an unnecessary compliance burden for stakeholders.

The draft rule creates new obligations for the DNSPs with regard to the development of network prices and a supporting compliance framework that strengthens the role of the AER in approving the TSS and network prices on an annual basis.

The Commission considers that the administrative and regulatory burden created by the draft rule is outweighed by the benefits to stakeholders, especially consumers.

## 2.4 Other requirements under the NEL

The Commission's consideration of other NEL requirements is contained in Appendix B.

# 3 Overview of new pricing objective and pricing principles

**Summary**

- This chapter provides an overview of the new pricing objective and pricing principles in the draft rule. Each pricing principle is discussed further in Appendices A1 to A5. Other related amendments proposed by the COAG Energy Council regarding tariff classes and side constraints are also summarised in this chapter and explained in Appendices A6 and A7.
- A new network pricing objective will be the focus for DNSPs when developing their network prices. This objective is that the network prices that a DNSP charges each consumer should reflect its efficient costs of providing network services to that consumer.[5]
- This pricing objective will be supplemented by a number of pricing principles. These principles provide clear requirements for DNSPs to develop network prices that are cost reflective and provide efficient price signals to each consumer, while transparently balancing consideration of consumer impacts and compliance with any jurisdictional pricing obligations.
- The new pricing principles will require DNSPs to:
  - set cost reflective network prices that are based on the LRMC of providing network services;
  - recover their total efficient costs in a way that minimises distortions to the efficient usage decisions of consumers;
  - minimise the impact on consumers of changes to network prices between regulatory years and set prices that can be understood by consumers; and
  - comply with any applicable jurisdictional pricing obligations.
- The new pricing objective and principles will create more transparency about the trade-offs DNSPs make between cost reflectivity, revenue recovery, consumer impacts and compliance with jurisdictional pricing obligations.
- The Commission has also considered other minor amendments proposed by the COAG Energy Council related to tariff classes and side constraints. The draft rule only makes one amendment to clarify that side constraints also apply to consumers with interval meters.

5 The specific language included in the draft rule reflects the existing defined terms in the NER. For example, the rule uses the existing defined term 'retail customers' instead of consumers.

## 3.1 Introduction

This chapter provides an overview of the new network pricing objective and principles contained in the draft rule. A more detailed analysis of the current pricing principles and the Commission's reasons for the draft rule are provided in Appendices A1 to A5 of this draft determination.

In chapter 4, the Commission sets out some of the outcomes that have resulted from the application of the current pricing principles and its views on what the expected outcomes are from the new pricing objective and pricing principles. Appendices A6 and A7 set out in detail the Commission's consideration of the tariff class and side constraints changes proposed by the COAG Energy Council.

This chapter is structured as follows:

- section 3.2 summarises the current pricing principles applicable to DNSPs in setting their network prices;
- section 3.3 explains the new network pricing objective;
- section 3.4 provides an overview of the new pricing principles;
- section 3.5 explains how the pricing objective and the pricing principles work together, and how any conflicts between different pricing principles are to be managed; and
- section 3.6 discusses the Commission's consideration of the COAG Energy Council's proposed minor changes to the network pricing related provisions regarding tariff classes and side constraints.

## 3.2 Current distribution pricing principles

The current distribution pricing principles were intended to guide DNSPs to set network prices that are efficient and meet the regulated revenue requirements of DNSPs. These pricing principles and supporting provisions rely on a number of economic pricing concepts such as:

- network customers being grouped into tariff classes for pricing purposes on an economically efficient basis;
- network prices should be within the stand alone and avoidable cost bounds for providing network services;
- prices should take into account the long run marginal cost (LRMC) of providing network services;
- there should be minimal distortion to efficient consumption patterns in recovering residual network costs; and
- transaction costs should be considered when determining the extent to which network price signals should be customised for individual customers.

There are a variety of reasons why DNSPs have not developed network prices in accordance with the policy intent of the current pricing principles. The main reason is the lack of firm obligations in a number of the existing pricing principles. For example, DNSPs are only required to "take into account" LRMC when developing their prices.

In practice, DNSPs' price structures have not reflected the LRMC of providing network services.

As discussed in the next chapter, network prices do not currently send consumers efficient signals about when, where and how to use electricity. Some consumers pay more than the costs caused by their use of the network. Other consumers pay less than the costs caused by their use. This outcome has resulted from a lack of cost reflective pricing of network services by DNSPs.

In light of these outcomes, the Commission's draft rule proposes a new network pricing objective and a set of supporting pricing principles to provide clearer obligations on DNSPs to develop network prices that are cost reflective and provide efficient signals to each consumer, while transparently addressing consumer impacts and jurisdictional pricing obligations.

The new objective and principles are described below.

## 3.3 A new network pricing objective

The Commission's draft rule includes a new network pricing objective to guide DNSPs in developing network prices that provide efficient pricing signals to individual consumers.

The network pricing objective is as follows:

> "The network pricing objective is that the tariffs that a Distribution Network Service Provider charges in respect of its provision of direct control services to a retail customer should reflect the Distribution Network Service Provider's efficient costs of providing those services to the retail customer."

The long term interest of consumers will be promoted by network prices that meet this network pricing objective.

The new pricing principles then provide guidance on how to give effect to the network pricing objective. The draft rule also provides guidance on how each DNSP is to make trade-offs between the various principles in order to meet the network pricing objective.

The focus of the network pricing objective is cost reflectivity. Cost reflectivity in relation to network tariffs has three key components:

(i) Sending efficient signals about future network costs.

(ii) Allowing a DNSP to recover its regulated revenues so that it can recover its efficient costs of building and maintaining the existing network.

(iii) Each consumer should pay for the costs caused by its use of the network.

Taken together, these three components of cost reflectivity should result in an outcome where the network prices that each consumer faces reflect the costs that particular consumer causes through its use of the network.

Cost reflective network prices will allow consumers to make more informed choices about when, where and how they use electricity. The prices that consumers pay will reflect the decisions that they make and the costs caused by those decisions. If consumers chose to use electricity in ways that reduce network costs, for example by using less power at peak times when the network usage is at its highest, they will be rewarded through lower electricity charges.

## 3.4 Pricing principles

### 3.4.1 Principle on sending efficient future network cost signals

An important element of meeting the network pricing objective will be to set network prices that send efficient future cost signals to consumers. To establish how DNSPs should set their network prices to provide these signals, the draft rule requires DNSPs to base each tariff on the LRMC of providing network services.

Appendix A1 sets out the Commission's views on why LRMC is the most appropriate measure of future cost signals. Appendix A2 discusses how the draft rule implements the LRMC based pricing obligation.

The Commission has considered the methodology for calculating LRMC based network prices. As highlighted in the report from NERA, there are various ways that LRMC can be calculated and implemented through different efficient price structures.[6]

The Commission considers that DNSPs should have the flexibility to implement LRMC based network prices in the way that best suits their network characteristics. The draft rule does this by not specifying the method for calculating LRMC. However, the draft rule provides a number of factors that DNSPs must take into account in choosing the method to calculate LRMC and determining the manner in which that method is to be applied:

- the costs and benefits associated with using and applying that method;
- the extent to which consumers are able to receive and respond to price signals;
- the additional costs likely to be associated with meeting demand from the relevant consumers at times of greatest utilisation of the relevant part of the distribution network; and
- the location of the relevant consumers and the extent to which costs vary between different locations in the distribution network.

These factors will be critical in focussing potential LRMC methodologies on achieving the network pricing objective. The obligation to base network prices on LRMC together with the guiding factors about the methodology should provide a sufficiently robust framework for DNSPs to implement future pricing signals that meets the network pricing objective.

The draft rule also provides guidance and clarity to DNSPs, consumers and the AER through a high level definition of LRMC.

6 NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014.

### 3.4.2 Principle on the recovery of total efficient total costs

As part of the five year regulatory determination process, the AER sets each DNSP's allowed revenues based on the expected total efficient cost of maintaining a reliable and secure network. It is important that DNSPs can recover these total efficient costs. If DNSPs were unable to do so, their financial viability would be threatened and they may be unable to maintain a safe and reliable network, which would not be in the long term interests of consumers.

The first pricing principle above requires DNSPs to base their network prices on LRMC. If network prices only recovered LRMC, then the revenues from these prices would be unlikely to allow DNSPs to recover their total efficient costs. LRMC estimates the costs that would be incurred to build extra network capacity to meet an increase in demand, or the costs that could be saved by reducing demand. However, DNSPs have also incurred significant costs in building and maintaining the existing network to meet existing demand and comply with reliability standards and other regulatory requirements. It is important that DNSPs can recover their total efficient costs, including costs related to building and maintaining the existing network.

The pricing principles therefore include a total efficient cost recovery principle that has three parts:

(i) To enable DNSPs to continue to provide safe and reliable network services to consumers in the long run, DNSPs must be allowed to recover their total efficient costs of providing network services. The pricing principle achieves this outcome by providing that the total revenue expected to be recovered from all consumers must permit the DNSP to recover its expected revenue for the relevant services as determined in accordance with the AER's distribution determination.

(ii) DNSPs should allocate their total efficient costs to individual network tariffs so that each tariff is cost reflective. The pricing principle does this by requiring that the amount of revenue recovered from each tariff must reflect the total efficient costs of providing network services to the consumers that are assigned to that tariff.

(iii) To maximise the benefits of providing efficient pricing signals to consumers under LRMC based network prices, DNSPs should recover the difference between LRMC based prices and total efficient costs in a way that minimises distortions to consumers' usage decisions. The pricing principle does this by requiring DNSPs to recover their revenues in a way that minimises the distortions to the price signals for efficient usage that would be sent by LRMC based prices.

This pricing principle is explained in more detail in Appendix A3.

### 3.4.3 Principle on avoiding cross subsidies between tariff classes

A key aspect of the pricing objective is that network prices should be free from cross-subsidies. This aim has traditionally been sought to be achieved under the NER by setting prices for a particular service within the range where the price generates more revenue than the avoidable cost of not providing the service to the relevant consumers, but less revenue than the stand-alone cost of providing the service. The current pricing

principles in the NER require network prices for each tariff class to be within this bound.[7]

However, these avoidable and stand-alone cost bounds are relatively wide bounds and under the current pricing principles there is very little guidance as to where within these bounds the right pricing level lies. In part, the difficulty with the avoidable and stand-alone costs concept stems from the fact that the current pricing principles only require DNSPs to allocate network costs to groups of consumers with similar characteristics, ie at a tariff class level.

The Commission considers that these stand-alone and avoidable cost bounds are not sufficient on their own to set efficient prices, which is why the additional pricing principles discussed above and below have been added. However, these stand-alone and avoidable cost bounds continue to have value and have been retained as a pricing principle to safeguard against large cross-subsidies between different tariff classes. For example, this principle would limit cross-subsidies between residential and business consumers if they were assigned to different tariff classes.

The Commission's draft rule therefore retains the existing requirement for DNSPs to price within the stand-alone and avoidable cost bounds for each tariff class. However, the draft rule amends the wording to clarify that this requirement is mandatory and network prices must always be within this range.

The draft rule provides that a DNSP's expected revenue from each tariff class *must* lie between the stand-alone and avoidable cost bounds, instead of *should* lie within those bounds. The change of wording from *should* to *must* is more appropriate given the mandatory nature of these stand-alone and avoidable cost bounds. The Commission understands that in practice DNSPs and the AER treat these bounds as mandatory, so this change is primarily a clarification.

### 3.4.4 Principle on consumer impacts

The draft rule introduces a consumer impact principle to support the network pricing objective. This principle places an obligation on DNSPs to set network prices that consumers can understand and to minimise the impacts of network price changes on consumers.

This principle will assist consumers to make efficient long term consumption and investment decisions and will help manage the transition to cost reflective network prices.

The move to more cost reflective network prices could result in significant price changes for some consumers. Consumers are more likely to be able to respond to the price signals that are intended to be sent by network prices if those signals are consistent and apply for a reasonable period of time. Price shocks or significant year-to-year price volatility will make it difficult for consumers to respond to price signals.

7 Clause 6.18.5(a) of the NER.

The requirement to minimise the impact of network price changes on consumers will assist DNSPs to manage price shocks by allowing them to slowly transition consumers to cost reflective network prices over time. The draft rule expressly allows this transition to take place over more than one regulatory control period. Regulatory control periods are usually five years long.

Under the draft rule, DNSPs will need to be transparent in how they address the cost reflectivity principles and this consumer impact principle and how they have adjusted their prices to address consumer impacts. The draft rule allows DNSPs to depart from cost reflective prices to the extent necessary to meet this consumer impact principle. DNSPs will be required to transparently explain how they have done so. This will be a critical element of their TSS under the new network pricing framework discussed in chapter 5.

This consumer impact principle is explained in more detail in Appendix A4.

### 3.4.5 Principle on meeting jurisdictional pricing obligations

Currently, many DNSPs have network pricing requirements placed on them through jurisdictional obligations that seek to meet a number of social and equity objectives. For example, several states have uniform state-wide network pricing obligations. Victorian DNSPs must also comply with jurisdictional rules on the time periods that can be used for time of use pricing for consumers with smart meters.

Consistent with the COAG Energy Council's proposed rule, the draft rule includes an additional pricing principle to provide an appropriate balance between achieving cost reflectivity of network prices and complying with jurisdictional pricing obligations.

A requirement to set network prices to meet the network pricing objective and the pricing principles for cost reflectivity could create a conflict with jurisdictional pricing obligations where those obligations require prices to be set to achieve some other objective. DNSPs could be placed in the position of having to comply with one requirement and thereby being unable to comply with the other.

In recognition of this potential conflict, the draft rule explicitly addresses the need for DNSPs to meet jurisdictional obligations.

To realise the benefits of efficient network pricing under the network pricing objective and the other pricing principles, the draft rule provides that if DNSPs must depart from network prices that meet the cost reflectivity principles so as to enable them to meet their jurisdictional pricing obligations, they may do so only to the minimum extent necessary.

This approach will promote clear and transparent network price development. The draft rule also requires DNSPs to explain in their TSS how they have departed from the cost reflectivity principles in order to meet their jurisdictional pricing obligations.

The jurisdictional pricing obligation principle is explained in Appendix A5. This Appendix also gives more detailed examples of current jurisdictional pricing obligations that DNSPs are required to comply with.

## 3.5 How the pricing objective and pricing principles work together

Several submissions raised the potential for the various pricing principles that were proposed by the COAG Energy Council to conflict with each other. In particular, some stakeholders were concerned that the requirement to base network prices on LRMC could conflict with the consumer impact principle and the jurisdictional pricing obligations principle.

The draft rule clearly sets out in clause 6.18.5(b) to (d) how the pricing objective and the pricing principles work together.

The first step for DNSPs in developing their network prices will be to calculate cost reflective prices.

To calculate cost reflective prices, each tariff must first be based on LRMC, as required by the principle on sending efficient future network cost signals. The difference between LRMC based prices and the DNSP's expected revenue as determined under its distribution determination must then be recovered in accordance with the principle on recovery of total efficient costs. The revenue recovered by each tariff class must also fall within the avoidable and stand-alone cost bounds as required by the principle on avoiding cross-subsidies between tariff classes. There should be no conflict between these three pricing principles.

The draft rule then allows DNSPs to vary from prices which would result from complying with these three cost reflectivity pricing principles only to the extent necessary to give effect to the consumer impact and jurisdictional pricing obligation principles.

If a DNSP proposes to depart from cost reflective prices in order to give effect to the consumer impact and jurisdictional pricing obligations pricing principles, then as part of the information that it provides with its proposed TSS, it must describe that departure and explain how the departure is only to the extent necessary to comply with those principles.

The network pricing objective should guide how DNSPs apply each of the pricing principles and exercise the flexibility and discretion that they have under each principle. The draft rule requires that a DNSP must comply with the pricing principles in a manner that will contribute to the achievement of the network pricing objective.

## 3.6 Other proposed changes to network pricing related provisions

### 3.6.1 Tariff classes

The NER currently provides discretion to DNSPs in constituting tariff classes based on economic efficiency and transaction cost considerations. There is no explicit definition of economic efficiency in the NER, and while DNSPs often justify the tariff classes they establish on the basis of economic efficiency, they interpret economic efficiency broadly.

The COAG Energy Council's rule change request proposed changes to provide greater clarity and certainty on the setting of tariff classes. The rule change request did not

specify any problems that are considered to have arisen as a result of how DNSPs currently set tariff classes.

As discussed in Appendix A6, the Commission considers that the proposed changes by the COAG Energy Council involve relatively minor wording changes that will not add significantly greater clarity or make material differences to the factors that DNSPs currently balance in developing their tariff classes. Under both the current and the proposed rule, DNSPs must balance economic efficiency benefits and transaction costs.

The Commission's draft rule does not make the amendment to tariff class provisions as requested by the COAG Energy Council. The Commission considers that a better alternative is to require DNSPs to apply the new pricing principles to develop individual network tariffs that are cost reflective. Under this approach, it would not matter how broadly DNSPs constitute their tariff classes, as each network tariff would be cost reflective and send appropriate signals to consumers about the costs caused by their usage decisions. Tariff classes would retain a limited role primarily in relation to how the side constraint provisions are applied.

### 3.6.2 Side constraints

The current side constraint provisions in the NER seek to limit the impact of network price changes on consumers. They specify that average network prices for each tariff class within a regulatory control period cannot increase by more than two percent above the average price increase for all consumers.[8]

The COAG Energy Council proposed two minor amendments to the side constraint provisions. First, it proposed removing the current ambiguity as to whether the side constraint provisions apply to consumers with interval meters. Second, it proposed extending the application of side constraints across regulatory control periods.

The Commission's consideration of the proposed amendments is detailed in Appendix A7. The draft rule only makes the amendment proposed by the COAG Energy Council in relation to clarifying the application of side constraints to consumers with interval meters.

The Commission has not made the amendment to extend the side constraints across regulatory control periods. The current side constraints provision has largely been ineffective in limiting price shocks for individual consumers. This is because side constraints only apply to average price changes at a tariff class level, which may be made up of a broad group of consumers. Accordingly, extending the side constraints across regulatory control periods is not likely to result in material benefits for consumers.

The COAG Energy Council's intended policy objective would be better achieved through the new consumer impact principle in the draft rule. The consumer impact principle applies to each individual tariff and would be a more effective means of managing the impact of price changes on individual consumers.

8 The side constraints apply to the increase in weighted average tariff revenue, which is a measure of average network tariffs.

# 4 Expected outcomes for consumers under the draft rule

**Summary**

- This chapter sets out some of the outcomes that have resulted from the application of the current pricing principles.
- It also discusses the Commission's views on the expected outcomes from the new pricing objective and pricing principles in the draft rule.
- Case studies undertaken by NERA for the Commission illustrate the outcomes that result from network prices that are not cost reflective.
- NERA's case study on air-conditioners shows that a consumer that buys and uses a large air-conditioner does not pay the full costs of that decision. In this case study, the consumer would face about an extra $300 a year in network charges, but the extra network costs caused by the use of the air-conditioner at peak times would be almost $1,000 a year. The $700 difference is recovered through the rest of the customer base facing higher network charges.
- Several other organisations have also undertaken recent research that shows the extent of these cross-subsidies in network prices. Research by AGL in Victoria shows that hardship consumers are currently the most likely group to be paying more than the costs that their usage causes and are subsidising costs caused by other consumers.
- Under the draft rule, DNSPs will be required to develop network prices that are cost reflective and send efficient pricing signals to consumers. This will allow consumers to make better decisions about how they want to use energy services.
- Case studies by NERA and research by other organisations illustrate the potential benefits for consumers from cost reflective network prices:
  - NERA's case studies show that up to 81 per cent of consumers would pay lower charges in the medium term under a cost reflective capacity price and up to 69 per cent would pay lower charges under a critical peak price.
  - NERA estimates that average network charges would fall by between $28 and $57 a year in the medium term under these cost reflective prices.
  - AGL's research shows that 64 per cent of consumers would pay lower charges in the long run under AGL's example cost reflective tariff.
- This research also shows that many vulnerable consumers would benefit from cost reflective prices. For example, AGL's research shows that 79 per cent of consumers in a hardship program would pay lower charges in the long run under AGL's example cost reflective tariff.
- However, some consumers will face higher network prices in future. This concern will be partly addressed by the new consumer consultation requirements and the requirement to minimise the impact of price changes on

consumers, for example by gradually transitioning consumers to cost reflective network prices over several years.

- The Commission also recommends that governments review the structure of their energy concession and hardship schemes so that they deliver on their purpose in an efficient and targeted way. This review should occur at the same time as DNSPs develop their new cost reflective prices over the next 12-18 months.

## 4.1 Current network pricing outcomes

As described in section 3.2, the current distribution pricing principles are based on a number of economic concepts. However, in practice these pricing principles have not resulted in DNSPs implementing efficient network prices that reflect the costs caused by individual consumers.

For example, most current network prices reflect network costs that are averaged by a combination of fixed and variable charges across the vast majority of residential and small business consumers.[9] This approach results in each consumer paying a proportion of total costs that depends on their absolute consumption level rather than taking into account the timing and locational aspects of their consumption, which are the key drivers of network costs.

In part, DNSPs have taken this approach to pricing because it has historically reflected the way consumption of electricity has been measured by meters located at each consumers' premises. The prevalence of simple accumulation meters for residential consumers meant DNSPs could only measure the total amount of electricity used by the consumer, regardless of when during the day, week or year it is consumed. With accumulation meters, this was the easiest way for DNSPs to charge for network costs.

Improvements in metering technology have meant that advanced meters are being increasingly installed at residential consumers' premises and can allow for more sophisticated ways of measuring electricity usage and offer better pricing options. Metering technology such as interval meters and smart meters can offer much better ways to capture and send signals about the network costs caused by a consumer's usage.

The Commission is currently assessing another rule change proposal from the COAG Energy Council in relation to expanding competition in metering and related services.[10] Like the COAG Energy Council's distribution pricing proposal, this metering rule change was recommended by the Commission in its *Power of Choice* review. The metering rule change aims to expand competition in metering and the value added services that advanced metering can provide, with more consumers being able to choose advanced meters if they want them.

9 See: Simshauser, P., Downer. D., *On the inequity of flat-rate electricity tariffs*, AGL Applied Economic and Policy Research, Working Paper No. 41, June 2014.

10 See: http://www.aemc.gov.au/Rule-Changes/Expanding-competition-in-metering-and-related-serv.

As highlighted in the recent analysis released by the Grattan Institute, a simple fixed and variable price structure based on a consumer's absolute consumption offered by accumulation meters worked reasonably well in the days when most residential consumers used electricity in largely similar ways.[11] For instance, residential consumers used similar electrical appliances and had largely similar energy needs. While demand varied across days, weeks and seasons, the variation did not cause significant changes in the amount each consumer's usage contributed to the cost of providing network services.[12] However, the way electricity is used by consumers has been rapidly changing, particular over the past decade.[13]

Changes in technology have been a key driver of changing electricity consumption patterns. There has been a significant penetration of air-conditioning across the NEM that has driven significant increases in peak demand. More recently, the market has seen the rising uptake of solar PV panels by residential consumers. The uptake of solar PV has contributed to falling total demand from the residential sector, but has not had as significant an impact on peak demand, resulting in a much larger gap between average and peak demand. In addition, energy efficiency awareness and standards have also been contributing to decreases in overall energy consumption.

These types of changes make it clear that technology shapes the way consumers use electricity and will play an even more important role in the future. New and emerging technologies like battery storage and electric vehicles have the potential to significantly change how consumers use energy in the coming years.[14]

The majority of network prices that are currently available for residential consumers are dominated by flat volume or inclining block energy prices as shown in Table 4.1.

Under these network prices, the price of using electricity at off-peak times is higher than the cost caused by that usage, while the price of using energy at times of peak demand is much lower than the cost.

11 Wood, T., Carter, L., and Harrison, C., *Fair pricing for power*, Grattan Institute, July 2014.

12 Ibid., p.7.

13 See AEMC, *Consideration of Differences in Actual Compared to Forecast Demand in Network Regulation*, Advice to SCER, 26 April 2013, pp.42-53.

14 NERA, *Efficiency of Tariffs for Current and Emerging Technologies*, A Report for the AEMC, 21 July 2014.

**Table 4.1 Structure of typical residential network prices in 2013-14[15]**

| DNSP | Tariff name | Tariff structure |
|---|---|---|
| ActewAGL | Residential basic network | Two-part tariff comprised of a fixed charge in cents per day and a flat volume charge in cents per kWh. |
| Ausgrid | LV Res non-TOU | Three block, inclining block tariff comprising of a fixed charge in cents per day and three volume charges in cents per kWh hour. A relatively low volume charge for use below 1000kWh per billing quarter, a medium rate for use between 1000-2000 kWh per quarter and a relatively high rate for usage above 2000kWh per quarter. |
| Energex | Residential flat | Two-part tariff comprised of a fixed charge in cents per day and a flat volume charge in cents per kWh. |
| South Australian Power Networks | Low voltage residential single rate | Four block, inclining block tariff comprising of a fixed charge in cents per day and four volume charges in cents per kWh hour. A relatively low volume charge for use below 333.3kWh per month, a low-to-medium rate for use between 333.3-833.3kWh per month, a high-to-medium rate for use between 833.3-1666.6kWh per month and a relative high rate for use above 1666.6kWh per month. |
| Aurora Energy | General network residential | Two-part tariff comprised of a fixed charge in cents per day and a flat volume charge in cents per kWh. |
| CitiPower | Low voltage residential single rate | Two block, inclining block tariff comprising of a fixed charge in cents per day and two different volume charges in cents per kWh hour. A relatively low volume charge for use below 340kWh per month and a relatively high rate for use above 340kWh per month. |

Source: ActewAGL approved 2013-14 pricing proposal, Ausgrid approved 2013-14 pricing proposal, Energex approved 2013-14 pricing proposal, South Australian Power Networks 2013-14 approved pricing proposal, Aurora Energy 2013-14 approved pricing proposal and CitiPower 2013 approved pricing proposal.

These prices provide inefficient signals to consumers about when, how and where to use electricity.

Consumers receive substantial network charge reductions for reducing total usage, even though total energy usage does not reflect the divers of network costs. On the other hand, consumers only receive small reductions in charges from reducing peak usage, even though the costs of providing network services at peak times are high.

This disconnect between network prices and the cost of providing network services creates inefficient incentives that influence the consumption and investment decisions made by consumers.

15 The typical residential network tariff is the tariff for each DNSP with the highest number of consumers and applies to residential consumers on the DNSP's network regardless of location. There are a number of other tariffs that DNSPs have that include time and demand based charges. However, these tariffs only apply to a small proportion of consumers.

For example, take a consumer considering whether to purchase an air-conditioner, which air-conditioner to purchase, and when and how much to use the air-conditioner:

- In deciding whether to purchase an air-conditioner, the consumer will compare how much it values air-conditioning against the cost of purchasing and using the air-conditioner. Those costs include the price of the air-conditioner and the increase in electricity charges from using it. However, the consumer will not currently be able to make an efficient decision by comparing the value it receives against the actual costs because network prices currently do not reflect the costs of using the air-conditioner.
- The consumer will also not be able to make an efficient decision about which air-conditioner to purchase. For example, in most networks there is currently no incentive to purchase an air-conditioner with load control capability that can significantly reduce network costs by automatically cycling to 'economy' mode for brief periods at times of peak demand.[16] Studies have shown that most consumers do not notice any decrease in comfort from the activation of this form of load control.
- Once purchased, the consumer will face a strong incentive to reduce total energy usage but very little incentive to reduce usage at peak times.

The result of these factors is that most consumers that purchase an air-conditioner are unlikely to be able to make efficient decisions. Under current network prices, a significant amount of the costs caused by buying and using an air-conditioner will not be paid by the consumer that buys the air-conditioner. Instead, those costs will be recovered by other consumers facing higher network charges.

The cross-subsidies caused by current network prices are illustrated in a recent research paper published by AGL.[17] Analysis by AGL of data from 160,000 Victorian residential consumers shows that existing network price structures result in half of all residential consumers paying too much, while the other half are being cross-subsidised.

Potentially the most concerning finding from AGL's research is that residential consumers in financial hardship are the group that is on average the most adversely affected by flat-rate price structures. Those consumers had the highest electricity charges on average of all consumer groups studied by AGL and were the most likely to be paying more than the costs that they cause.

16 The main exception is Energex's network in Queensland, where consumers receive a cash rebate from Energex for purchasing an air-conditioner with load control capability.

17 Simshauser, P., Downer. D., *On the inequity of flat-rate electricity tariffs*, AGL Applied Economic and Policy Research, Working Paper No. 41, June 2014.

AGL explains the reason for this outcome as follows:

> "This data took us by surprise... we had anticipated that Households in Hardship would be large users (i.e. large electricity bills), but we had not anticipated the extent of off-peak consumption. This may reflect variables such as the quality of materials used in the housing stock (eg limited insulation), a less inefficient [sic] electrical appliance stock, and some element of anthropogenic pattern driven by the circumstances facing these households."[18]

AGL goes on to explain that:

> "Above all, because this cohort [households in hardship] exhibits the most favourable load factor, they will be the most adversely affected from continued use of existing tariff structures. To be perfectly clear, consumer advocates seeking to retain simple tariff structures or further simplify tariff structures by moving to a single variable rate are almost entirely (albeit inadvertently) doing more damage than good to this cohort."[19]

### NERA's technology case studies

The AEMC commissioned NERA to examine the impact on network costs from the use of different technologies. As highlighted in NERA's report, there are considerable differences in what some consumers currently pay and what they would pay if their network prices reflected the network costs caused by their usage.[20]

The case studies in Box 4.1 below summarise NERA's findings in relation to the impact of air-conditioners and solar PV.

18 Simshauser, P., Downer. D., *On the inequity of flat-rate electricity tariffs*, AGL Applied Economic and Policy Research, Working Paper No. 41, June 2014, pp.10-11.

19 Simshauser, P., Downer. D., *On the inequity of flat-rate electricity tariffs*, AGL Applied Economic and Policy Research, Working Paper No. 41, June 2014, p.11.

20 NERA, *Efficiency of Tariffs for Current and Emerging Technologies*, A Report for the AEMC, 21 July 2014.

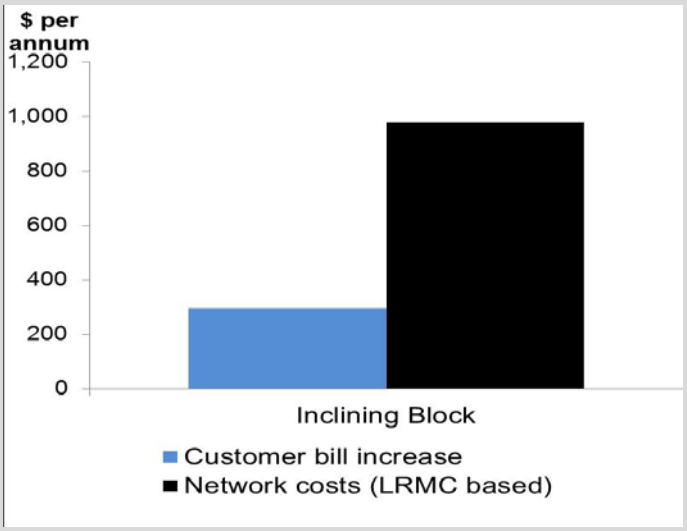
**Box 4.1: Summary of NERA's technology case studies**

**Case study one – Consumers' investment and consumption incentives and outcomes for air-conditioners**

Consumers with air-conditioners generally use a higher proportion of their total energy usage during peak times than other consumers. This is because air-conditioners represent a large residential load and many consumers switch their air conditioning on at the same time when it is hot. These consumers therefore typically cause higher network costs relative to their total usage. Under current flat and inclining block price structures, these consumers are not charged in a way that reflects their usage at peak times and the increased network costs they cause.

NERA undertook a case study of consumers with a large 5kW air-conditioner in SP AusNet's network in Victoria. A key finding of that case study is shown in the graph below.

**Air-conditioners cause network costs that exceed the costs to the consumer**




Source: NERA, *Efficiency of Tariffs for Current and Emerging Technologies*, A Report for the AEMC, 21 July 2014, p.20.

NERA's analysis indicates that the increase in network costs associated with a consumer purchasing and using an air-conditioner of this size far exceeded the additional network charges faced by the consumer.

This consumer would face an extra $296 per year in network charges. But the extra network costs caused by the use of the air-conditioner at peak times would be $979 a year. The difference of $683 is a cross subsidy between consumers with and without air-conditioners.

This extra $683 a year will be recovered by the rest of the customer base facing higher network charges.

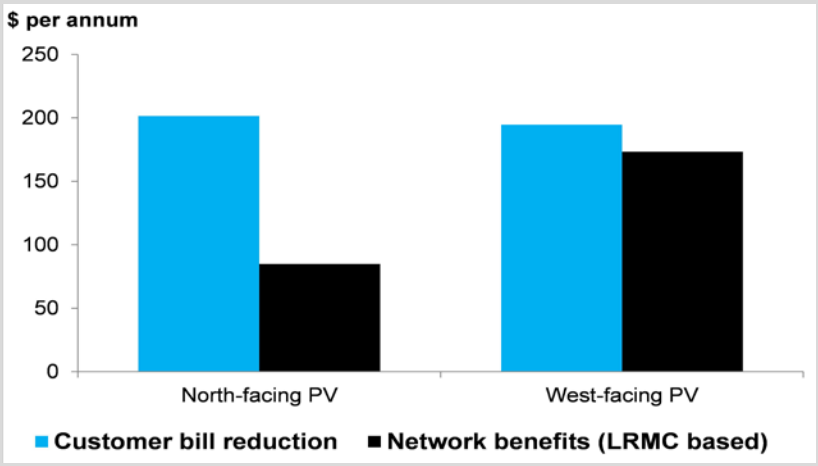
**Case study two – Consumers' investment and consumption incentives and outcomes for solar PV installations**

Consumers with solar PV installations typically have lower total energy usage than other consumers because they consume energy from the solar panels during daylight hours. While their total usage is lower, their peak usage is not typically reduced by as high a proportion because peak periods often fall outside of times when the sun is brightest and solar PV generation is high.

Under current network prices, many consumers with solar panels will pay significantly less than similar consumers without solar panels even though the difference in the network costs that they cause is small.

NERA undertook a case study of a consumer with an average sized solar PV installation (2.5kW) in South Australia. The reduction in network charges faced by this consumer and the reduction in network costs caused by the consumer's solar installation is shown below.

**Consumer bill reductions for north-facing PVs exceed the network benefits**




Source: NERA, *Efficiency of Tariffs for Current and Emerging Technologies*, A Report for the AEMC, 21 July 2014, p.27.

NERA's analysis indicates that the reductions in network charges associated with north-facing solar panels exceeds the reduction in network costs. This consumer saves $202 a year on its network charges. But the reduction in network costs is only $85 a year. The difference of $117 a year is recovered by other consumers facing higher network charges.

If this consumer installs west-facing solar panels, the network cost savings are significantly larger than for north-facing panels. Network costs fall by $173 a year instead of just $85 a year. This is because west-facing solar panels produce more electricity during the late afternoon peak period.

However, consumers do not currently face an incentive to install west-facing solar panels, because north-facing panels produce slightly more total energy and the consumer receives a greater reduction in charges.

## 4.2 Benefits to consumers of cost reflective network prices

Under the draft rule, DNSPs will be required to develop network prices that reflect their efficient costs of providing services to each consumer.

When network prices reflect the costs of providing network services, the prices consumers pay will reflect the decisions they make. Consumers will be able to make more efficient consumption and investment decisions by comparing the value they place on using the network against the cost of providing network services.

### 4.2.1 NERA's case studies on the impact of cost reflective network prices on consumers

#### NERA's case studies on cost reflective capacity prices and critical peak prices

Analysis by NERA demonstrates the extent to which consumers can benefit from cost reflective network prices.[21]

In their report, NERA sets out illustrative case studies for developing cost reflective network price structures. The case studies show that network prices that signal future costs will likely lead to lower electricity prices for the majority of residential consumers. This is because they provide stronger signals for consumers to minimise coincident network peak demand, thereby lowering future network costs which will be passed through to consumers through lower future network prices.[22]

For example, NERA undertook a case study where residential consumers move to either a peak capacity price or a critical peak price based on estimates of LRMC. Those prices would provide a stronger correlation between the consumer's usage decisions and network peak demand.[23] Such prices would provide consumers with larger rewards if they choose to shift their consumption to off-peak times, which would result in lower electricity charges.

As shown in Tables 4.2 and 4.3 below, average network charges are expected to decrease and a significant proportion of residential consumers are expected to be better off under a peak capacity price or a critical peak price:

- The extent of the reductions in average network charges and the proportion of consumers that will pay lower charges depend on the method for recovering residual costs (ie the difference between LRMC based prices and the DNSP's total efficient costs). The approach to recovering residual costs is discussed in Appendix A3.

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21 NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014.

22 Coincident peak demand refers to when a consumer's individual peak consumption coincides with the greatest utilisation of the network.

23 In NERA's illustrative case studies, a peak capacity tariff would include charging the consumer based on its individual maximum demand during a defined network peak period of the day. A critical peak tariff would be charged for a four hour duration on the three maximum demand days within a year. A critical peak tariff would be charged to the consumer for a peak event period, which would be defined by the DNSP and communicated to the consumer, typically the day prior to the event period. See NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014, pp.33-38.

- NERA's 'short term' result assume that consumers do not change their energy usage decisions in response to new network prices. In the 'medium term' results, NERA has estimated how consumers may change their behaviour in response to these new prices. That expected change in behaviour results in lower network costs, which are passed through to consumers through lower average network prices.
- Under a peak capacity price, NERA estimates that consumers' average network charges would fall by between $28 and $40 per year in the medium term. Up to 81 per cent on consumers would face lower network charges in the medium term depending on the method of residual cost recovery.
- Under a critical peak price, NERA estimates that consumers' average network charges would fall by between $47 and $57 per year in the medium term. Between 62 and 69 per cent on consumers would face lower network charges in the medium term.

**Table 4.2 Illustrative impact on electricity charges from a peak capacity price**

| 100% Supply Charge Residual Cost Recovery | Average Bill ($/year) | Proportion with Higher Bill (%) | Proportion with Lower Bill (%) |
|---|---|---|---|
| Current Tariff | $1,832 | - | - |
| Short-Term (no demand response) | $1,832 | 62% | 38% |
| Medium-Term (with demand response and avoided network costs) | $1,804 | 56% | 44% |
| **100% Usage Charge Residual Cost Recovery** | | | |
| Short-Term (no demand response) | $1,832 | 43% | 57% |
| Medium-Term (with demand response and avoided network costs) | $1,792 | 19% | 81% |

Source: NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014, p.36.

**Table 4.3 Illustrative impact on electricity charges from a critical peak price**

| 100% Supply Charge Residual Cost Recovery | Average Bill ($/year) | Proportion with Higher Bill (%) | Proportion with Lower Bill (%) |
|---|---|---|---|
| Current Tariff | $1,832 | | |
| Short-Term (no demand response) | $1,832 | 49% | 51% |
| Medium-Term (with demand response and avoided network costs) | $1,785 | 38% | 62% |
| **100% Usage Charge Residual Cost Recovery** | | | |
| Short-Term (no demand response) | $1,832 | 39% | 61% |
| Medium-Term (with demand response and avoided network costs) | $1,775 | 31% | 69% |

Source: NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014, p.38.

### NERA's case study on consumers with air-conditioners

NERA's modelling work on the network costs caused by different technologies also shows that consumers will benefit from cost reflective network prices as a result of the elimination of cross-subsidies that currently exist between consumers that have different load profiles due to the different technologies that they use, for example air-conditioners or solar PV panels.[24]

As illustrated in Box 4.1 above, NERA's case study for air-conditioners indicates that consumers with large air-conditioners currently do not face network prices that reflect the costs that are caused by their use of the network at peak times. These additional costs are recovered by other consumers facing higher network prices.

A move to more cost reflective time of use network prices would result in consumers without air-conditioners facing lower network charges that reflected the lower costs that their usage causes. The same outcome would apply for consumers with smaller or more efficient air-conditioners.

24 NERA, *Efficiency of Tariffs for Current and Emerging Technologies*, A Report for the AEMC, 21 July 2014.

NERA's case study notes that SP AusNet currently offers a seasonal time of use network tariff. This tariff is much more cost reflective than the inclining block tariff that currently applies to most SP AusNet consumers. Many consumers would pay significantly lower electricity charges if they moved to this seasonal time of use tariff, in particular consumers without an air-conditioner or with a small air-conditioner.

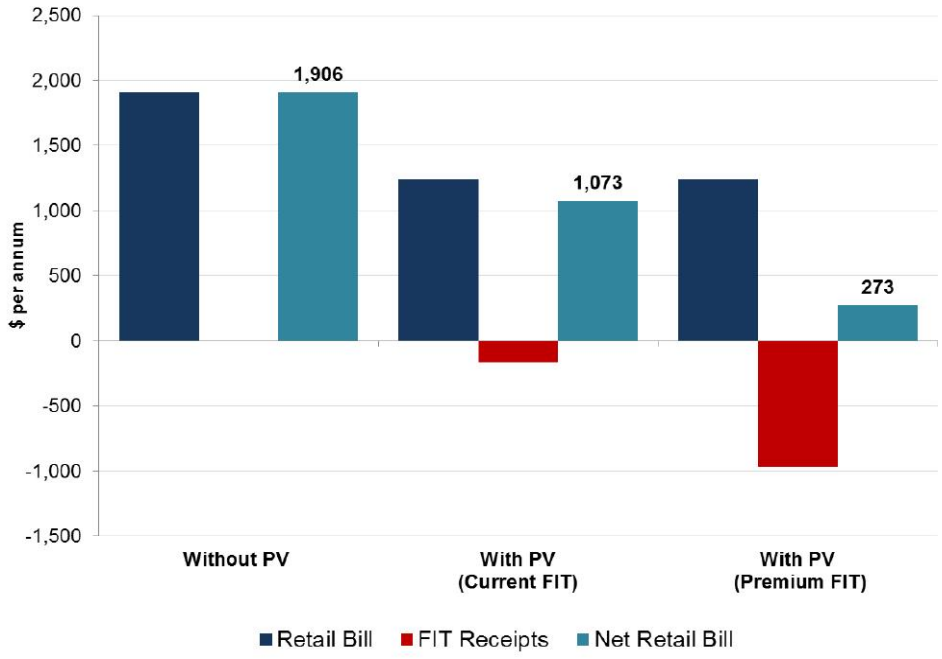
NERA estimates that consumers without an air-conditioner would save around 20 per cent on their network charges if they moved to this seasonal time of use tariff. It appears that only a small number of consumers are currently on this tariff, which implies that there would be potential savings for other consumers if they moved onto this tariff.

### NERA's case study on consumers with solar PV panels

Figure 4.1 below shows NERA's estimate of the current annual retail electricity charges, including the impact of feed-in tariff rebates, for a representative South Australian residential consumer with and without a solar PV system. The feed-in tariffs reduce the retail electricity charges of solar PV consumers, with premium feed-in tariffs reducing retail charges even further than the current feed-in tariff.

A South Australian consumer with a 2.5kW solar PV system receiving the premium feed-in tariff currently pays about $1,600 a year less than a similar consumer without solar panels.

**Figure 4.1 Illustrative retail charges of residential consumers with and without solar PV panels under current network prices**



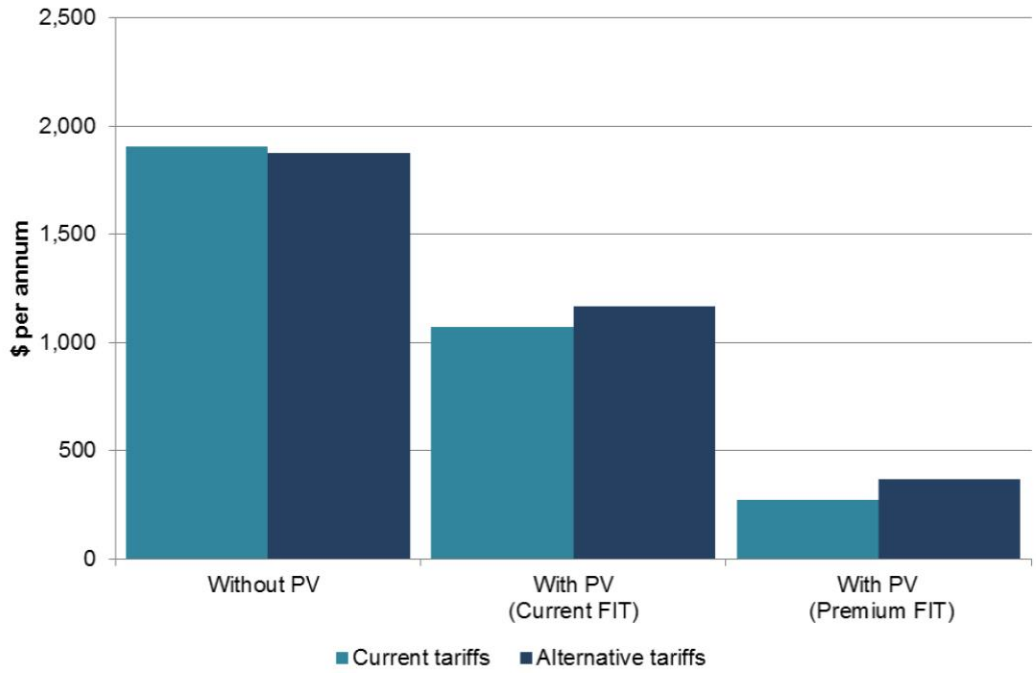

Source: NERA, *Efficiency of Tariffs for Current and Emerging Technologies*, A Report for the AEMC, 21 July 2014, p.30.

Figure 4.2 below shows the potential impact of cost reflective network prices on the retail charges of consumers with and without solar PV systems.

NERA's modelling shows that a representative South Australian consumer with north-facing solar PV panels currently pays about $200 a year less in network charges than a similar consumer without solar PV. Under cost-reflective network prices, this difference would fall to about $80 a year to better reflect the difference in the network costs caused by each consumer. The consumer with solar PV would pay about $120 a year more in network charges than it currently does, while the network charges of similar consumers without solar PV would be reduced.

The changes in the draft rule only relate to network prices and do not affect the feed-in-tariffs and other benefits received by consumers with solar PV. Under NERA's case study, the consumer with solar PV would still pay between $800 and $1,400 a year less in total retail electricity charges than a similar consumer without a solar PV system, depending on which feed-in tariff the solar consumer is receiving.

**Figure 4.2 Illustrative retail charges of residential consumers with and without solar PV panels under current prices and cost reflective network prices**




Source: NERA, *Efficiency of Tariffs for Current and Emerging Technologies*, A Report for the AEMC, 21 July 2014, p.31.

### NERA's case studies on battery storage and electric vehicles

NERA's report also highlights the potential impact emerging technologies such as battery storage and electric vehicles can have on network costs.

NERA's case study examines consumers in Queensland with solar PV systems and battery storage. It demonstrates that solar PV systems and batteries used together have the potential to significantly reduce peak demand by using the battery to store the daytime output from the solar PV panels and drawing from it during the late afternoon and early evening peak period. This combination of technology has the potential to significantly reduce consumers' charges and network costs and will be significantly more economic under cost reflective network prices.

NERA's electric vehicles case study shows how cost reflective network prices would provide an incentive for electric vehicle buyers to purchase a 'smart' electric vehicle that can be programmed to charge at off-peak times. If electric vehicle users charge their vehicles during peak periods, they could significantly increase peak network demand and require DNSPs to undertake expensive network upgrades to meet that extra peak demand. Under cost reflective prices, a consumer could save over $600 a year in network charges if it purchased a smart electric vehicle instead of one that charges at peak times.

#### Conclusion on NERA's case studies

While it is difficult to predict the uptake of emerging or new types of technology, it is clear that any new technological development has the potential to rapidly alter network demand and impact on the cost of providing network services.

An important principle underlying all of the Commission's decisions is technological neutrality. The outcomes highlighted above are the result of the changes in consumers' energy load profiles that technologies such as air-conditioners, solar PV, batteries and electric vehicles cause, not the technologies themselves.

The draft rule is designed to provide efficient network price signals for all load profiles, regardless of the technology used by the consumer, by signalling the cost of providing network services to consumers through network prices.

### 4.2.2 Other recent work on the potential impacts of cost reflective network prices

A number of other recent studies have also demonstrated the benefits to consumers from moving to more cost reflective network prices.

Research by AGL referred to above illustrates the impacts on various types of consumers from a move to cost-reflective prices.[25]

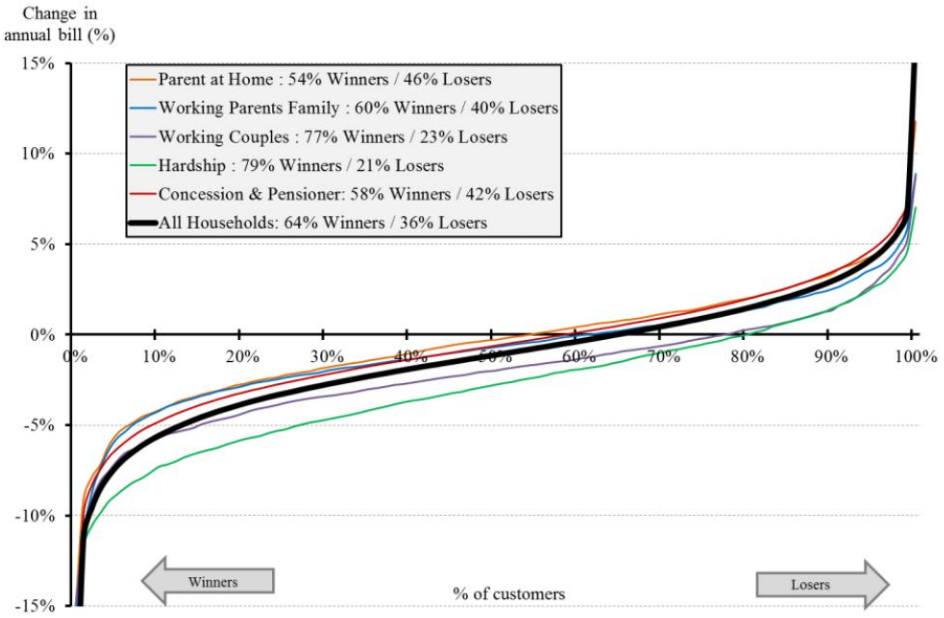
In the short term without accounting for any changes in how consumers use energy in response to the price signals sent by cost reflective prices, 50 per cent of consumers would pay higher changes and 50 per cent would pay lower charges. Those consumers that are currently paying more than the costs caused by their usage would benefit from lower charges, while those that are currently paying less than the costs they cause would pay more.

In the longer term, some consumers are likely to change how they use energy in response to cost-reflective prices. AGL has estimated the impacts of this demand response. AGL's estimates of the outcomes for consumers after demand response are shown in figure 4.3.

AGL estimates that overall 64 per cent of consumers would pay lower charges under cost reflective prices. The group of consumers that would on average benefit the most are consumers in a hardship program, with 79 per cent of those consumers paying lower charges under cost reflective prices.

25 Simshauser, P., Downer. D., *On the inequity of flat-rate electricity tariffs*, AGL Applied Economic and Policy Research, Working Paper No. 41, June 2014.

**Figure 4.3 AGL results on the impacts for residential consumers of cost reflective prices**




Source: Simshauser, P., Downer. D., *On the inequity of flat-rate electricity tariffs*, AGL Applied Economic and Policy Research, Working Paper No. 4, June 2014, p.18.

Similar analysis on a smaller sample of consumers was undertaken by Ellipson with funding from the Consumer Advocacy Panel and included in Ellipson's submission.[26] Ellipson's research focussed on implications for small consumers of more cost reflective network prices.

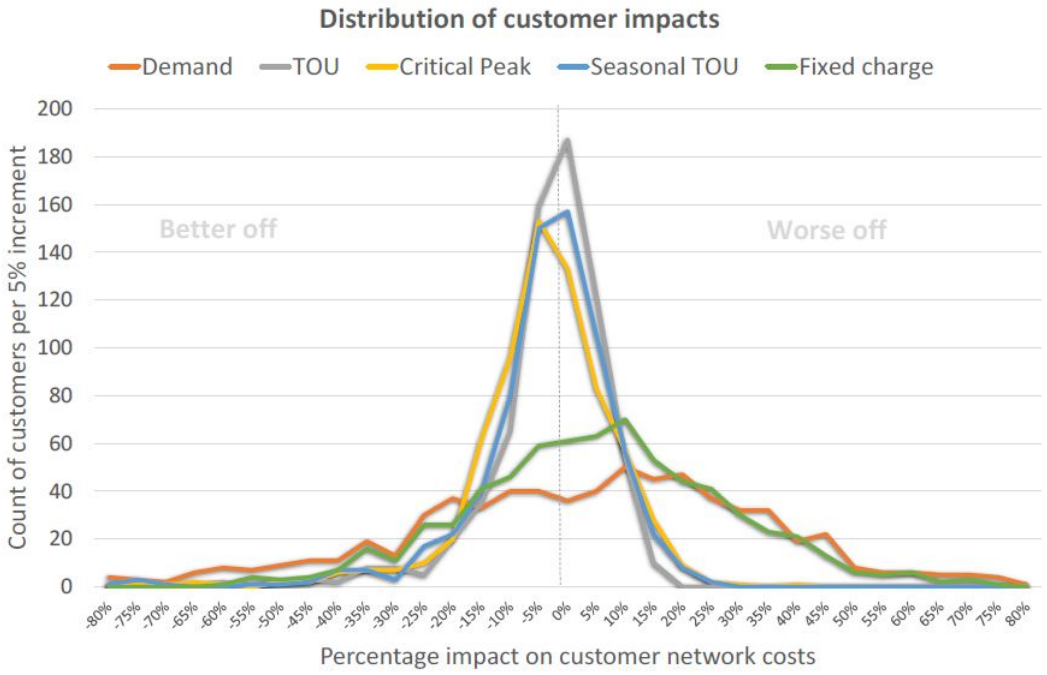
Ellipson concluded that cost reflective critical peak prices and time of use prices would benefit small consumers the most. In its modelling, 52 per cent of small consumers would face lower network charges under a seasonal time of use price and 59 per cent of small consumers were face lower charges on a critical peak price.[27] Most consumers' network charges increased or decreased by no more than 20 per cent under these price structures.

In contrast, Ellipson concluded that demand charges (also referred to as capacity charges) or increased fixed charges were likely to result in small consumers paying higher charges on average, with some consumers paying significantly higher charges. These results are shown in Figure 4.4 below.

26 Ellipson submission, 21 March 2014.

27 Ibid, p30.

**Figure 4.4 Ellipson modelling of the impact on residential consumers' network charges of various types of cost reflective prices**




Source: Ellipson submission, 21 March 2014, p.32.

Ellipson notes that an analysis of how consumers are likely to change their energy use in response to cost reflective prices was beyond the scope of this study.

As noted above, it is likely that some consumers will change their energy usage in response to cost reflective network prices. As a result, a higher proportion of consumers are likely to face lower network prices in the medium to long term once demand response is included in the analysis.

Recent analysis by the Grattan Institute assessed the impacts of capacity based network prices and concluded that they would lead to lower costs overall in the long term.[28]

Grattan's report states that:

> "In the short run, capacity tariffs would mean that consumers who are now subsidising others have their electricity bills significantly reduced....
>
> Over time, households paying capacity tariffs are likely to become increasingly aware of their maximum energy use and the patterns of energy use that increase their capacity requirements. At least some households will change the behaviour as a result, leading to lower levels of peak demand and lower prices...
>
> The move to capacity-based network tariffs will allocate costs more fairly among consumers and lead to lower costs overall." [29]

28 Wood, T., Carter, L., and Harrison, C., *Fair pricing for power*, Grattan Institute, July 2014.

29 Ibid, pp17-18.

In a recent presentation at the Australian Competition and Consumer Commission (ACCC)/AER Regulatory Conference, Dr Ahmad Faruqui of The Brattle Group responded to what he stated were "seven myths" about cost reflective time of use pricing (which he refers to as 'dynamic pricing') that are often used to suggest that cost reflective pricing will not benefit consumers.[30]

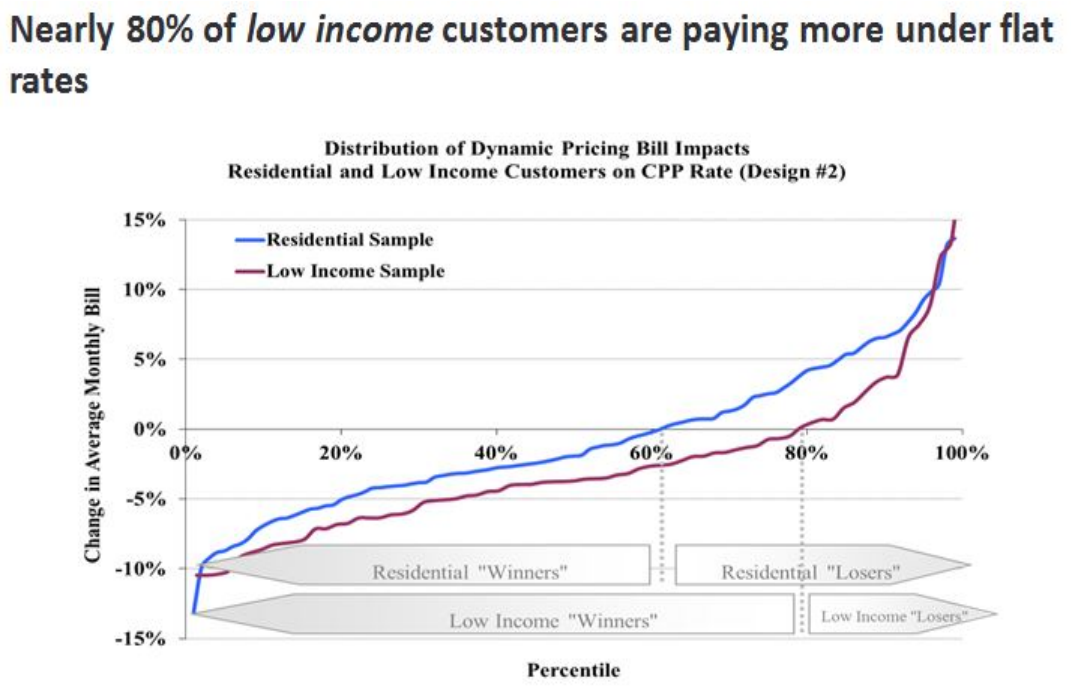
Based on numerous international studies and trials, Dr Faruqui provided evidence that he considers disproves each of these "myths", which are that:

- Consumers do not respond to dynamic pricing - many studies have shown that they do respond, with 60 per cent of trials producing peak reductions of greater than 10 per cent.
- Consumer response does not vary with the magnitude of the pricing signal – trials have shown that the higher the incentive, the greater the demand response.
- Enabling technologies do not boost demand response – international and Australian trials have shown that enabling technologies such as in home displays significantly increase response.
- Consumer response does not persist over time – some international time of use programs have been in place for decades and have produced consistent consumer response.
- Dynamic pricing will hurt low-income consumers – as illustrated in Figure 4.5 below, low-income consumers can actually benefit more than other consumers.
- Consumers have never encountered dynamic pricing – dynamic prices are common in many sectors such as airlines and hotels.
- Consumers do not want dynamic pricing – pilot programs have shown that the vast majority of consumers were able to save money by making small adjustments to their energy use and would participate again.

In relation to the impact of cost reflective prices on low-income consumers, Dr Faruqui's presentation contained the slide shown in Figure 4.5 below. This figure shows The Brattle Group's estimate of the impacts on average residential consumers and low-income consumers of moving from a flat rate price to a critical peak price.

30 Faruqui, A, *Architecting the Future of Dynamic Pricing*, ACCC/AER Regulatory Conference 2014, 8 August 2014.

**Figure 4.5 The Brattle Group modelling of the impact on of cost reflective prices on low-income consumers**




Source: Faruqui, A, *Architecting the Future of Dynamic Pricing*, ACCC/AER Regulatory Conference 2014, 8 August 2014, p13.

## 4.3 Impact on vulnerable consumers

The analysis from NERA's case studies and other research discussed above show that many low-income consumers will benefit from lower electricity charges under cost reflective network prices.

In submissions, many consumers groups expressed concerns that cost reflective prices could be implemented by reducing variable charges and increasing fixed charges. This concern was partly based on a view that in a period of flat or falling peak demand, LRMC may be low and residual network costs high, and residual costs were likely to be recovered through fixed charges. There was a concern that many vulnerable consumers have low total energy use and would be adversely affected by higher fixed charges.

Cost reflective network prices do not need to result in higher fixed charges. The Brattle Group provided a report to the Commission on the methods for the recovery of residual costs.[31]

Brattle's report sets out three principles that should guide the recovery of residual costs:

1. Efficiency: residual costs should be recovered in a way that is not inconsistent with the promotion of economic efficiency and does not distort efficient LRMC based network prices.

31 The Brattle Group, *Structure of Electricity Distribution Network Tariffs, Recovery of Residual Costs – prepared for the AEMC*, August 2014.

2. Fairness: prices should not be changed so drastically that certain consumers experience large bill increases in a short period of time, prices should recover revenues from classes of consumers in proportion to the costs of serving those consumers, and all consumers in a class should be on the same average tariff.
3. Gradualism: Prices should change gradually to avoid shocking and inconveniencing consumers.[32]

Based on these three principles, Brattle considers five potential price structures that could be used in Australia to design cost reflective network prices in a way that does not involve increases in fixed charges or minimises the impact of any increases in fixed charges.

The Commission acknowledges that some consumers will face higher charges under cost-reflective network prices, and some of those consumers may be vulnerable consumers.

We caution against making generalisations about which types of consumers may face higher or lower network prices under these changes.

The key factor that will determine how much consumers pay will be their individual load profiles. Consumers that use a lower than average proportion of their energy at peak times are likely to face lower network prices under the draft rule. Consumers that use proportionately more energy at peak times are likely to face higher prices, although those consumers will also have the greatest potential for future savings if they choose to change how they use energy and move some of their peak use to off-peak times.

Some of the concerns from stakeholders about the potential impacts of cost reflective network prices, including in particular the concerns about potential higher fixed charges, related to the potential impact on vulnerable consumers with lower than average energy use. However, there are many reasons why a consumer may have low overall energy use. For example the consumer may not be at home very often, the house may be a holiday home, or the consumer may have large solar panels that reduce its overall usage.

In its report, Brattle notes that:

> "Low use consumers are often interpreted as low income consumers even though the empirical evidence on that correlation is decidedly weak."[33]

If network price structures were intentionally designed to favour all consumers with low overall energy use, they would provide support to those who do not need it. That support would be funded by higher prices paid by all average and high use consumers, including for example those that have high energy use due to medical needs.

The design of network pricing structures is too blunt a tool to use in response to concerns about the potential impact of electricity prices on vulnerable consumers.

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32 Ibid, p.1.

Appropriately targeted concession and hardship schemes are a more effective approach.

Appendix C provides an overview of the current concession and hardship schemes available to energy consumers who meet certain eligibility requirements. Assistance to vulnerable consumers is either provided directly to them as a rebate, through their retailer as a discount to their electricity bill, or sometimes through community welfare organisations in the form of emergency payments.

To address concerns that cost reflective network prices could potentially result in higher prices for some vulnerable consumers, we recommend that governments review the structure of their energy concession and hardship schemes so that they deliver on their purpose in an efficient and targeted way. This review should occur at the same time as network businesses develop their new network prices over the next 12 - 18 months.

# 5 The network pricing process

**Summary**

- This chapter relates to changes to the network pricing process. This is the process through which DNSPs set their network price structures and levels.
- IPART and the COAG Energy Council have raised a number of issues with the current network pricing process, including that the process does not allow for adequate consultation or notification of approved annual network prices and does not provide retailers and consumers with any certainty about how or when the structure of network prices will change over time.
- To address these issues, IPART and the COAG Energy Council have proposed a number of changes. These proposed changes would require:
  - DNSPs to consult with stakeholders in the development of network prices;
  - DNSPs to provide more certainty to stakeholders about likely changes to network prices; and
  - earlier notification of approved annual network prices.
- The Commission has considered the proposed changes and had decided to make a draft rule that incorporates elements from both proposals.

*Draft rule*

- The draft rule splits the network pricing process into two stages:
  - The first stage will occur at the same time as the regulatory determination process. DNSPs will develop a Tariff Structure Statement (TSS) that outlines the DNSP's tariff classes, tariff structures and the methodologies associated with the pricing principles that are to apply for the next regulatory control period. This will be accompanied by a schedule of indicative price levels. The TSS will be assessed for compliance with the pricing principles by the AER in conjunction with the DNSP's regulatory proposal.
  - The second stage will occur on an annual basis. In this stage, DNSPs develop and submit their annual pricing proposals to the AER. The annual pricing proposals essentially apply pricing levels to the tariff structures outlined in the already approved TSS. The AER's assessment of the DNSP's pricing proposal will be a compliance check against the approved TSS and the control mechanism as specified in the AER's regulatory determination.
- DNSPs will be required to describe how they have consulted with retailers and consumers on the design of the network tariffs that they propose to implement over the next regulatory control period. This consultation will occur prior to the submission of the TSS to the AER.
- DNSPs will be able to amend their TSS during the regulatory control period,

but this will be limited to specific circumstances where a change to the TSS would result in outcomes that better meet the pricing principles.

  - DNSPs will be required to describe how they have consulted with retailers and consumers on amendments to their TSS.
  - Amendments to the TSS will occur outside the annual pricing process.

- The timeframe of the annual network pricing process will be moved forward to facilitate notification of approved annual network prices at least six weeks before they commence:
  - TNSPs will be required to publish transmission prices by 15 March, except for in Victoria where transmission prices will continue to be published by 15 May;
  - DNSPs will be required to submit annual pricing proposals to the AER no later than 31 March, except in Victoria where DNSPs will be required to submit annual pricing proposals to the AER no later than 30 September; and
  - the AER will be required to approve network prices within 30 business days.

## 5.1 Introduction

This chapter sets out the Commission's views on the changes to the network pricing process proposed by IPART and the COAG Energy Council. It sets out the Commission's assessment of the current issues with the pricing process and the Commission's framework for promoting better outcomes.

This chapter is structured as follows:

- section 5.2 provides an overview of IPART and the COAG Energy Council's proposed changes to the network pricing process;
- section 5.3 summarises the views of stakeholders;
- section 5.4 outlines the Commission's views of the outcomes that a network pricing process should achieve. It then sets out the Commission's assessment of whether the current framework delivers these outcomes; and
- sections 5.5 to 5.8 describe the new network pricing process:
  - section 5.5 provides an overview of the new process;
  - section 5.6 outlines the process DNSPs and the AER must go through to put in place a TSS;
  - section 5.7 describes the process to amend the TSS during the course of the regulatory control period; and
  - section 5.8 outlines the changes to the annual network pricing process.

## 5.2 The rule proponents' views

Both IPART and the COAG Energy Council have identified a number of issues with the current network pricing process in relation to how DNSPs develop their network tariffs.

The rule proponents argue that the existing network pricing process does not provide:

- adequate consultation by DNSPs with retailers and consumers;
- sufficient notification of approved changes to annual network tariffs; and
- retailers and consumers with any certainty about how or when network tariffs will change over time.

The rule proponents consider that the existing network pricing process is not delivering the right outcomes for consumers.

### 5.2.1 IPART's rule change proposal

IPART's rule change request sought to modify the annual network pricing process to achieve earlier notification of annual network charges than is currently the case.

Specifically, IPART proposed the following changes:

- The annual network pricing process timeframe for transmission and distribution network service providers be moved forward to allow the annual approval and notification of distribution network prices to occur at least two months prior to taking effect (this also entails transmission network prices being notified two months earlier, ie by 15 March). IPART also raises the issue of changes to initial year network pricing processes, but defers the solution to the AEMC.
- The AER to be required to develop guidelines that outline how DNSPs should consult with retailers and consumers in developing and changing their statement of expected price trends. As part of developing the guidelines, the AER would establish what information DNSPs should include in their statement of expected price trends and the timing of the statement.
- To provide certainty about changes to future prices, the AER should be required to consider whether the DNSPs' annual pricing proposals are consistent with their statement of expected price trends before the AER approves their network price changes each year.

### 5.2.2 COAG Energy Council's rule change proposal

The COAG Energy Council proposed introducing a new framework for the network pricing process. As part of this framework, the COAG Energy Council suggested that consultation on, and approval of, network tariff structures takes place alongside the DNSP's five year regulatory determination process. Under this framework, pricing levels would still be determined in an annual network pricing process.

To support this new framework, the COAG Energy Council proposes the introduction of a document that would set out a DNSP's proposed network tariff structures to apply over the regulatory control period. The COAG Energy Council's rule change proposal refers to this document as the Pricing Structures Statement (PSS).

Under the COAG Energy Council's proposal, DNSPs would need to formally consult with stakeholders when developing the tariff structures to be included in their PSS. This consultation would be supported by an AER guideline that would outline how DNSPs should consult in developing and changing their PSS.

The PSS would need to be consistent with the distribution pricing principles and approved by the AER as part of the regulatory determination process. The PSS would also include a statement on expected pricing levels

Tariff structures proposed by DNSPs in their annual pricing proposals would need to comply with the tariff structures in the approved PSS, but pricing levels would not have to be consistent with those in the statement of expected price levels. DNSPs would be able to amend the PSS during the regulatory period subject to consumer consultation and AER approval.

The COAG Energy Council also proposed changes to the timing of the annual network pricing process under its new framework to allow earlier notification of approved annual network tariffs. However, the proposal requested that the AEMC determine the appropriate timeframes.

## 5.3 Stakeholder views

The AEMC published two consultation papers during the rule change process. The first paper on IPART's proposal was released on 6 June 2013, and the second paper, relating to the COAG Energy Council's proposal, was released on 14 November 2013. The following section summarises the key issues raised by submissions to both consultation papers.

Stakeholders generally agree that the network pricing process could be improved. There was consensus that there can be:

- greater opportunity for consultation with retailers and consumers;
- earlier notification of network tariffs on an annual basis; and
- more certainty and transparency with respect to how and when network tariffs are likely to change.

However, stakeholders' views were more divergent on the degree to which the network pricing process should be changed to get better outcomes.

### 5.3.1 Consultation on the design of network tariffs

Stakeholders generally accepted that under the current arrangements, many DNSPs are not doing enough to consult with retailers and consumers on the design of their network tariffs. However, stakeholders did not agree on the appropriate extent of consultation or on whether DNSPs should consult on pricing levels.

Energy users and consumers were strongly supportive of greater consumer engagement on network pricing. The New South Wales Irrigators' Council submitted that consultation on network tariffs is essential to ensure that tariffs are appropriate and suitable to consumers' usage patterns.[34] Similarly Arrium argued that consultation

34 NSW Irrigators' Council submission, 19 December 2013, p.6.

will result in better outcomes for both consumers and DNSPs as it will allow "DSNPs to better understand the circumstances and sensitivities of their customers".[35] The Consumer Action Law Centre (CALC) had some concerns in relation to consumers' ability to engage in detail about network pricing, but considered that consumer groups could provide value at this point.[36]

Retailers were supportive of consultation on the structure of network tariffs and the levels of network charges.[37] Retailers submitted that the introduction of consultation requirements will lead to more cost reflective and innovative retail tariffs that enable retailers to pass on network pricing signals.[38] Combined with earlier notification of approved network tariffs, retailers believed that this would improve the ability of retailers to offer competitive retail tariffs, leading to better outcomes in the retail market consistent with the long term interests of consumers.

DNSPs supported effective engagement with stakeholders as being "likely to assist retailers [to] better structure their prices and to enable consumers to understand and respond to price changes and changes in tariff structures."[39] However, DNSPs considered that it is important to be clear about what factors can be influenced by consultation, noting that the ability of DNSPs to take into account stakeholder feedback on the level of prices is highly constrained.[40] DNSPs stated that it is more appropriate for consultation to be focussed on the structure and not level of network tariffs.[41] DNSPs argued that consultation requirements should not be overly prescriptive, but should allow DNSPs to best determine how to engage with stakeholders.[42]

The AER also supported the introduction of consultation requirements in the network tariff setting process. The AER submitted that this consultation should cover whether a particular network tariff is appropriate to particular consumers and how the DNSP proposes to transition to more efficient tariff options.[43] The AER considered that DNSPs should be required to consult with retailers, consumers and their representatives and other parties, such as those that provide demand-side management services.[44]

35 Arrium submission, 24 January 2014, p.5.

36 CALC submission, 18 December 2013, p.3.

37 See, for example: AGL submission, 12 July 2013, p.2; EnergyAustralia submission, 4 July 2013, p.20; Origin Energy submission, 4 July 2013, p.4.

38 EnergyAustralia submission, 4 July 2013, p. 20; Origin Energy submission, 4 July 2013, p.4.

39 ENA submission, 5 July 2013, pp. 4-5..

40 See, for example: Aurora, submission, 3 July 2013, p.2; ENA, submission, 19 December 2013, p. C-6; Powercor and CitiPower, submission, 4 July 2013, p. 5.

41 See, for example: SAPN submission, 5 July 2013, p.4, Powercor and CitiPower submission, 4 July 2013, p.5; United Energy submission, 4 July 2013, p.5; ENA submission, 5 July 2013, pp.4-5.

42 ActewAGL Distribution, submission, 19 December 2013, pp. 3,5; Ergon, submission, 4 July 2013, p..10; Jemena, submission, 4 July 2013, p.2.

43 AER, submission, 19 December 2013, p. 7.

44 Ibid., p.12.

### 5.3.2 Notification of network tariffs

Most submissions supported improvements to the timing of the annual network pricing process to achieve earlier notification of approved annual network tariffs.

DNSPs supported earlier notification of network tariffs, noting that the existing arrangements put pressure on TNSPs, DNSPs and retailers.[45] DNSPs acknowledged that earlier notification of network tariffs would give retailers more time to reflect network structures in retail tariffs and improve the function of the competitive retail market.[46] DNSPs noted that to achieve earlier notification of network tariffs, solutions would need to be found for the availability of key network pricing inputs.[47]

Retailers strongly supported IPART's proposed two month notification period. Retailers noted that under the current arrangements, late notification of network tariffs creates risks that retailers pass on to consumers through prices.[48] As such, retailers argued that two months' notification of network tariffs would improve competition in the retail market, with Origin arguing that it would "increase visibility of changes in prices across the industry, resulting in a reduction in risk and volatility in end prices and an increase in efficiency."[49]

Retailers considered earlier notification of network tariffs would be particularly important if DNSPs are required to adopt cost reflective network prices. Retailers argued that two months' notification of network prices would be necessary to ensure that cost reflective network tariffs are incorporated into the relevant retail tariff.[50]

Consumer groups also supported earlier notification of approved network tariffs. Consumers groups considered that earlier notification would lead to more reliable price paths and would make it easier to prepare budgets.[51] The Energy Users Association of Australia (EUAA) acknowledged in their submission that setting network prices earlier may result in those prices being set with less accurate information. However the EUAA considered that "this risk could occur at any time in the regulatory control period and should not be used as an excuse not to set tariffs earlier."[52]

The AER acknowledged that fixing a timeframe for its own review of network tariffs is likely to lead to more certainty as to the length of reviews and the timing of outcomes.[53] However, the AER considered that it is difficult to determine an appropriate length of time for its assessment, as circumstances may arise that mean the

45 ENA submission, 19 December 2013, p.16.

46 ENA submission, 19 December 2013, p.16; Jemena submission, 19 December 2013, p.2.

47 Energex submission, 19 December 2013, p.9.

48 EnergyAustralia submission, 4 July 2013, p.7; ERAA submission, 4 July 2013, p.2; Momentum Energy submission, 4 July 2013, p.2; Origin Energy submission, 4 July 2013, p.4.

49 Origin Energy submission, 4 July 2013, p.4.

50 EnergyAustralia submission, 19 December 2013, p.3; ERAA submission, 19 December 2013, p.2.

51 Arrium submission, 24 January 2014, p.2; CALC submission, 18 December 2013, p.2.

52 EUAA submission, 5 July 2013, p.2.

53 AER submission, 5 July 2013, p. 3.

AER's approval needs to be delayed.[54] To ensure that the AER can still undertake an appropriate assessment of DNSP pricing proposals, the AER proposed that it should have the ability to 'stop-the-clock' on its assessment of the annual proposal if significant issues arise.[55]

In submissions, some stakeholders acknowledged that the COAG Energy Council's proposed PSS could relieve timing pressures to an extent. However, these stakeholders did not consider that the PSS was an alternative to more timely notification of changes to network tariffs.[56]

### 5.3.3 Certainty and transparency of network tariffs

Stakeholders were supportive of more certainty and transparency with respect to how network tariffs will change over time.

Consumer groups supported measures to introduce greater certainty and transparency into the network pricing process, noting that greater certainty and transparency with respect to network tariffs would increase consumer confidence and acceptance of tariff structures.[57] Consumer groups considered that the PSS should be binding and the DNSPs should be required to apply it in the annual pricing process.[58]

Retailers also supported greater certainty with respect to changes in network tariffs. In submissions, retailers appeared to support a PSS in principle.[59] However, retailers did not agree that the PSS should be binding, with Origin Energy arguing that DNSPs should be able to amend the document up to once annually.[60]

DNSPs generally accepted that they could be more transparent about how and when they will change their network tariffs. DNSPs recognised that this is important to improve outcomes in the retail market and enhance consumer confidence.[61] As such, DNSPs supported a PSS to facilitate consultation with stakeholders and to provide

54 Ibid., p. 4.

55 AER submission, 5 July 2013, p. 4; AER submission, 19 December 2013, p. 15.

56 See, for example: AER submission, 19 December 2013, p.15; Energex submission, 19 December 2013, p.9; EnergyAustralia submission, 19 December 2013, p.1; ERAA submission, 19 December 2013, p.1; Ergon submission, 19 December 2013, p.6; IPART submission, 19 December 2013, p.5; NSW DNSPs submission, 19 December 2013, p.34; Origin submission, 20 December 2013, p.5.

57 Cotton Australia submission, 19 December 2013, p.2; Energy Action submission, 24 December 2013, p.2; EnerNOC submission, 19 December 2013, p.2.

58 ATA submission, 19 December 2013, p.8; Arrium submission, 24 January 2014 p.4; EnerNOC submission, 19 December 2013, p.3; TEC submission, 19 December 2013, p.3.

59 ActewAGL Retail submission, 19 December 2013, p.2; AGL submission, 19 December 2013, p.2; EnergyAustralia submission, 19 December 2013, p.3; Origin submission, 20 December 2013, p.9.

60 Origin submission, 20 December 2013, p.4.

61 See, for example: Energex submission, 19 December 2013, p.4; Ergon submission, 19 December 2013, pp.4 – 5; Jemena submission, 19 December 2013, p.A1.

consumers with better information about network tariff strategies.[62] However, most DNSPs argued that the PSS should not be binding.[63]

The AER considered that the PSS could provide an effective focal point for certainty on tariff structures.[64] It argued that requiring DNSPs to develop a PSS could improve the process by which DNSPs design, apply and modify tariffs, which will benefit all stakeholders through greater engagement, visibility and certainty.[65] The AER supported a binding PSS, but suggested that DNSPs should be able to propose mid-period variations.[66]

## 5.4 Outcomes of a network pricing process

This section describes the Commission's views on the outcomes that a network pricing process should seek to achieve and assesses the performance of the current process against these outcomes.

The Commission considers that there are five key outcomes that a well-functioning network pricing process should deliver. These are:

(i) meaningful consultation with retailers and consumers on the development and approval of network tariffs;

(ii) adequate notification of changes to network tariffs;

(iii) understanding of the pricing signals that network tariffs are sending consumers;

(iv) oversight by the AER to assess compliance of DNSPs' proposed network tariffs; and

(v) DNSPs are able to recover their allowed revenues over the regulatory control period.

In workshops with stakeholders, there was broad agreement that it is important that the network pricing process achieve these outcomes.[67]

### 5.4.1 Meaningful consultation

The network pricing process should allow for meaningful consultation between DNSPs, retailers and consumers.

62 See, for example: Energex submission, 19 December 2013, p.4; ENA submission, 19 December 2013, p.C-2; Ergon submission, 19 December 2013, p.4; Jemena submission, 19 December 2013, p.2; NSW DNSPs submission, 19 December 2013, p. 21, 31.

63 See, for example: ActewAGL submission, 19 December 2013, p.4; CitiPower and Powercor submission, 19 December 2013, p.5; Energex submission, 19 December 2013, p.4; ENA submission, 19 December 2013, p.15; Ergon submission, 19 December 2013, p.4.

64 AER submission, 19 December 2013, p.2.

65 Ibid., p.11.

66 Ibid.

67 Sydney workshop, 13 March 2014; Melbourne workshop, 16 May 2014.

Retailers and consumers are greatly impacted by the decisions that DNSPs make in relation to their network tariffs. Network charges typically make up 30 to 50 per cent of a consumer's total electricity charges. This means that for retailers, network prices are a key input cost that needs to be factored into their retail offers. For consumers, it is a substantial element of their total electricity charge.

The level of network prices is largely dependent on the revenues DNSPs are allowed to recover by the AER, determined in the regulatory determination process. Meaningful stakeholder engagement on the level of network prices should therefore occur through the regulatory determination process. Changes made to the NER as a result of the 2012 *Economic Regulation of Network Service Providers* rule should facilitate this consultation.

However, the structure of network tariffs is within the control of DNSPs. The structure of network tariffs can have a substantial impact on stakeholders as it determines the signals consumers are sent about use of network.

For example, with a time of use network tariff, consumers could be rewarded for shifting the timing of their consumption to off-peak times. The extent to which consumers do this may depend on how DNSPs structure their tariff applicable to the particular consumer. Given the significant impact that the structure of network tariffs may have on these stakeholders, it is important that they are given an opportunity to provide feedback on the types of tariff structures that DNSPs develop.

Consultation is also important to allow DNSPs to ascertain whether the pricing signals that network tariffs are intended to send can be passed on by retailers and understood and responded to by consumers. Such consultation can be useful as a mechanism to allow DNSPs to design better tariffs that can maximise efficient responses from consumers. This is an important step in the design of network tariffs, as network tariffs can only be effective in providing signals if retailers can implement them and consumers can respond to them.

Although consultation with retailers and consumers is essential to the success of sending the right network pricing signals, effective consultation by DNSPs will need to use different consultation practices to target different stakeholder groups. This is because various stakeholder groups will have different needs and expectations and it is unlikely that any one approach to consultation will be suitable to all.

As such, DNSPs need to manage these different expectations and needs by using consultation practices that target the particular stakeholder group. The network pricing process should recognise this need for flexibility and allow for the use of different consultation processes and tools.

### 5.4.2 Timely notification

The network pricing process should provide adequate notification of approved network tariffs to stakeholders, and in particular retailers and consumers.

Retailers require advance notification of network tariff changes so that they can work out how best to incorporate network charges into their retail tariffs. In a competitive retail market environment, advance notification of network tariffs is particularly important to allow retailers to develop competitive retail products that appropriately factor in these costs.

Retailers also require sufficient time to make changes to their billing systems, train their call centre staff and notify their customers of price changes where changes to network tariffs cause changes in retail tariffs. These tasks need to be completed in time to accommodate the implementation of network tariff changes, which occurs on 1 January in Victoria and 1 July in all other jurisdictions. Retailers are required to pay DNSPs for their customers' network charges from this date.

Consumers need adequate notification of changes to network tariff structures and levels so they can plan their response to the signals sent by network tariffs. Notification is important to allow consumers time to understand the signals they are being sent before they need to respond to them. This assists consumers to make efficient consumption and investment decisions.

Timely notification of network tariff changes is particularly important for larger commercial and industrial consumers. These types of consumers may have capacity to plan their business operations around the cost signals sent by network tariffs.[68] Given that network charges may be a large component of some businesses' operating costs, uncertainty in relation to notification of network price changes can create additional budgetary challenges for these businesses.

### 5.4.3 Understanding of network tariff pricing signals

The network pricing process should provide consumers with the information and education they need to develop knowledge and understanding of the pricing signals being provided by network tariffs.

For network tariffs to be effective as a signalling mechanism, consumers need to be able to relate their usage decisions to the price structure. To do this, consumers need to be educated and informed about what network tariffs are designed to achieve. In turn, this information and education empowers consumers to make informed choices about their electricity usage, including in relation to their own investment decisions as to whether to adopt energy savings or energy efficiency measures.

This becomes particularly important under the new pricing principles that will require DNSPs to set cost reflective network tariffs. The benefits of cost reflective network pricing will only be realised if consumers have an ability to understand and respond to the price signals they are being sent.

Most consumers will gain an understanding of pricing signals through the retail tariffs they are charged. This is because for most consumers, their primary relationship will be with their retailer. As such, the role of retailers in providing information to facilitate understanding of pricing signals is critical. To perform this role, retailers need engagement with DNSPs and adequate notification of changes to network tariffs to enable them to develop retail tariffs that pass on network pricing signals.

68 Energy intensive businesses may particularly have capacity to alter their operations to respond to network signals.

### 5.4.4 Regulatory oversight

The network pricing process should allow the AER an appropriate opportunity to undertake a proper assessment of DNSPs' proposed network tariffs to certify compliance with the NER.

The AER's assessment and oversight of proposed network tariffs is important for two reasons. Firstly, it provides a check that network tariffs are consistent with the control mechanism and do not recover any more than the allowed revenue. Secondly, the AER's assessment and oversight of network tariffs provides a mechanism to check that network tariffs comply with the pricing principles and other NER requirements.

The AER needs to be able to check and approve network tariffs in a way that maintains the credibility of the regulatory framework, while also promoting confidence that network tariffs are cost reflective and provide efficient pricing signals to consumers.

Without an appropriate level of assessment and regulatory oversight, confidence in the regime could be undermined.

To undertake a proper assessment of network tariffs against the requirements of the NER, the AER would require:

- sufficient time to undertake a full assessment of proposed network tariffs, including tariff structures and price levels;
- access to information that allows it to assess the DNSPs' pricing proposals; and
- the ability to require DNSPs to amend their proposed tariffs to comply with the NER where there are deficiencies in their proposed network tariffs.

### 5.4.5 Revenue recovery

The annual network pricing process needs to provide DNSPs with an opportunity to adjust their network charges so that they recover their allowed revenues as determined by the AER though the regulatory determination processes.

DNSPs are best placed to determine the structure and level of their network charges that would allow for the recovery of their allowed revenue each year. This is because they have the best information on the drivers of their network costs that need to be matched with the revenues that they are allowed to recover. It is therefore important that DNSPs continue to be responsible for their network tariffs.

If DNSPs are unable to recover their allowed revenues then it would have significant financial consequences for them, and ultimately, consumers. Without adequate recovery of revenues, DNSPs will not be able to undertake their planned expenditure program, thereby creating issues in the delivery of service quality, reliability and safety of network supply. These outcomes would not be in the long term interest of consumers.

It is also important to recognise that there are a number of inputs required to convert allowed revenue into annual network charges. Examples include:

- transmission prices;
- demand forecasts;

- consumer price index (CPI);
- jurisdictional scheme costs; and
- adjustments to the annual revenue allowance to account for any overs/unders, cost pass-throughs or contingent projects.

Some of these inputs can vary significantly from year to year. To minimise risk to revenue recovery, there needs to be an annual process that adjusts network tariff pricing levels that captures changes to these inputs.

In most circumstances, DNSPs should be able manage the risks associated with changes to inputs while keeping the structure of network tariffs relatively stable. Network tariff structures can provide important signals to consumers about the impact that their consumption decisions have on the costs of providing network services. While these structures are important to the revenue recovery, it is the pricing levels that determine the total amount of revenue that can be recovered. Changes to the pricing levels of network tariffs from year to year should normally be sufficient to address revenue recovery risks created by changes in pricing inputs.

### 5.4.6 Assessment of current outcomes

#### Lack of consultation on development of network tariffs

The current network pricing process does not require DNSPs to consult with retailers and consumers on the development of new network tariffs or on changes to existing network tariffs. The AER is also not required to consult with stakeholders on its assessment of annual pricing proposals.

In addition, the current network pricing process does not allow sufficient time for DNSPs or the AER to consult with retailers and consumers. This is because the entire process occurs in a very short space of time on an annual basis. This means that while the NER does not prevent DNSPs and the AER from consulting with retailers and consumers, in practice it is unlikely that they would be able to undertake any robust consultation given the current time constraints.

#### Insufficient notice of network price changes

The current timing of the annual network pricing process has meant that retailers have not received notification of approved network tariffs until very close to when the new tariffs are to take effect. These new network tariffs apply from 1 July in all jurisdictions, except in Victoria where network tariffs change on 1 January each year.

In some instances, late notification of approved network tariffs has required retailers to develop their retail tariffs on the basis of estimates of network tariffs. To account for the risk that actual network tariffs could be different from their estimate, retailers build a price premium into their retail tariffs that is ultimately borne by their customers. Such outcomes can impact on the level of competitiveness in the retail market.

The National Energy Customer Framework (NECF) and jurisdictional requirements also constrain retailers in relation to how often they can change their retail tariffs to reflect changes in network tariffs. Some of these obligations include:

- under NECF, retailers are only able to change standing offer retail prices once every six months. If a retailer is to vary its standing offer retail prices, it must publish the variation at least 10 business days before the variation takes effect;
- in Victoria, retailers are required to provide a minimum of one months' notification of a change to the standing offer retail prices and 20 business days' notice of a change to the amount and/or structure of a retail tariff that affects a consumer with a smart meter installed; and
- in jurisdictions with retail price regulation (as of 1 July 2014, this only applies to Queensland, the Australian Capital Territory and Tasmania), there is an added level of approvals from jurisdictional regulators that further compress the time available for retailers to implement changes to network tariffs.

Some stakeholders have suggested that the timing of the annual pricing process is only a problem in jurisdictions with retail price regulation.[69]However, feedback from retailers in this rule change process indicates that adequate notification of changes to network tariffs is an issue across all regions.[70]

### Limited time for thorough assessment by the AER

The current annual network pricing process provides little scope for the AER to undertake a thorough assessment of the network tariffs that DNSPs propose in their annual pricing proposals.

The AER's process to date has been focussed on ensuring that changes to the pricing levels in the DNSPs' pricing proposals are within the revenue boundaries set by the applicable control mechanism and side constraint provisions. While this assessment is essential, and is the appropriate focus under the current process, it is only one component of the assessment task that should ideally be done. For instance, it is also important to assess whether network tariffs are cost reflective and send efficient pricing signals to consumers.

There are a number of other reasons why the AER has not been able to undertake a thorough assessment of DNSPs' network tariffs. The principal reason is the degree of discretion given to DNSPs under the current pricing principles. This issue is discussed in more detail in chapter 3 and in Appendix A2.

The AER also is not currently afforded enough time in the annual pricing process to undertake a comprehensive assessment of DNSPs' pricing proposals. While under the current arrangements there is no obligation on the AER to approve annual network prices within a specific time period, new network prices must come into effect from the start of the new regulatory year.

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69 See, for example: Grid Australia submission, 5 July 2013, p. 2; Powercor and CitiPower submission, 4 July 2013, p.1, 3.

70 EnergyAustralia submission, 4 July 2013, p.8; Momentum Energy submission, 4 July 2013, p.2; Origin submission, 4 July 2013, p.6.

In order to allow changes to network tariffs to take effect from the first day of the new regulatory year, the AER has endeavoured to approve network charges as soon as they are received from the DNSPs. Typically, the AER has taken around 20 business days to assess and approve annual network tariffs.

In some instances, the AER has also received incomplete or non-compliant annual pricing proposals. This has meant that the AER has had to liaise with the relevant DNSP to rectify deficiencies or errors in the pricing proposal before it can approve it. This puts further pressure on the timeliness of the pricing process.

### Conclusion

As the current process does not providing opportunity for stakeholder engagement in the development of network tariffs, adequate notification of approved network tariffs and sufficient time for the AER to undertake a thorough assessment of pricing proposals, it appears that the current process is focussed on allowing DNSPs a mechanism to recover their allowed revenue at the expense of all other outcomes.

In addition, as the current arrangements are focussed on short term flexibility over providing more long term certainty on the structure and pricing level of network tariffs, they are not likely to contribute to consumer understanding of network pricing signals.

## 5.5 A new pricing process

In the Commission's view, the current annual pricing process is not delivering the right outcomes for consumers. This has implications for the efficiency of network tariffs and the charges faced by consumers.

In order to achieve better outcomes, the Commission's draft rule splits the network pricing process into two distinct stages. This process is broadly based on the network pricing process proposed by the COAG Energy Council and incorporates elements of IPART's proposal.

In the first stage of the network pricing process, DNSPs would develop a TSS[71] that would outline the tariff classes, tariff structures and the methodologies associated with the pricing principles to apply over the five year regulatory control period.[72] This document would be submitted to the AER for assessment against the pricing principles in conjunction with the DNSP's five year regulatory proposal. The AER would then approve the TSS if it meets the pricing principles and other NER requirements.

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71 The TSS is based on the COAG Energy Council's proposed PSS. The Commission has renamed the document to clarify that the document's main function is to outline tariff structures (and be accompanied by indicative pricing levels) for the five year regulatory control period.

72 Under clause 6.3.2(b) of the NER, a regulatory control period must be not less than 5 years. In practice, all DNSPs' regulatory control periods to date have been five years.

The second stage of the network pricing process would occur as part of an amended annual network pricing process. In this stage, DNSPs would develop and submit their annual pricing proposals to the AER. The annual pricing proposals would essentially apply pricing levels to the tariff structures outlined in the already approved TSS. The AER's assessment of the DNSP's pricing proposal would be a compliance check against the approved TSS, the control mechanism specified in the AER's regulatory determination and side constraints.

### 5.5.1 Need for a two stage pricing process

Splitting the network pricing process into two stages is a significant change from the current arrangements. However, the Commission considers that this approach will enable the network pricing process to meet the outcomes discussed above. This includes allowing for:

- requirements that would facilitate meaningful consultation and dialogue between DNSPs, the AER, retailers and consumers;
- increased certainty with respect to changes in network tariff structures and more timely notification of approved changes to network tariff pricing levels;
- more opportunity for retailers and consumers to inform and educate themselves about how network tariffs will affect them and how they should respond to the pricing signals;
- the AER to have appropriate timeframes and capacity to assess the compliance of the DNSPs' proposed network tariffs against the pricing principles and other requirements; and
- DNSPs to maintain ownership of network tariffs and to adjust the pricing levels of their tariffs to recover allowed revenues.

The concept of this two stage network pricing process was tested with stakeholders at a workshop on 16 May 2014. Stakeholder feedback at the workshop indicated that there was broad support for a two stage network pricing process. Retailers, consumer groups and the AER were very supportive, while DNSPs were generally positive, but highlighted some issues of detail for further consideration.

## 5.6 Stage one of the pricing process

Stage one of the network pricing process involves a number of steps. The draft rule requires that each of these steps is undertaken in order to put in place a TSS for each DNSP. These steps are as follows:

1. DNSPs undertake consultation and seek feedback from retailers and consumers on the network tariff structures they are contemplating to apply for the upcoming five year regulatory control period.
2. Preparation by the DNSP of its proposed TSS for submission to the AER along with its regulatory proposal.
3. AER consultation and approval of the proposed TSS.

These steps are discussed in further detail below.

### 5.6.1 DNSP consultation on network tariffs

Before DNSPs submit their proposed TSS to the AER, it will be necessary for the DNSP to engage in discussions with stakeholders, particularly retailers and consumers, about the network tariff structures and indicative price levels that the DNSP is considering proposing. DNSPs would accordingly be required to describe how they have engaged with consumers and retailers in developing the proposed TSS and have sought to address any relevant concerns identified as a result of that engagement.

The intention of this consultation is to stimulate discussion between DNSPs, retailers and consumers so that DNSPs have information to develop more robust and suitable tariff structures that retailers can implement and consumers can understand and respond to. The Commission does not intend for this consultation process to operate as an educational exercise, whereby DNSPs inform retailers and consumers of their proposed network tariff structures. Instead, this consultation process is intended to provide retailers and consumers with a real opportunity to provide meaningful input into the development of network tariffs.

In submissions, DNSPs strongly argued that they are best placed to determine the appropriate level and form of consultation.[73] Conversely, retailers advocated for a "standard approach and consistent definition to consultation" to facilitate a minimum standard of information exchange.[74]

The Commission considers that it is appropriate that DNSPs have the flexibility to determine the nature and extent of consultation. There is a risk that if the NER prescribes the type and level of consultation expected, DNSPs would only engage with retailers and consumers to the minimum extent necessary to meet this obligation.

The draft rule does not include an explicit requirement on DNSPs to consult with stakeholders. Instead, the draft rule requires DNSPs to demonstrate when submitting their proposed TSS, how they have taken stakeholder views into account in developing the proposed TSS.

This approach is consistent with the Commission's decision in the *Economic Regulation of Network Service Providers* rule change in November 2012. In this rule change, the Commission introduced a requirement that DNSPs demonstrate how they have incorporated feedback from consumers into their regulatory proposal.

It is expected that consultation on network tariffs will occur in conjunction with consultation on the regulatory proposal. This minimises the consultation burden, which many stakeholders raised as an issue.[75]Consultation on the regulatory proposal and the proposed TSS at the same time will also facilitate greater consumer understanding of how planned investment in the network impacts on network costs,

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73 See, for example: Ergon submission, 4 July 2013, p.10; Jemena submission, 19 December 2013, p.A-3; United Energy submission, 4 July 2013, p.5.

74 AGL submission, 12 July 2013, p.5.

75 See, for example: ATA submission, 19 December 2013, p.9; AER submission, 19 December 2013, p.12; CitiPower and Powercor submission, 19 December 2013, p.4; Energex submission 19 December 2013, p.6; Networks NSW submission, 4 July 2013, pp.1, 6.

recovered through network tariffs. This link is important to getting consumers to understand how and why they should respond to network pricing signals.

Both IPART and the COAG Energy Council proposed that the AER should develop a guideline to guide DNSPs in their consultation on network tariffs. A consultation guideline that applies explicitly to consultation on network pricing does not appear to be necessary. If further guidance was considered useful by stakeholders, the AER could expand its existing *Consumer Engagement Guideline for Network Service Providers*[76] to provide guidance to DNSPs on the type and level of consultation that would be expected at a minimum.

The AER's Consumer Engagement Guideline was developed by the AER in response to the *Economic Regulation of Network Service Providers* rule change requirement for DNSPs to engage with consumers. This guideline already includes information on how DNSPs can consult with consumers on network pricing issues. Since the AER is able to amend this guideline at its discretion, the NER do not need to address this specific issue. Most stakeholders supported using the existing guideline over developing a new specific consumer engagement guideline for the network pricing process.[77]

### 5.6.2 Content of the Tariff Structure Statement

It is important that the TSS provides sufficient information to enable the AER to make a thorough assessment of whether or not the network tariff structures comply with the pricing principles. The TSS also needs to provide sufficient information to provide certainty to stakeholders in regards to the network tariff structures and pricing levels that will apply for the regulatory control period so that consumers are given stable, long term price signals that they can respond to.

Given these requirements, the Commission considers that the TSS must include the following:

1. The tariff classes into which consumers are to be divided during the relevant regulatory control period.
2. The policies and procedures the DNSP will apply when assigning and reassigning consumers to tariffs or from one tariff to another.
3. The structures for each proposed tariff.
4. The charging parameters for each proposed tariff.
5. The pricing methodology that will be used to set each tariff in each pricing proposal of the DNSP during the relevant regulatory control period.

The TSS must also be accompanied by a pricing schedule that sets out the indicative price levels for each tariff included in the TSS.

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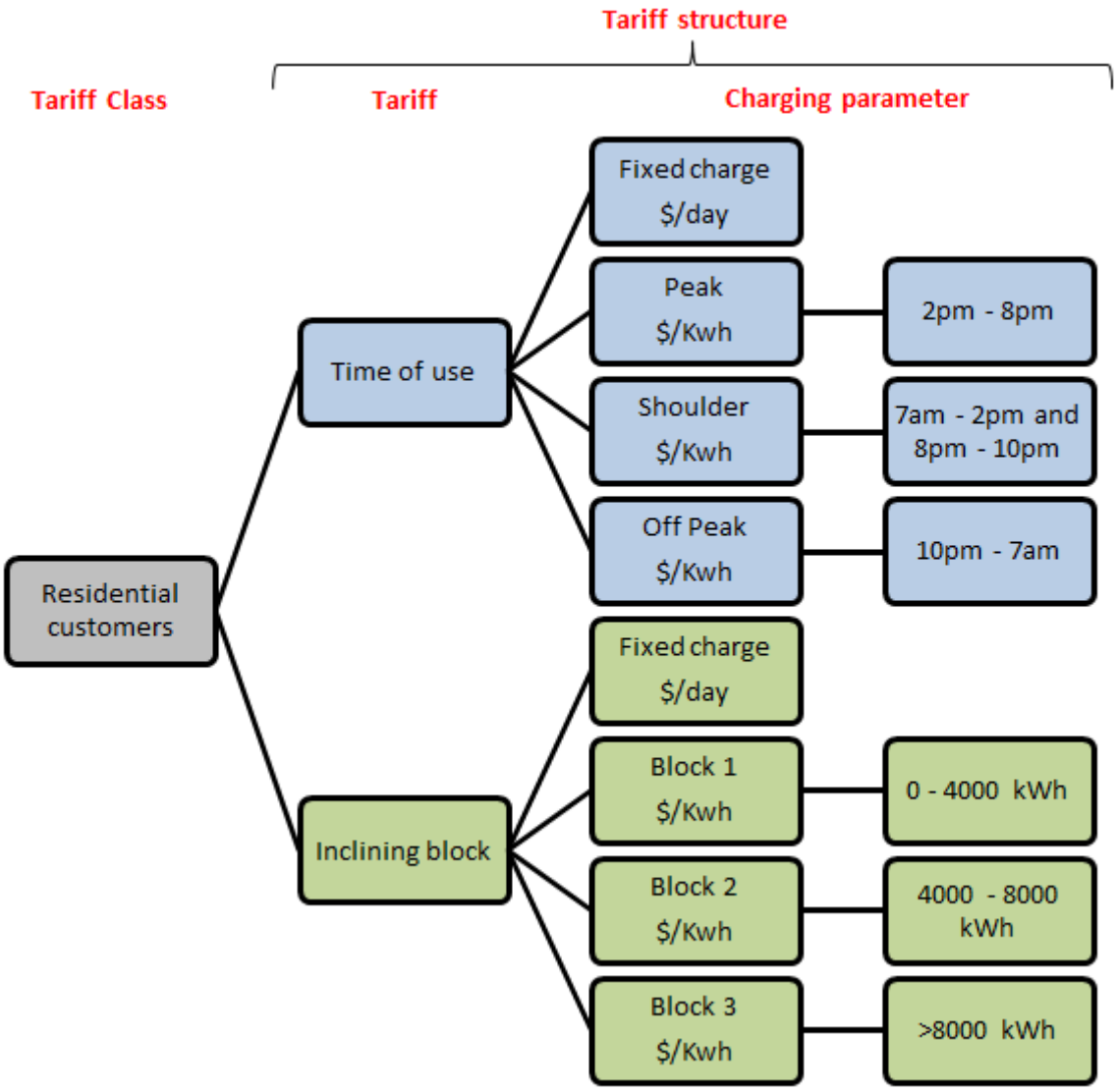
76 AER, *Consumer Engagement Guideline for Network Service Providers*, November 2013, Melbourne.

77 See, for example: ATA submission, 19 December 2013, p.10; AER submission, 5 July 2013, p.6; Energex submission, 19 December 2013, pp.6-7; ENA submission, 5 July 2013, p.5; MEU submission, 19 December 2013, p.43; SACOSS submission, 14 December 2013, p.9.

Under the draft rule, DSNPs will be required to provide detailed information on the tariff classes and tariff structures that they intend to apply during the regulatory control period. DNSPs will need to do this for every tariff that they propose to apply over the regulatory control period. DNSPs will also need to describe their policies and procedures for assigning and reassigning consumers to tariffs and from one tariff to another.

An example of what this would mean is provided in Figure 5.1 below.

**Figure 5.1 Example of tariff class and tariff structure**




Source: Based on Ausgrid's Network Pricing Proposal, 2014-15, May 2014.

The purpose of providing this level of detail is to allow stakeholders, particularly consumers, to understand what these tariffs will likely mean for them. This level of detail will also assist retailers in deciding how best to incorporate network tariffs in their retail offers, affording them opportunity to develop a greater range of retail products. Ultimately, the Commission considers that this will support greater competition in the retail market.

The Commission notes that DNSPs will still be able to implement new network tariffs in the course of the regulatory control period, as long as:

- it is clearly indicated in the approved TSS that the DNSP will implement a new tariff to commence in a particular regulatory year;
- the TSS is amended to include these tariffs; or
- the revenue expected to be recovered from the tariff is less than 0.5 per cent of the annual revenue requirement and, in aggregate, all such tariffs recover less than one per cent of the annual revenue requirement. This is discussed in section 5.7.3.

The intent of the TSS is not to preclude DNSPs from making any changes to their network tariffs, but to minimise unnecessary changes and to encourage DNSPs to make changes transparently.

Once tariff classes and tariff structures are approved by the AER in the TSS, these must be applied in the stage two annual pricing process, unless the DNSP goes through a process to amend the TSS. The process and test for amending an approved TSS is considered in section 5.7 below.

We note that Jemena already prepares a TSS for Jemena Gas Networks (JGN). It recently submitted a draft TSS to the AER as part of JGN's 2015-2020 Access Arrangement.[78] JGN's TSS includes many of the matters that would be required for electricity DNSPs under the draft rule.

### Compliance with the pricing principles

The TSS must comply with the pricing principles over the regulatory control period. This means that DNSPs will need to show how they have applied the cost reflectivity principles to develop network tariffs and how they have adjusted their cost reflectivity based tariffs to reflect other pricing principles. If during the regulatory control period, a DNSP wants to change its application of the pricing principles, it would need to seek to amend its TSS.

This will require DNSPs to specify the methodology by which they will set network tariffs in their TSS. This will limit the extent to which DNSPs can vary their price levels from year to year as they will need to comply with the methodology specified in the TSS. Price level changes should then primarily relate to matters that are outside the control of the DNSP, rather than the DNSP preferring to change its methodologies.

Requiring DNSPs to specify the methodology by which it will develop network tariffs was supported by a number of stakeholders.[79]

78 Available at http://jemena.com.au/Gas/Jemena/media/JemenaGasNetworksMedia/Community-Engagement-Document/Our-2015-plan/Tariff%20structures%20statement.pdf

79 See, for example: ATA submission, 19 December 2013, p.10; EnerNOC submission, 19 December 2013, p.2.

### Pricing schedule

Binding DNSPs to price levels at the start of the regulatory control period would create too much revenue risk for DNSPs. In submissions, stakeholders recognised this issue.[80] However, many stakeholders also considered that DNSPs could be required to provide indicative price levels so that retailers and consumers can understand the longer term pricing strategy of the DNSP and the trajectory of network charges over time.[81]

The Commission considers that DNSPs should provide more information on the indicative price levels of their network tariffs to stakeholders. Therefore, the draft rule requires DNSPs to submit with their TSS a pricing schedule of indicative price levels for each tariff for each regulatory year of the regulatory control period. This schedule is to be updated annually as part of the annual pricing process in stage two.

The annually updated pricing schedule will give retailers and consumers access to the DNSP's best estimate of the likely trajectory of future network tariff price levels. In submissions and in workshops, this information was something that retailers and large users considered critical. They considered that access to better information in relation to the price paths of each network tariff will assist them in preparing budgets and managing the risks associated with movements in network prices.[82] Large users have also noted that prices for some tariffs often diverge significantly from the overall change in the DNSP's revenue allowance and that information on expected price paths for each tariff would be very useful.[83]

DNSPs expressed some concern in workshops that publishing a schedule of indicative prices for the remaining regulatory years could create expectations in stakeholders that these prices will be actual prices. DNSPs were concerned that this could lead to confusion when actual prices differ from the indicative prices. On balance, the benefits to stakeholders, such as retailers and large users, outweighs the potential for confusion as suggested by DNSPs. The pricing schedule should clearly state that the prices in it are indicative only and could give examples of reasons why actual prices could diverge from the indicative prices.

### AER guideline

The Commission also considered whether the NER should require an AER guideline that provides further direction to DNSPs on the information to be incorporated into the TSS as was suggested during consultation.

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80 See, for example: CitiPower and Powercor submission, 19 December 2013, p.5; Energex submission, 19 December 2013, p.4; IPART submission, 3 July 2013, p.10.

81 See, for example: ATA submission, 19 December 2013, p.12; Arrium submission, 24 January 2014, p.6; Clean Energy Council submission, 19 December 2013, p.5; Energex submission, 19 December 2013, p.9; Energy Action submission, 24 December 2013, p.3; EnerNOC submission, 19 December 2013, p.4; ENA submission, 19 December 2013, p.C-2; Ergon submission,19 December 2013; p.6; IPART submission, 19 December 2013, pp.3-5; MEU submission, 19 December 2013, p.39; Origin submission, 20 December 2013, p.3.

82 EUAA submission, 5 July 2013, p.3.

83 Arrium submission, 24 January 2014, p.2.

The Commission acknowledges that there are benefits to an AER guideline directing DNSPs on the type of information that it expects to see in the TSS. This approach would recognise that tariff structures will evolve over time and it is difficult to be certain about what information the AER will need to assess tariffs into the future. Such a guideline would assist DNSPs in developing their TSS and could mitigate some of the risk of the AER receiving a TSS that is incomplete or that is missing information.

However, the Commission believes that high level content requirements, specified in the NER, would allow DNSPs to develop and own their tariffs better. This approach will give the AER and DNSPs certainty with respect to what kind of information should be included in the TSS, but also affords DNSPs the flexibility to structure their TSS in a way that best supports their tariff strategy. This will further reinforce DNSPs being responsible for their own network tariffs.

Requiring an AER guideline would also significantly delay the implementation of the new rules.

### 5.6.3 AER approval of the Tariff Structure Statement

Once a DNSP has developed a TSS, it will need to be submitted to the AER for assessment and approval alongside the regulatory proposal.

The AER will need to assess the proposed TSS for compliance against the pricing principles and other rule requirements. Undertaking this assessment as part of the 15 month regulatory determination process allows the AER sufficient time to properly assess the TSS against the pricing principles and other requirements.

In submissions, most stakeholders supported requiring the AER to undertake consultation on the TSS assessment. The ATA suggested that AER consultation "is essential to ensure that due process is followed".[84] The AER stated that it would likely seek feedback from stakeholders in its assessment of the TSS as this would provide a means of addressing matters left unresolved in the DNSP's consultation.[85] The Commission agrees with stakeholders that the AER should consult with stakeholders, noting this would also be an opportunity for the AER to consider the extent to which DNSPs have incorporated retailer and consumer feedback in developing their proposed TSS.

The AER consultation requirements that apply during its assessment of the regulatory determination are extended under the draft rule to incorporate consultation on the TSS. This brings consultation on the TSS into the broader consultation processes undertaken in relation to the regulatory proposal, streamlining consultation and reducing the potential for consultation burden. As with the DNSPs' own consultation processes, the AER's consultation process will allow for all parties to consider the links between what is proposed in the regulatory proposal and what this means for network tariffs in a more cohesive way.

84 ATA submission, 19 December 2013, p.10.

85 AER submission, 19 December 2013, p.12.

There is merit in the AER's assessment of the TSS mirroring the process it is already required to adopt in approving the Pricing Methodology for TNSPs under Chapter 6A of the NER. Based on the Chapter 6A process, the draft rule requires the AER to make a draft and final determination in relation to the DNSP's proposed TSS. If the AER does not approve a DNSP's proposed TSS in its draft determination, it issues a statement of the changes required. The DNSP then submits a revised proposed TSS that addresses the issues identified in the AER's draft determination. If the AER is not satisfied that the revised proposed TSS complies with the pricing principles and does not approve it, it amends the TSS to the extent necessary to comply with the pricing principles.

DNSPs should maintain ownership and control of their network tariffs as much as possible, while also allowing the AER sufficient ability to interrogate the basis on which tariffs have been developed, within the context of the pricing principles. Therefore, the Commission has decided that the AER must approve a DNSP's proposed TSS unless the AER is reasonably satisfied that the proposed TSS does not comply with the pricing principles or other requirements of the NER. This restricts the AER's ability to substitute its own TSS for that proposed by a DNSP and thereby limits the risk that DNSPs lose responsibility for their network tariffs.

Once a TSS is approved by the AER, DNSPs are required to publish the approved TSS on their websites within five business days and apply the tariff classes, tariff structures and pricing methodology outlined in the TSS to each annual network pricing process.

### AER's powers to amend a Tariff Structure Statement

The Commission considered whether there was another mechanism beyond allowing the AER to amend a TSS that would encourage DNSPs to comply with the rule requirements. The COAG Energy Council proposed in its rule change that if the AER was unable to approve a DNSPs TSS, the previously approved TSS would continue to apply. The Commission considers that this proposal is problematic and may result in inefficient outcomes as the operating environment may have changed significantly since the last TSS was approved. This proposal also would not address what would happen if the AER did not approve the first TSS.

Many stakeholders are supportive of the AER having the ability to amend the TSS if it is considered necessary.[86] In its submission, EnerNOC notes that the AER should be able to amend a DNSP's TSS to make it compliant in instances where the DNSP is unable or unwilling to submit a compliant TSS. EnerNOC considers that this is a better outcome than reverting to the previously approved TSS.[87] DNSPs are not supportive of the AER having the ability to amend the TSS, noting that it is "inappropriate for the AER to have a role in designing individual network tariffs or structures."[88]

86 See, for example: ATA submission, 19 December 2013, p.11; Arrium submission, 24 January 2014, p.5; AER submission, 19 December 2013, p.14; Clean Energy Council submission, 19 December 2013, p.4; MEU submission, 19 December 2013, p.45.

87 EnerNOC submission, 19 December 2013, p.3.

88 ENA submission, 19 December 2013, p.C-4.

On balance, the Commission considers that the AER should have the ability to amend the DNSP's TSS. If the DNSP does not submit a TSS that the AER considers to be compliant with the pricing principles there needs to be some mechanism to stop a deadlock where the AER asks the DNSP to resubmit a TSS but the DNSP keeps submitting a non-compliant TSS. It is preferable that the AER amend the DNSP's TSS to the minimum extent necessary to approve it than revert to the previously approved TSS. The Commission considers that this is likely to result in an outcome that is better for consumers. This is consistent with the arrangements that apply to the approval of a TNSP's Pricing Methodology under Chapter 6A of the NER.

#### Limited Merits Review

Consistent with the Pricing Methodology approval for TNSPs under Chapter 6A of the NER, the Limited Merits Review regime under the NEL will apply to the TSS approval process under the draft rule. This is because the TSS will be part of the distribution determination that sets a regulatory period. Given the importance of the TSS, the Commission considers that it is appropriate for it to be subject to merits review.

### 5.7 Amending the Tariff Structure Statement

DNSPs can be faced with significant and unexpected events that may require reconsideration of their tariff strategy. This is particularly the case with current demand conditions where forecasting future demand is challenging.[89] DNSPs may also have to comply with jurisdictional requirements on pricing introduced within the regulatory control period. These are some examples of legitimate reasons that can require DNSPs to amend their approved TSS.

Therefore, the draft rule allows DNSPs to vary their approved TSS to deal with unexpected circumstances. However, certain restrictions and processes would apply to amend the TSS within a regulatory control period.

DNSPs argued in submissions that if they are required to apply the TSS to the annual pricing process, they must have the ability to vary network tariff structures over the five year regulatory control period.[90] DNSPs stated that restricting their ability to adjust their network tariffs over the five year regulatory control period would not enable DNSPs to respond to changing circumstances and may make it harder to recover their allowed revenue.[91] DNSPs also considered that restricting changes to network tariffs during the regulatory determination period will stifle tariff innovation.[92]

89 See, AEMC, *Consideration of difference in actual compared to forecast demand in network regulation*, advice to SCER, 26 April 2013.

90 See, for example: ActewAGL Distribution submission, 19 December 2013, p.4; Energex submission, 19 December 2013, p.5; Jemena submission, 19 December 2013, p.2.

91 See, for example: Energex submission, 19 December 2013, p.5; ENA submission, 19 December 2013, p. C-2.

92 Energex submission, 19 December 2013, p.5; ENA submission, 19 December 2013, p.C-2; Networks NSW submission, 19 December 2013, p.22.

Stakeholders generally accept that DNSPs may need to make adjustments to their TSS in the course of the regulatory control period.[93] However, stakeholders consider that there should be limits to a DNSP's ability to amend its approved TSS. Stakeholders have argued that DNSPs should be required to consult with stakeholders prior to seeking an amendment to the TSS and this amendment should be subject to AER approval.[94]

### 5.7.1 The test for Tariff Structure Statement amendment

Under the draft rule, DNSPs will not be able amend their TSS at their discretion. The Commission considers that if DNSPs had discretion to vary their TSS at will, this would undermine the credibility of the initial TSS process and reduce the value of an approved TSS as a tool for the AER to assess the compliance of network tariffs with the pricing principles and to provide certainty about tariff structures for retailers and consumers. Allowing DNSPs to amend their TSS at their discretion would be contrary to the outcome of providing retailers and consumers with certainty about how and when network tariffs are likely to change.

The draft rule provides a limited ability to DNSPs to amend the TSS by prescribing certain conditions that must be met in order to change a TSS. The draft rule specifies that to amend a TSS, there must be an event that is beyond the reasonable control of the DNSP, which could not have been reasonably foreseen by the DNSP at the time the TSS was approved. Further, the DNSP must demonstrate that amendments to the TSS that are proposed in response to this event would, or would be likely to, result in a TSS that materially better complies with the pricing principles and other NER requirements than the DNSP's current TSS.

If a DNSP believes that these conditions are satisfied, it may submit a request for an amendment of the TSS to the AER. This request must include:

- the proposed amended TSS;
- a description and justification of the differences between the proposed amended TSS and the DNSP's current TSS;
- a description of how the differences between the proposed amended TSS and the DNSP's current TSS would impact on other elements of the TSS;
- a description of how the proposed amended TSS would better comply with the pricing principles than the current TSS; and
- a description of how the DNSP has engaged with consumers and retailers in developing the proposed amended TSS and has sought to address any relevant concerns identified as a result of that engagement.

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93 See, for example: AER submission, 19 December 2013, p.1; EnerNOC submission, 19 December 2013, p.2; IPART submission, 19 December 2013, p.3; MEU submission, 19 December 2013, p.38; Origin, submission, 20 December 2013, p.4; SACOSS submission, 14 December 2013, p.7; TEC submission, 19 December 2013, p.3.

94 See, for example: ATA submission, 19 December 2013, p.8; Arrium submission, 24 January 2014, p.5; Clean Energy Council submission, 19 December 2013, pp.4-5; EnerNOC submission, 19 December 2013, p.3; IPART submission, 19 December 2013, p.4; MEU submission, 19 December 2013, p.40; SACOSS submission, 14 December 2013, p.7; TEC submission, 19 December 2013, p.4.

The AER will then assess whether the DNSP's amended TSS results in outcomes that better meet the pricing principles than the original TSS. The AER is required to approve the amended TSS if (among other things) the DNSP has demonstrated to the AER's reasonable satisfaction that the amended TSS better meets the pricing principles. The AER is required to consider the entire TSS, so that the indirect impacts of the amendments are understood and accounted for.

#### Materiality threshold

The Commission considered whether to apply a numerical materiality threshold to TSS amendments. The Commission recognised that a materiality threshold could provide some transparency in relation to the significance of an event or circumstance that requires amendments to a TSS. A materiality threshold could also give some certainty to stakeholders that the TSS will only be amended in circumstances where it is considered that there is a material reason for such a change.

The option of a materiality threshold for amendments to the TSS was explored in workshops with stakeholders. Most stakeholders strongly opposed the introduction of a materiality threshold. Stakeholders considered that a materiality threshold would be difficult to measure and implement and would make the amendment process more complicated.

The Commission agrees that a numerical materiality threshold would be difficult to implement and that there is no need for a materiality threshold to apply to the TSS amendments process. However, the Commission notes that the requirements that DNSPs describe how they have consulted on the proposed changes to their TSS and that they go through an amendment process with the AER's oversight should provide sufficient disincentives to DNSPs from seeking smaller, non-material changes.

### 5.7.2 Timeframe for amending the Tariff Structure Statement

If a DNSP wants to amend its TSS, this should ideally occur outside the annual pricing process so as not to compromise the timeliness of that process.

Under the draft rule, DNSPs are required to submit any proposed amended TSS to the AER at least six months before the commencement of the annual pricing process. This allows sufficient time for the AER to undertake a thorough assessment of the amended TSS proposal. The AER is also required to publish on its website a DNSP's request for an amendment to its TSS before making its decision on whether to approve it or not.

The AER is required to publish its decision on a revised proposed TSS no later than one month before the commencement of the annual pricing process. This will give stakeholders, including retailers and consumers, sufficient notification of a change in network tariff structures before the change applies.

With the exception of DNSPs, this approach is broadly supported by stakeholders who argued that no changes to the TSS should be allowed within the annual pricing process.[95] DNSPs considered that they should be able to address minor variations to the TSS in the annual pricing process, but more major changes should be done outside this process.[96]

### 5.7.3 Exceptions to the need to seek Tariff Structure Statement amendment

DNSPs expressed concerns that a TSS would prevent them from introducing trial tariffs. DNSPs were particularly concerned that they may not be able to develop new or innovative network tariffs in response to consumer requests or changing consumption patterns.

So as not to not stifle the ability of DNSPs to be innovative and responsive to their customers, the Commission considers that there should be different arrangements for the introduction of network tariffs that apply to a small number of consumers. These arrangements should permit DNSPs to implement new network tariffs where these tariffs are under a certain materiality threshold.

The draft rule provides an exemption from the need to seek an amendment to a TSS so as to enable the introduction of a new tariff where the revenue recovered by the tariff does not exceed 0.5 per cent of the annual revenue requirement, and where the revenue recovered cumulatively from all such tariffs that are not included in the TSS does not exceed one per cent of the annual revenue requirement.

To the extent that either of these thresholds are breached, DNSPs would be required to go through an amendment process to incorporate the tariff into their TSS for the following year. At this point, the AER would be able to assess whether the tariff complies with the pricing principles.

Even if these thresholds are not breached, the network tariff would still need to be included in the TSS developed as part of the next regulatory determination process so that it can be assessed against the pricing principles. The TSS developed at the start of the regulatory period is to contain all tariffs that the DNSP is planning to offer over the regulatory control period.

Under the draft rule, DNSPs are required to notify the AER of their intention to introduce a network tariff that is not included in the TSS, no later than four months before the commencement of the relevant regulatory year. These tariffs also need to be included in the DNSP's annual pricing proposal, so that the AER can check for compliance with the applicable control mechanism and side constraints. However, new network tariffs will not be assessed against the pricing principles until they are included in the TSS.

These tariffs also need to be included in the schedule of indicative pricing levels. This will afford stakeholders, particularly retailers and consumers, with some visibility and certainty with respect to movements in network pricing levels.

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95 See, for example: Clean Energy Council submission, 19 December 2013, p.3; EnerNOC submission, 19 December 2013, p.3; Origin submission, 20 December 2013, p.4.

96 Networks NSW submission, 19 December 2013, p.32.

## 5.8 Stage two of the pricing process

Under the Commission's draft rule, stage two of the network pricing process will occur on an annual basis. This process involves amendments to the existing annual pricing process. Four significant changes to the existing process have been made:

1. DNSPs will develop their annual pricing proposals by applying pricing levels to the tariff structures outlined in their approved TSS.
2. The AER will assess the annual pricing proposal against the TSS, the control mechanism specified in the DNSP's revenue determination and the side constraint provisions.
3. The timing of the annual network pricing process will be moved forward to facilitate earlier assessment, approval and notification of network price changes.
4. The AER will have a set timeframe within which to assess and approve the DNSP's annual pricing proposal.

The Commission considers that linking the annual pricing proposal to the TSS enables stakeholders, including retailers and consumers, to have more certainty about the way they will be charged for their use of the network. In particular, by giving retailers information about how network tariffs will be structured over the regulatory control period, they can develop more robust retail offers contributing to competition in the retail market. This should help ease some of the price volatility felt by consumers in the long run.

### 5.8.1 DNSPs' annual pricing proposals

With tariff classes and tariff structures set in the TSS, DNSPs will need to apply pricing levels to those elements in the annual network pricing process to come up with the network tariffs to apply for the next regulatory year. This is the basis of their annual pricing proposals.

Annual pricing proposals relate to network use of system charges, and so DNSPs are required to incorporate transmission prices into the pricing levels they apply in their annual pricing proposal.

DNSPs will also be required to update the indicative price levels in their pricing schedules for future years of the regulatory control period as part of the annual pricing process.

This proposal will be submitted to the AER for assessment as currently occurs. Indicative pricing levels are for information only, and the AER will not be required to approve these prices. DNSPs will have a set timeframe by which to submit annual pricing proposals to the AER.

### 5.8.2 AER assessment of annual pricing proposals

The AER's assessment of the annual pricing proposal will involve the AER checking that the tariff structures in the annual pricing proposal are consistent with those outlined in the approved TSS, and that the pricing levels are consistent with the pricing methodologies in the TSS, the control mechanism as defined in the AER's regulatory determination and side constraints.

Similar to IPART's rule change proposal, the AER will be required to check that the DNSP's proposed pricing levels are broadly consistent with the indicative pricing levels provided in the TSS or that the DNSP has explained any material differences.

Under the draft rule, the AER must approve a pricing proposal if the AER is satisfied that:

1. the proposal complies with the applicable distribution determination, the applicable TSS and any other rule requirements;
2. the proposed tariff for each tariff class as set out in the proposal is broadly consistent with the corresponding indicative pricing levels for the relevant regulatory year as set out in the current pricing schedule, or else any material differences between them have been explained by the DNSP; and
3. all forecasts associated with the proposal are reasonable.

DNSPs will be required to publish their approved annual pricing proposal on their websites no later than five business days after the AER has published its decision.

### 5.8.3 Timeframes for the annual network pricing process

Splitting the network pricing process framework into two stages offers significant scope to improve the timing of the annual process to facilitate earlier approval and notification of changes to network tariffs.

Under this framework, the draft rule includes a requirement that network tariffs are approved and notified at least six weeks prior to taking effect. This timeframe is consistent with IPART's proposal.

To enable the six weeks' notification of network tariffs, other pricing processes will need to also shift from current timeframes. The draft rule shifts the publication of transmission prices to 15 March, two months earlier than under the current arrangements. This will apply across all TNSPs except for in Victoria, where transmission prices will continue to be published by 15 May. The exception for Victoria is discussed further below.

DNSPs will then be required to submit their annual pricing proposals to the AER one month earlier than they currently do. For all jurisdictions except Victoria, this means that DNSPs would submit their pricing proposals to the AER no later than 31 March each year. In Victoria, DNSPs will submit their pricing proposals to the AER no later than 30 September each year.

The AER will have 30 business days in which to assess and approve annual pricing proposals, except in the initial year where the AER will be required to approve the initial pricing proposal as soon as practicable. If the AER is not able to approve the proposed network tariffs, the AER has the ability to amend the DNSP's network tariffs to the extent necessary to approve them, consistent with the current NER provision.[97] However, the Commission notes that if the AER is required to amend a DNSP's network tariffs, it is expected that the AER would use the indicative price levels, updated as part of the previous year's pricing process to assist it in determining what adjustments would be appropriate.

Consistent with current arrangements[98], before the AER amends a DNSP's network tariffs, it may first give the DNSP an opportunity to address the identified deficiency. If the DNSP fails to do this, or it does not address the issue satisfactorily, the AER may make the proposed amendment itself.

This timeframe will give retailers at least six weeks' notification of approved network tariffs before they take effect.

### Volatility in transmission prices

During the rule change process, TNSPs expressed concern that requiring publication of annual transmission prices earlier will lead to greater volatility in transmission prices. TNSPs were particularly concerned about the impact this may have on the prices faced by large customers who are directly connected to the transmission network.

The increase in transmission price volatility can come from more reliance on forecasts of key transmission pricing inputs. The most significant of these is the inter-regional settlement residue auctions and the intra-regional settlements residue, which can be quite volatile. AEMO publishes the results of positive inter-regional settlement residue auctions data quarterly. Grid Australia's submission indicated that the March quarter results become available between 15 and 20 March each year.[99] Negative inter-regional settlements residue and intra-regional settlements residues are calculated and published weekly by AEMO.

To set transmission prices, TNSPs currently forecast settlements residues to the end of the financial year and for the forthcoming financial year. These forecasts are generally trued-up with a two-year time lag. TNSPs' concerns relate to the fact that if they are required to publish their prices earlier, this will result in having to forecast an additional period of settlement residues which can result in more volatility in transmission prices when trued up.

The Commission acknowledges that requiring TNSPs to publish prices two months earlier than they do will require TNSPs to forecast an additional eight weeks of data and that this may lead to increased volatility in transmission prices. However, the Commission considers that the benefits in terms of improved notification of approved network tariffs outweigh the potential of increased price volatility, noting that

97 Clause 6.18.8(b)(2), (c) of the NER.

98 Clause 6.18.8(b)(1), (2), (c) of the NER.

99 Grid Australia submission, 19 December 2013, p.4.

improved notification cannot happen without earlier availability of transmission prices. In its submission, Grid Australia acknowledged this balance between earlier notification of network tariffs and price volatility.[100]

For the majority of consumers, transmission prices are only a small component of their total electricity charge. Therefore, a minor increase to the volatility of transmission prices is likely to only have a minor impact on their total electricity charge.

Large energy users, who are more likely to be impacted by increased volatility in transmission prices, have indicated that they would prefer more advance notification of price changes. For example, EUAA notes in its submission that volatility risks could occur at any point in the regulatory control period and should not be used as an "excuse to not set prices earlier".[101]

### Publication of transmission prices in Victoria

The timing change from 15 May to 15 March will not apply to Victorian TNSPs.

In Victoria, DNSPs' network tariffs operate on a calendar year rather than on a financial year as in other jurisdictions. Victorian DNSPs' pricing proposals will not be submitted until 30 September each year under the draft rule. Therefore, there is no need for Victorian TNSPs to publish transmission prices earlier than they do at present.

The exclusion of Victorian TNSPs from this timing change is effected by the draft rules applying the exclusion to TNSPs whose regulatory years do not align with financial years (as is currently the case for SP AusNet, but no other TNSPs) and by maintaining the application to AEMO of the current requirement to publish transmission prices by 15 May.

Victorian TNSPs will still be required to publish modified load export charges by 15 February (see section 5.8.4 below). The reason for bringing forward the publication of the modified load export charge in Victoria is to enable neighbouring transmission regions to calculate their intra-regional transmission charges and incorporate them into the transmission prices that they need to publish by 15 March each year.

### Timeframe for AER's assessment of annual network tariffs

Noting that it may be difficult for the AER to approve an annual pricing proposal within 30 business days if DNSPs do not submit a complete pricing proposal on time, the AER suggested a 'stop-the-clock' mechanism in its submission. A stop-the-clock mechanism would allow the AER to seek additional information from the business without compromising its own timeframe to approve the proposal. The AER argued that if network tariffs are to become more complex, the annual pricing process may become more complex and as such, it may need the ability to stop-the-clock on its assessment of annual pricing proposals.[102]

100 Grid Australia submission, 5 July 2013, p.1.

101 EUAA submission, 5 July 2013, p.2.

102 AER submission, 19 December 2013, p.15.

If the AER were able to stop-the-clock on its assessment timeframe, it may be appropriate to introduce a mechanism by which DNSPs are incentivised to provide full and compliant annual pricing proposals on time. This would enable timely notification of approved network tariffs for retailers and transfer the risks associated with any delays in the approval of annual network prices from retailers to DNSPs, where DNSPs cause delays for annual network price changes.

Implementing such a scheme would require imposing a minimum notification period. Under this approach, DNSPs would be prevented from charging new network tariffs until the expiry of the minimum notification period. If there were delays to the approval of network tariffs, this could mean that network tariff changes would not take effect from the date of commencement of the next regulatory year.

Any additional revenue that would be recovered in the period between the start of the regulatory year and the expiry of the notification period will therefore be foregone where there would have been a network tariff price increase. In instances where there would have been a network tariff price decrease, DNSPs would be required to refund the additional revenue collected.

This type of compliance mechanism was tested with stakeholders at workshops. In general, stakeholders expressed a preference for the introduction of a firm timeframe for AER assessment of the annual pricing proposals over a stop-the-clock mechanism and compliance mechanism. Retailers, in particular, argued for certainty with respect to the date by which network tariffs will be finalised.

On balance, the Commission considers that a stop-the-clock mechanism and compliance incentive would be difficult to implement and would not be as effective in achieving timely notification of approved tariffs as having a firm timeframe for AER assessment of annual pricing proposals.

In addition, the Commission expects that changes to the network pricing process will result in a more mechanical annual pricing process, whereby the AER will essentially audit the annual pricing proposal against the TSS, the applicable control mechanism and side constraints. Therefore, the Commission considers that 30 business days affords the AER a reasonable opportunity to undertake this task effectively.

### 5.8.4 Network pricing inputs

The timing of the annual pricing process depends on the availability of a number of key network pricing inputs. These are discussed below.

#### Inter-regional transmission use of system charges

To achieve the publication date of 15 March for transmission prices, the date specified in the NER by which the modified load export charge will be published has been adjusted under the draft rule. TNSPs indicated in discussions that they would need notification of the modified load export charge at least one month prior to publishing their prices. Under the draft rule, the modified load export charge will now need to be published by 15 February. Due to the transitional arrangements outlined in Chapter 6, this change will only effectively commence from 2017.

### Consumer Price Index

The CPI figure used by TNSPs and DNSPs would also need to change to the December quarter CPI or allow use of an estimated March quarter CPI (Victorian DNSPs would need to use June quarter CPI or an estimated September quarter CPI). As the AER is able to specify which CPI figure applies to the TNSP or DNSP in its regulatory determinations, this can be amended by the AER for future determinations.

### Alignment of TNSP and DNSP regulatory determination processes

In all jurisdictions except for New South Wales, the timing of the relevant TNSP and DNSP regulatory determination process are misaligned. For example, the next regulatory control period for Queensland DNSPs will commence on 1 July 2015 but Powerlink's next regulatory control period will commence on 1 July 2017. This means that for one of the five years in the regulatory control period, DNSP pricing proposals will be submitted to the AER prior to the finalisation of the TNSP's maximum allowed revenue (MAR) and its Pricing Methodology.

In these instances, the draft rule requires TNSPs to publish transmission prices based on the draft MAR detailed in the draft transmission determination, and to set prices in accordance with their draft or previously approved Pricing Methodology. TNSPs will be able to account for any differences between the draft and final MAR using the overs and unders mechanism as part of their revenue cap control mechanism, in later regulatory years.

### Timely provision of key pricing inputs

The timing of the new pricing process relies on TNSPs and DNSPs having access to all key pricing inputs well in advance of the annual network pricing process. If there are delays in the availability of these inputs, this could affect the timeliness of the annual pricing process, and delaying the notification of approved network tariffs.

For TNSPs, it is important that the coordinating TNSP is given access to the network and asset information from other TNSPs in time for this to be incorporated into its transmission prices. This is because the coordinating TNSPs set the transmission charge for that particular region and need to set prices at a level that recovers the costs of other TNSPs in that region.

The AER will also need to publish its decision on TNSP annual service target performance incentive scheme reports by early March for inclusion in annual transmission prices.

DNSPs also pass on the costs of approved jurisdictional schemes through their annual network tariffs. This includes, for example, the costs of the various solar feed-in tariffs. The relevant jurisdictional government advises the DNSP of the cost of the jurisdictional scheme, which the DNSPs incorporates into its tariffs. It is essential to the timeliness of the annual network pricing process that DNSPs receive jurisdictional scheme amounts in enough time for inclusion into their annual pricing proposals, which are to be submitted to the AER no later than 31 March each year (except in Victoria where DNSPs will submit annual pricing proposals to the AER no later than 30 September).

### 5.8.5 Timeframe in the initial year

During the rule change process, it was widely acknowledged that the timing of the initial year network pricing process is particularly problematic.

Due to the proximity of the final regulatory decision to the commencement of the initial regulatory determination year, there is limited ability to improve the timeliness of the initial year pricing process. The only way to significantly improve the timeliness of this process would be to move the timeframe of the final distribution determination forward. This was not supported by stakeholders and as such the Commission does not consider that this would be an appropriate solution.[103] Nonetheless, having the TSS consulted on and approved in the regulatory determination process should alleviate some of the time pressures created in the initial pricing year.

In its submission, the AER suggests that the timeliness of the initial year pricing process could be improved by having more effective engagement with stakeholders on the price path of each network tariff and by requiring DNSPs to provide indicative pricing levels for each network tariff in the regulatory determination process.[104]

The Commission agrees that these measures will assist in the timeliness of the initial year pricing process by giving retailers more certainty and notification in relation to the structure and indicative price levels of initial year network tariffs, allowing them to commence their own processes.

103 See, for example: ActewAGL Distribution submission, 4 July 2013, p.1; AER submission, 5 July 2013, p.3; ENA submission , 5 July 2013, p.3; Ergon Energy submission, 4 July 2013, p.12; Powercor and CitiPower submission, 4 July 2013, p.6.

104 AER submission, 5 July 2013, p.3.

# 6 Transitional arrangements

**Summary**

- The draft rule determination will result in significant changes to the network pricing arrangements.
- These changes mean that DNSPs will be required to apply the pricing principles to develop a TSS during the regulatory determination process. The TSS will be assessed by the AER against the pricing principles as part of this process.
- Many of the DNSPs will have either commenced or will be shortly due to commence their regulatory determination process at the time of the Commission's final rule determination.
- Transitional arrangements will be needed to apply the new pricing arrangements so that the benefits from the new rules can be realised as soon as possible.
- The proposed transitional arrangements will enable the new rules to be implemented progressively between 2015 and 2017 in all jurisdictions. This means that the existing rules will apply until the new rule becomes effective.
- No transitional arrangements are proposed for Aurora Energy. Aurora Energy is not due to commence its regulatory determination process until 31 January 2016 and it will be in a position to apply the new rule at this time.

## 6.1 Introduction

Changes to the network pricing process and the pricing principles proposed in the draft rule represents a significant shift in the way that network tariffs are developed and approved. The changes are designed to operate as a package, whereby the pricing principles are implemented through a new two staged network pricing process.

As outlined in chapter 5, the first stage of this pricing process requires DNSPs to prepare a TSS that outlines how the DNSP will apply the pricing principles to develop its network tariff structures across the regulatory control period. This TSS will be assessed by the AER against the new pricing principles as part of the DNSP's regulatory determination process.

The second stage requires DNSPs to determine pricing levels for each network tariff structure outlined in its approved TSS. These will be set out in an annual pricing proposal that will be assessed by the AER for compliance against the TSS, the control mechanism and other NER requirements.

As the draft rule builds in part of the network pricing process into the regulatory determination process, the new pricing framework would ideally come into effect from when each DNSP enters into its next regulatory determination process. This would mean that the new rule would not come into effect at the same time across all DNSPs.

However, with the exception of Aurora Energy, all DNSPs will have commenced, or will be shortly due to commence, their regulatory determination process at the time the Commission's final rule determination is expected to be made by the end of November 2014. Therefore, transitional arrangements will be needed to transition these DNSPs to the new rule during their current or upcoming regulatory control periods.

This chapter outlines the Commission's proposed transitional arrangements. The remainder of this chapter is structured as follows:

- section 6.2 describes why transitional arrangements are necessary to implement the rule change;
- section 6.3 provides an overview of the transitional arrangements;
- section 6.4 sets out the timing of the transitional arrangements; and
- section 6.5 outlines how TNSPs will be transitioned to a new annual pricing timeframe.

## 6.2 The next round of regulatory determinations

Most DNSPs will have commenced their next regulatory determination process by the time that the Commission's final rule is made in November 2014.

DNSPs in New South Wales (Ausgrid, Endeavour Energy and Essential Energy), Queensland (Energex and Ergon Energy), South Australia (SA Power Networks) and the Australian Capital Territory (ActewAGL) are due to submit their regulatory proposals to the AER prior to the final rule determination. Victorian DNSPs (CitiPower, Jemena, Powercor, SP AusNet and United Energy) will submit their regulatory proposals five months after the release of the final rule determination in April 2015.

The next round of regulatory determinations is shown in Table 6.1 below.

**Table 6.1 Next round of regulatory determinations for DNSPs**

| DNSP | Next regulatory period | Regulatory Proposal due | Draft decision | Final decision |
|---|---|---|---|---|
| *New South Wales and the Australian Capital Territory*<br>ActewAGL, Endeavour Energy, Essential Energy and Ausgrid | 1 Jul 2015 – 30 Jun 2019 | 31 May 2014 | 30 Nov 2014 | 30 Apr 2015 |
| *Queensland and South Australia*<br>Ergon, Energex and SA Power Networks | 1 Jul 2015 – 30 Jun 2020 | 31 Oct 2014 | 30 Apr 2015 (Preliminary determination)* | 31 Oct 2015 (Substitute determination)* |
| *Victoria*<br>Jemena, United Energy, CitiPower, Powercor and SP AusNet | 1 Jan 2016 – 31 Dec 2020 | 30 Apr 2015 | 31 Oct 2015 (Preliminary determination)* | 30 Apr 2016 (Substitute determination)* |
| *Tasmania*<br>Aurora Energy | 1 Jul 2017 – 30 Jun 2022 | 31 Jan 2016 | 30 Sep 2016 | 30 Apr 2017 |

* Transitional arrangements put in place as part of the 2012 Economic Regulation of Network Service Providers rule change subject DNSPs in Queensland, South Australia and Victoria to a preliminary determination with a mandatory re—opener. This model involves using the AER's preliminary (draft) determination as a 'placeholder' for these DNSPs' revenue requirements and prices for the initial regulatory year. The preliminary determination is revoked and replaced by the substitute (final) determination. The decision making and consultation process that occurs between the preliminary and substitute determinations is intended to be the same as what would occur between a draft and final determination.

As the new rules will make the initial processes of network pricing part of the regulatory determination process, without transitional arrangements the new pricing arrangements would not be implemented until the round of regulatory determinations that follow the next round. This would mean that the new pricing rules would not take effect until:

- 2019 in New South Wales and the Australian Capital Territory; and
- 2020 in South Australia and Queensland.

The new rules could be applied sooner to Victorian DNSPs and they could be required to submit a TSS with their regulatory proposal on 30 April 2015. However, as discussed in section 6.4.1, this approach is unlikely to be workable in practice.

## 6.3 Overview of the proposed transitional arrangements

In order to implement the new rules during the next regulatory control periods, some trade-offs will be required with respect to key elements of the new pricing process. In particular, there is a trade-off between the requirement that the TSS is developed and approved as part of the regulatory determination process and the obligations on both the DNSPs and the AER in developing and approving a TSS.

On balance, the transitional arrangements in the draft rules reflect that the benefits of a full process to develop a TSS outweigh the benefits of attaching the TSS process to the regulatory determination process.

Different transitional arrangements will be needed for each set of DNSPs. As Aurora Energy will not commence its regulatory determination process until 31 January 2016, it will not require transitional arrangements. This is because Aurora Energy will have sufficient time to adapt to the new rules in time for its next regulatory determination process.

For ActewAGL, Ausgrid, Endeavour Energy, Energex, Ergon Energy, Essential Energy and South Australia Power Networks, the proposed transitional arrangements will decouple the process to develop a TSS from the regulatory determination process for the first regulatory control period. This will allow new prices based on the new set of pricing principles to apply from the third regulatory year of the upcoming regulatory period.

For CitiPower, Jemena, Powercor, SP AusNet and United Energy, the proposed transitional arrangements will impose shorter timeframes on the AER to issue a draft determination on the TSS. This will allow the TSS process to catch up to the regulatory determination process. New prices based on the new set of pricing principles will apply from the second regulatory year of the upcoming regulatory period.

The proposed transitional arrangements will mirror the same processes for the development and approval of the TSS that would apply under the new rules, except in some cases shorter timeframes will apply. This will require:

- DNSPs to develop a TSS that outlines the DNSP's tariff classes, structures and pricing methodology that are to apply for the next regulatory control period. The TSS is to be accompanied by a schedule of indicative price levels; and
- the AER to assess the TSS for compliance against the pricing principles.

As well as allowing the new rules to be applied as soon as possible, the proposed transitional arrangements will minimise the resourcing burden on stakeholders.

Changes to the timing of the annual pricing process will not be able to be implemented until after the initial TSS process is undertaken. As such, the new rules relating to changes to the timing of the annual pricing process will commence following the completion of the initial TSS process.

## 6.4 Timeframe of transitional arrangements

The draft rules require all DNSPs, with the exception of Aurora Energy, to submit their TSS to the AER by 30 June 2015. This gives these DNSPs seven months to understand the new rule requirements, to consult with retailers and consumers on their proposed network tariffs and to develop a TSS.

This timeframe has been determined with consideration to the significant amount of work that DNSPs will have to undertake in order to apply the new pricing principles to develop their proposed network tariffs.

While the timeframe is shorter than would otherwise be preferred by the Commission, it is reasonable and does not materially disadvantage any particular DNSP. DNSPs may be able to start planning and developing their new tariffs from the release of the draft rules, which allows for an additional three months.

The AER will also have a substantial workload until the end of April 2015 with the regulatory determination processes for the New South Wales, Australian Capital Territory, South Australian and Queensland DNSPs already underway. Requiring DNSPs to submit their TSS after this period will enable the AER to better manage its own resourcing needs.

### 6.4.1 Transitional arrangements for Victorian DNSPs

Victorian DNSPs will submit their regulatory proposals for the 2016-20 regulatory control period on 30 April 2015. This will be five months after the final rule determination is made. As such, it could be feasible to require Victorian DNSPs to submit a proposed TSS with their regulatory proposals. However, recognising that the final rule determination will be made close to the end of the year, the Commission considers that this timeframe is not long enough for DNSPs to engage in meaningful consultation with consumers and retailers on potentially significant changes to network tariffs and develop a TSS.

A further limiting factor is that the transitional arrangements introduced as part of the 2012 Economic Regulation of Network Service Providers rule change require prices in the initial regulatory year of Victorian DNSPs to be developed with reference to the preliminary (draft) determination.

This potentially creates two issues for the introduction of a TSS in time for the first regulatory year in Victoria. Firstly, basing initial regulatory year pricing on a draft TSS could create volatility and uncertainty if the AER considers that significant changes are needed to the draft TSS for it to approve it. This could be solved by requiring the AER to make its final decision on the TSS before the commencement of the initial year. However, this would create a second issue that the AER would not have sufficient time to undertake a full assessment of the proposed TSS.

Victorian DNSPs and consumers could be disadvantaged if DNSPs were required to submit their TSS with their regulatory proposals and the AER was required to make a decision in time for the initial pricing year. This is because the Victorian DNSPs will be required to apply their TSS to each pricing year of the regulatory control period, unless they are able to make a case to amend the document. If the process to develop and approve a TSS is rushed, Victorian DNSPs may be required to apply a TSS that is not reflective of their operating conditions or the feedback they received from consumers and retailers in their consultation processes.

Requiring Victorian DNSPs to submit a TSS by 30 June 2015 will give these businesses sufficient time to develop their proposed TSS while also allowing for the TSS process to catch up to the regulatory determination process. This will allow the network pricing process to occur alongside the regulatory determination process, which is a key feature of the changes to the network pricing process.

Under this approach, the AER will make a draft decision on the Victorian DNSPs' TSS alongside its preliminary (draft) determination. The AER will have four months in which to make this decision.

Given this shorter timeframe for the AER to make the decision, the timeframes associated with the AER's preliminary examination and consultation on the proposed TSS has been shortened. For example, under these arrangements stakeholders will have three weeks as opposed to the normal six weeks in which to make a submission to the AER on the issues paper on the proposed TSS. While this timeframe is shorter than what would usually apply, the Commission notes that DNSPs should have already consulted with stakeholders on the content of their TSS. The AER will be required to make a draft decision on the proposed TSS approximately eight weeks after the close of submissions.

The alternative to shortening the timeframe for the AER's preliminary examination and consultation process would be to remove the requirement for the preliminary examination and consultation process in relation to the proposed TSS. However, given the significance of the TSS and the value of an issues paper in highlighting key issues for consumer representatives in particular, the Commission does not consider that this is appropriate.

Following the AER's preliminary (draft) determination, DNSPs will have 45 business days in which to submit a revised regulatory proposal and a revised TSS to the AER. The AER will then make a final decision on the TSS alongside its substitute (final) determination due in April 2016.

The changes to the annual network pricing process will take effect after the TSS is approved. This will mean that:

- DNSPs will be required to submit their annual pricing proposals to the AER by 30 September each year;
- the AER will have a firm timeframe of 30 business days in which to approve network tariffs; and
- retailers will receive at least six weeks' notice of the network tariffs to apply in Victoria.

This means that network tariffs based on the new set of pricing principles will apply from the second regulatory year, which will commence on 1 January 2017.

Table 6.2 below outlines the timing of the transitional arrangements for Victorian DNSPs.

**Table 6.2 Transitional arrangements for Victorian DNSPs**

| Date | Regulatory arrangements | Transitional arrangements |
|---|---|---|
| 30 Apr 2015 | Regulatory proposal due | |
| 30 Jun 2015 | | TSS due to the AER |
| 31 Oct 2015 | AER preliminary (draft) determination | AER draft decision on TSS |
| 1 Jan 2016 | **First regulatory year commences** | |
| 6 Jan 2016 (approx) | Revised regulatory proposal due | Revised TSS due (45 business days after AER draft decision) |
| 30 Apr 2016 | AER substitute (final) determination | AER final decision on TSS |
| 30 Sep 2016 | Annual pricing proposal (based on new pricing arrangements) due to AER | |
| 15 Nov 2016 (approx) | AER approval of annual network prices (30 business days after submission of annual pricing proposal) | |
| 1 Jan 2017 | **Second regulatory year commences** | |

### 6.4.2 Transitional arrangements for New South Wales, Queensland, South Australian and the Australian Capital Territory DNSPs

Transitional arrangements for ActewAGL, Ausgrid, Endeavour Energy, Energex, Ergon Energy, Essential Energy and SA Power Networks will mirror the timeframe that DNSPs and the AER would generally follow in a regulatory determination process. This will give all parties sufficient time to undertake a full and comprehensive process, although this will occur outside the regulatory determination process initially.

The AER will be required make a draft decision in relation to the TSS of these DNSPs by 29 February 2016. This allows the AER eight months to consider the TSS of these businesses. This is consistent with the timeframe between the submission of the revenue proposal and the AER's draft determination in the regulatory determination process.

DNSPs may then submit a revised proposed TSS that addresses the issues identified in the AER's draft decision no later than 45 business days after the AER's draft decision. The AER will issue its final decision on the TSS by 31 October 2016, eight months after the draft decision on the TSS.

The changes to the annual network pricing process will take effect after the TSS is approved. This will mean that:

- DNSPs will be required to submit their annual pricing proposals by 31 March each year;
- as in Victoria, the AER will have a binding timeframe of 30 business days in which to approve network tariffs; and
- retailers will receive at least six weeks' notice of the network tariffs to apply in these jurisdictions.

Under these transitional arrangements, network tariffs based on the new set of pricing principles will apply from 1 July 2017.

Table 6.3 and Table 6.4 below outline the timing of transitional arrangements for these DNSPs.

**Table 6.3 Transitional arrangements for New South Wales and Australian Capital Territory DNSPs**

| Date | Regulatory arrangements | Transitional arrangements |
|---|---|---|
| 31 May 2014 | Regulatory proposals due | |
| 30 November 2014 | AER draft determination | |
| 30 April 2015 | AER final determination | |
| 30 June 2015 | | TSS due to the AER |
| 1 July 2015 | **First regulatory year commences** | |
| 29 February 2016 | | AER draft decision on TSS |
| 5 May 2016 (approx) | | Revised TSS due (45 business days after AER draft decision) |
| 1 July 2016 | **Second regulatory year commences** | |
| 30 October 2016 | | AER final decision on TSS |
| 31 March 2017 | Annual pricing proposal (based on new pricing arrangements) due to AER | |
| 15 May 2017 (approx) | AER decision on annual network prices (30 business days after submission of annual pricing proposal) | |
| 1 July 2017 | **Third regulatory year commences** | |

**Table 6.4 Transitional arrangements for Queensland and South Australian DNSPs**

| Date | Regulatory arrangement | Transitional arrangement |
|---|---|---|
| 31 October 2014 | Regulatory proposal due | |
| 30 April 2015 | AER preliminary (draft) determination | |
| 30 June 2015 | | TSS due to AER |
| 1 July 2015 | **First regulatory year commences** | |
| 31 October 2015 | AER substitute (final) determination | |
| 29 February 2016 | | AER draft decision on TSS |
| 5 May 2016 (approx) | | Revised TSS due (45 business days after AER draft decision) |
| 1 July 2016 | **Second regulatory year commences** | |
| 30 October 2016 | | AER final decision on TSS |
| 31 March 2017 | Annual pricing proposal (based on new pricing arrangements) due to AER | |
| 15 May 2017 (approx) | AER decision on annual network prices (30 business days after submission of annual pricing proposal) | |
| 1 July 2017 | **Third regulatory year commences** | |

## 6.5 TNSP transitional arrangements

From 2017, TNSPs, other than Victorian TNSPs, will be required to publish transmission prices by 15 March instead of 15 May as they do at present. To facilitate the publication of transmission prices by this date, the modified load export charge will also need to be published by all TNSPs (including Victorian TNSPs) one month earlier from 2017, ie by 15 February each year. As publication of the modified load export charge will be a new requirement on TNSPs from 2015, this will give TNSPs two years to adapt to the new arrangements before the timing changes take effect.

Further transitional arrangements will be needed to allow ElectraNet, the South Australian TNSP, to use an estimated March quarter CPI in 2017.

ElectraNet's 2013-2018 transmission determination specifies that March quarter CPI is to be used to adjust its MAR. As the March quarter CPI figure generally does not become available until late April, the draft rule will require the AER to estimate the March quarter CPI for the purposes of ElectraNet's 2016-17 prices. This will enable ElectraNet to publish its prices by 15 March 2017. The CPI figure specified in ElectraNet's transmission determination can be amended by the AER in ElectraNet's next regulatory determination process, which will conclude in time for the 2018 pricing year. Any differences between the estimated and actual March quarter CPI in 2017 will

be accounted for using the unders and overs mechanism in the first regulatory years of the next regulatory control period.

In addition, as Powerlink will be going through its regulatory determination process in 2017, with its final determination to be published by 30 April 2017, it will be required to publish its prices for the 2017-18 regulatory year based on its draft MAR. This will allow Powerlink to publish its prices by 15 March 2017. Any difference between the draft and final MAR will be accounted for through the overs and unders process in later regulatory years.[105]

105 A similar arrangement currently operates in New South Wales. As the New South Wales TNSP and DNSPs go through the regulatory determination process at the same time, the TNSP may set prices for the first pricing year on draft MAR, clause 6A.24.4 of the NER.

## Abbreviations

| | |
|---|---|
| ACCC | Australian Competition and Consumer Commission |
| AEMC or Commission | Australian Energy Market Commission |
| AEMO | Australian Energy Market Operator |
| AER | Australian Energy Regulator |
| AIC | Average Incremental Cost methodology |
| AMI | Advanced Metering Infrastructure |
| Brattle | The Brattle Group |
| CALC | Consumer Action Law Centre |
| COAG | Council of Australian Governments |
| CPI | Consumer Price Index |
| CSOs | Community Service Obligation payments |
| DHS | Department of Human Services |
| DNSP | Distribution network service provider |
| DVA | Department of Veterans' Affairs |
| ESAA | Energy Supply Association of Australia |
| HCC | Health Care Card |
| IPART | Independent Pricing and Regulatory Tribunal |
| JGN | Jemena Gas Networks |
| kVA | Kilovolt-ampere |
| LMP | Locational marginal pricing |
| LRMC | Long run marginal cost |
| LV | Low voltage |
| MAR | Maximum Allowed Revenue |
| MCE | Ministerial Council on Energy |
| MWh | Megawatt hour |
| NECF | National Energy Customer Framework |
| NEL | National Electricity Law |
| NEM | National Electricity Market |
| NEO | National Electricity Objective |

| | |
|---|---|
| NER or rules | National Electricity Rules |
| NERA | NERA Economic Consulting |
| NPV | Net Present Value |
| NSP | Network service provider |
| PCC | Pensioner Concession Card |
| PSS | Pricing Structures Statement |
| PV | Photovoltaic |
| SRMC | Short run marginal cost |
| TNSP | Transmission network service provider |
| TSS | Tariff Structure Statement |
| TUOS | Transmission use of system |

# A1 Efficient pricing of distribution network services

**Summary**

- This Appendix sets out the Commission's views on what measure of cost should provide the basis for DNSPs' pricing decisions.
- Marginal cost provides a solid economic basis for setting distribution network prices. This is because it signals the future investment costs that flow from the decisions and choices consumers make about their consumption.
- While either short run marginal cost (SRMC) or LRMC can be used as a basis for providing efficient network price signals to consumers, the Commission considers that LRMC represents the most appropriate measure. It is simpler to implement and provides more stable longer term price signals about the future network costs consumers can affect through their consumption decisions. Consumers are more likely to be able to better respond to more stable price signals.
- The Commission has considered different methodologies for calculating LRMC, including the:
  - Average Incremental Cost Approach (AIC) methodology; and
  - Perturbation or 'Turvey' methodology.
- Analysis by NERA demonstrates that there is no single clearly superior LRMC methodology in the context of distribution pricing because the different methods have benefits and detriments that depend on the specific circumstances of the DNSP.[106]
- The Commission considers that there is merit in providing flexibility to use either of these LRMC methodologies, or other accepted methodologies, depending on how strong the LRMC price signals need to be in order to send signals to consumers about the cost or benefit of undertaking or deferring additional network expenditure.
- As discussed in Appendix A2, the draft rule does not prescribe any particular methodology for calculating LRMC. The draft rule instead focuses on providing guidance for DNSPs on what the LRMC methodology should target in terms of sending efficient pricing signals. This approach allows for more sophisticated methodologies, such as the perturbation methodology, to be used where the benefits exceed the costs.

106 See NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014.

## A1.1 Introduction

This Appendix sets out the Commission's views about what measure of cost should form the most appropriate basis for cost reflective network tariffs. It explains the fundamental concept of marginal cost and its importance for sending efficient network pricing signals. It also sets out the Commission's views on what methodologies would be appropriate for estimating LRMC.

This Appendix is structured as follows:

- section A1.2 explains the concept of marginal cost in the context of distribution network services;
- section A1.3 summarises the COAG Energy Council's rule proposal in relation to LRMC;
- section A1.4 summarises submissions to the consultation paper; and
- section A1.5 sets out the Commission's analysis and conclusions on LRMC and the methodologies that can be used to send efficient price signals to consumers through network tariffs.

## A1.2 Economic concept of marginal cost

The marginal cost of supplying a good or service is the change in total costs of producing one more unit of a good or service.

Economic theory suggests that where prices are equal to marginal cost then consumption decisions will be efficient. This is because a decision by a consumer to increase or reduce their level of consumption will reflect the consumer's comparison between the benefits of an additional unit of consumption and the costs of supplying an additional unit. Prices will then reflect a consumer's 'willingness to pay' for a good or service, which provides signals for resources to flow to those goods and services that consumers value. This is often referred to by economists as allocative efficiency.

The marginal cost of providing a good or service will differ depending on the time horizon chosen:

- costs in the short run (SRMC) reflect a time dimension over which production inputs cannot be varied (eg additional demand cannot be met by an increase in the capacity of the network); and
- costs over the longer term (LRMC) reflect a time dimension over which all production inputs can be varied (eg the capacity of the network can be increased).

Both SRMC and LRMC provide different types of price signals. SRMC provides a price signal to consumers about the cost of using the network at a particular point in time, while LRMC represents a forward estimate of how consumers use over time can influence future network costs.

The distinction between the two cost measures is important as each has different implications for how distribution network prices are determined. The differences between SRMC and LRMC in the context of distribution network services are discussed below.

### A1.2.1 SRMC of distribution network services

In order to apply the marginal cost concept to distribution network services, it is important first to understand the nature of the services a DNSP provides.

The core service DNSPs provide is an electricity transportation service - ie the provision of capacity to allow electricity to flow from the bulk supply points at the transmission interconnection nodes to the consumers' connection points within the distribution network. In this context, the short run costs of providing an electricity transportation service are:

- energy losses, which vary depending on how far along the network energy is required to be transported to the consumer's connection point; and
- network constraints, or the costs of rationing scarce transport capacity when the distribution network becomes constrained and some demand therefore needs to be curtailed.

Network constraints are most likely to occur when a large number of consumers, located in close proximity to one another, all desire to use the network at the same time. This is often referred to as 'coincident peak demand'.

Coincident peak demand typically tends to occur in the mornings and in the early evenings when the majority of consumers are at home. As well as varying by time of day, coincident peak demand will also vary by season and by location.[107] The latter arises because network capacity and customer density tends to vary geographically.

The SRMC of providing network services to a particular consumer will consequently be related to three factors:

- how much connection capacity a consumer requires for its energy use;[108]
- the load profile of that consumer; and
- where that consumer is located.

An important characteristic of SRMC is that it is highly volatile depending on the timing and location of coincident peak demand. SRMC is very low at times and locations where there are no network constraints. SRMC at these times will simply reflect energy losses. In contrast, SRMC will be very high at times and locations where the network is constrained. In these instances, SRMC will reflect energy losses and the opportunity cost to consumers of being unable to use electricity, which can potentially

107 For example, consumers will typically substantially increase their use of air conditioning during the height of summer, or electric heating during winter.

108 For example, a residential customer with an air-conditioner will use the network much more intensively at peak times than a residential customer without an air-conditioner. This is because the residential customer with an air-conditioner has greater demand to convert energy into heating or cooling.

range into the tens of thousands of $/megawatt hour (MWh), depending on the value consumers place on using electricity.[109]

The most sophisticated way of capturing such volatile SRMC price signals is through locational marginal pricing (LMP). The LMP signals the cost of supplying electricity to consumers taking into account locational and time-of day differences at every demand node across the network.[110]

LMP is widely used in North American markets, Argentina, Chile and New Zealand for pricing transmission networks. In Australia, a modified form of LMP is in place for transmission networks, with a single LMP price (the regional reference price) set in each region of the NEM. To date, LMP has not been implemented anywhere in the world for distribution networks.

### A1.2.2 LRMC of distribution network services

The LRMC of distribution network services differs from SRMC in that it includes the cost of expanding network capacity to meet demand. Distribution network capacity can be adjusted in two principal ways:

- by establishing a local connection for a new customer, which depends on how much capacity (kW or kVA) a new consumer needs, including any required reinforcement of the network beyond the customer connection point to accommodate that consumer's needs; and
- expanding the shared network to accommodate peak demand growth over time.

Both types of costs contribute to the LRMC of providing distribution network services.

LRMC delivers a different type of price signal compared with SRMC. While SRMC provides a price signal to consumers about using the network at a particular point in time, LRMC reflects a forward estimate of how such use over an extended period may influence future network costs.

In order to use LRMC to set network prices, the prices must be determined for consumers in advance of when costs are actually incurred. That is, LRMC requires that network prices are based on estimates of demand and costs rather than actual demand and costs. Consequently, calculating LRMC necessarily involves a level of subjectivity regarding what methodology should be used and assumptions about inputs such as forecasts of demand, timing and location of new customer loads, investment in centralised and distributed generation and the likely costs associated with such network expenditure.

109 See Oakley Greenwood, *NSW Value of Customer Reliability* , Final report, 30 May 2012.

110 A more comprehensive explanation of the theory of LMP can be found in, Hogan, W., 'Contract Networks for Electric Power Transmission', *Journal of Regulatory Economics*, Vol 4, pp. 211-242 ', Feb 1992.

A number of different methodologies have been traditionally used to estimate the LRMC of providing network services. Some of the more common methodologies include:

(i) Average Incremental Cost methodology (AIC). This methodology estimates LRMC by identifying the stream of capital, operations and maintenance expenditure needed to satisfy projected demand growth, typically over 10 years, and then dividing this by projected demand growth. It then calculates the present value of the expenditure required and divides this by the present value of incremental demand growth to estimate the LRMC.

(ii) Common Distribution Charging methodology. This methodology is used by DNSPs in the United Kingdom and estimates the capital, maintenance and operating costs of supplying a hypothetical increment of 500 MW of demand at the system peak on the distribution network.

(iii) Perturbation or 'Turvey' methodology. This methodology involves a number of steps. First a small increment or decrement "shock" is applied to a known demand forecast. Then, a change is calculated in the present value of costs over the investment planning period resulting from this shock compared to the base case. Finally. this result is divided by the demand increment or decrement to arrive at the LRMC estimate.

NERA's report on *Economic Concepts for Pricing Electricity Network Services* suggests that the two most common methodologies for calculating LRMC for electricity network services are the AIC and the perturbation methodologies.[111] These two methodologies are considered in more detail in section A1.5 below.

## A1.3 Rule proponent's view

The COAG Energy Council considered that DNSPs should be required to set network tariffs on the basis of the LRMC of providing network services.

The COAG Energy Council noted that if network tariffs provide a price signal to consumers that reflect the consequences of increasing consumption on future network costs, then network tariffs will provide consumers with the opportunity to contribute to lowering future network costs and reduce their own network charges.[112]

## A1.4 Stakeholder views

While submissions were broadly supportive of LRMC as a basis for setting distribution network prices, a range of views were expressed about the practicalities of doing so and the degree to which use of LRMC should be prescribed in the NER.

Most DNSPs supported use of LRMC as a concept underpinning network pricing, but expressed concerns about having it prescribed as an explicit obligation in the rules. In particular they were concerned this would require DNSPs to undertake a highly granular allocation of costs, which would be impractical, complex and conflict with

111 NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014, pp.14-21.

112 COAG Energy Council, rule change request, 18 September, p 6.

other objectives to which DNSPs were required to have regard, such as meeting jurisdictional requirements. Other than SP AusNet, all DNSPs were opposed to an explicit LRMC obligation in the NER.[113]

The AER broadly supported use of LRMC as it considered that it would improve the current approaches used by DNSPs. However, it was of the view that the requirement to apply LRMC should not limit a move to more dynamic forms of network pricing over time. Its submission noted that an LRMC requirement might be insufficiently informative without further explanations and guidance.[114] The AER considered that LMP type approaches, which directly price network constraints in real time, would represent the theoretical optimum basis for price setting, but noted that this kind of pricing is currently unattainable and that LRMC would reflect a second best alternative.[115]

The MEU supported the use of LRMC but considered there may be practical limitations in implementing it.[116]

Consumer groups representing smaller consumers typically recognised that existing network tariffs needed reform and broadly supported the use of LRMC. For example, SACOSS stated in its submission that "changes to electricity tariff structures are inevitable... it is clear to us that existing pricing structures are becoming further removed from the underlying costs of networks and generation."[117] Both the Consumer Action Law Centre[118] and UnitingCare[119] supported the COAG Energy Council's rule proposal for network prices to be based on LRMC.

AGL noted that insufficient analysis and justification had been provided by the COAG Energy Council to prescribe LRMC as a basis for setting distribution network prices. It considered the LRMC represented a very narrow definition of efficiency which may overly constrain DNSPs in their tariff development.[120] These views were similar to those expressed by the Energy Supply Association of Australia (ESAA)[121] and Origin Energy.[122]

The ERAA considered there were a number of practical limitations to implementing prices on the basis of LRMC, including lack of available data and technology and risks of creating overly complex prices for consumers. They considered that there were alternatives to LRMC in achieving cost reflectivity, but did not specify what these approaches were.[123]

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113 ENA submission, 19 December, 2013, p.9.

114 AER submission, 19 December, p.3.

115 Ibid., p.4.

116 MEU submission, 19 December 2013, p.21.

117 SACOSS, submission, 13 December, 2013 p.1.

118 Consumer Action Law Centre, submission 13 December 2013, p.1.

119 Uniting Care submission, 19 December, 2013, p.4.

120 AGL submission, 19 December 2013, p.3.

121 ESAA submission, 19 December 2013, p.2.

122 Origin Energy submission, 19 December 2013, p.7.

123 ERAA submission, 19 December 2013, p.3.

## A1.5 Commission's analysis

The Commission considers that better signals about future costs will promote more equitable as well as efficient outcomes for consumers by requiring that each consumer pay no more or less than the costs their consumption decisions cause in the provision of distribution network services. Providing cost reflective network price signals to consumers will help to unwind some of the existing cross-subsidies that are inherently embedded in current network tariffs due to poor application of marginal cost pricing signals.

The Commission considers that marginal cost provides the best economic basis for setting distribution network prices. This is because it signals the costs that flow from the choices consumers make about their consumption. When provided with these signals, consumers see the cost of providing additional distribution network services and can make their consumption and investment decisions based on the value of using those network services. This allows the consumer to decide if the value of the service to them is greater than the efficient costs of providing it. By contrast, where there is no link between network prices and network costs, there will be inefficient use of distribution network services.

The Commission acknowledges that from a theoretical perspective, setting network tariffs on the basis of SRMC has benefits for achieving economic efficiency as it signals network costs to consumers in real time. However, there are significant practical challenges in implementing SRMC based network tariffs. For example, while LMP would provide the most sophisticated approach to capturing SRMC for network services, it is highly complex, and to date has not been implemented for distribution networks anywhere else.

SRMC pricing can also be expected to be highly volatile. The Commission considers that consumers may in practice have limited capacity to respond to volatile network price signals. In the short term consumers may be able to switch-off or turn-down some equipment and processes and SRMC will provide stronger signals for this. But larger, longer term responses typically require the user to invest in new equipment. More stable longer term price signals provide a better basis for these decisions.

Furthermore, more stable pricing also supports the reliability standards that drive the investment and planning decisions of DNSPs. These require DNSPs to forecast potential constraints well ahead of when they occur and invest to remove them before network constraints would actually occur. If such planning and investment approaches are maintained under a framework of real time SRMC price signals, this would significantly dilute those signals, rendering them less effective. The net benefits of complex SRMC pricing approaches such as LMP would then be unlikely to justify the costs of implementation and administration.

The Commission considers that LRMC provides a number of advantages as a foundation for distribution network pricing. First, it is likely to provide simpler and more stable price signals. Second, it provides such signals well in advance of those costs being incurred, which provides consumers with greater capacity to respond in meaningful ways. Third, more forward-looking LRMC signals are also more consistent

with the long term planning decisions of DNSPs and likely consumer perceptions about acceptable levels of price volatility.

The Commission also notes that a focus on LRMC in the NER does not preclude the use of dynamic pricing approaches such as critical peak pricing. NERA's report illustrates a range of dynamic and less dynamic pricing structures that would be consistent with providing efficient price signals about LRMC.[124] In reflecting LRMC rather than SRMC however, such prices signals will be less volatile and less extreme, which in the Commission's view is likely to be more consistent with consumer preferences.

For these reasons, the Commission considers that LRMC is the most appropriate measure for providing efficient network usage price signals to consumers about future network costs.

### A1.5.1 What methodology should be used for calculating LRMC?

As discussed above, if LRMC is the basis for determining the efficient pricing signals to consumers, then an important question becomes how this should be implemented.

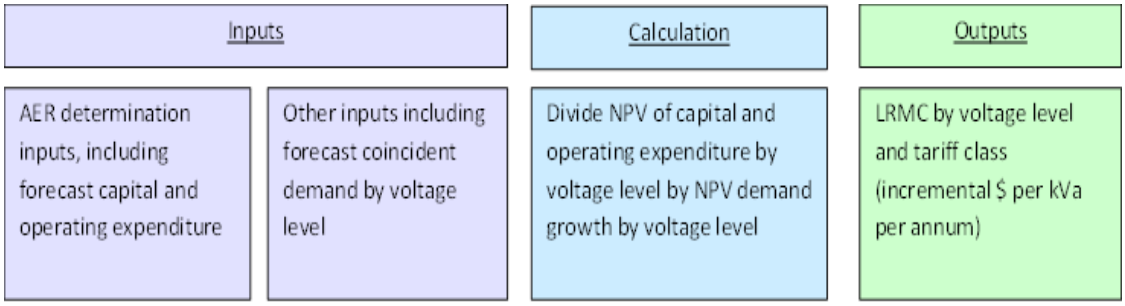
The Commission engaged NERA to investigate possible methodologies for calculating LRMC.[125]

NERA reviewed a range of international approaches and provided an in depth analysis of two approaches in particular, the AIC methodology and the perturbation methodology.[126]

#### AIC methodology

Those DNSPs that currently consider LRMC in determining their network prices all use the AIC methodology or some variation of it. This methodology is discussed in detail in NERA's report and can be summarised as shown in Figure A1.1 below.

**Figure A1.1 Approach typically used by DNSPs to calculate LRMC**




Source: NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014, p.18.

DNSPs typically calculate LRMC with reference to tariff classes rather than individual tariffs or consumers. Tariff classes are used to group together network consumers with

124 NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014, p.4.

125 Ibid.

126 Ibid., pp.14-17.

similar cost characteristics. The most typical categorisation occurs on the basis of the voltage of connection required. For example, Ausgrid groups all its residential and small business consumers into a low voltage tariff class, because they are all connected to the low voltage distribution network.[127] It subsequently applies the AIC methodology to the low voltage (LV) tariff class to determine the LRMC on a $/kilovolt-ampere (kVA) basis, which is then converted to a c/kWh basis for each tariff class.[128]

As described in section A1.2.2, the AIC methodology calculates the average of expected capacity related expenditure over a defined period to meet load growth and uses that average to calculate network prices for consumers.[129]

A key weakness of the AIC methodology is the level of cost averaging inherent in the way it estimates LRMC. For example, under Ausgrid's approach above, LRMC is calculated for serving all residential and small business consumers collectively across the DNSP's network, with costs averaged both over time and geographically. The AIC methodology does not take into account the lumpy nature of new expenditure or existing levels of excess capacity in the network.[130]

The AIC methodology will underestimate the LRMC in constrained parts of the network and overestimate the LRMC in those parts of the network where there is excess capacity. As noted by NERA, these are precisely the opposite signals that should be sent to encourage efficient consumption and investment decisions.[131]

### Perturbation methodology

The other LRMC methodology investigated by NERA is the perturbation methodology.[132] The perturbation methodology measures LRMC as the change in the present value of costs over the investment planning period resulting from a permanent increment or decrement in forecast demand at a given date (compared to demand in the base case) divided by the present value of the increment or decrement.

The perturbation methodology requires the following steps to be undertaken:

- first, estimating forward looking total operating and capital costs for each year over a chosen time horizon, eg ten years;
- second, re-estimating forward looking operating and capital costs for each year over the time horizon as a consequence of a small but permanent increment in demand; and
- third, dividing the present value of the difference between the two forward looking operating and capital costs by the increment applied.

127 See Appendix A6.

128 Ausgrid 2013-14 Annual Pricing Proposal, p.43.

129 In practice, DNSPs assess their future investment requirements based on average maximum demand over those periods of the year when the network is reaching its capacity limits.

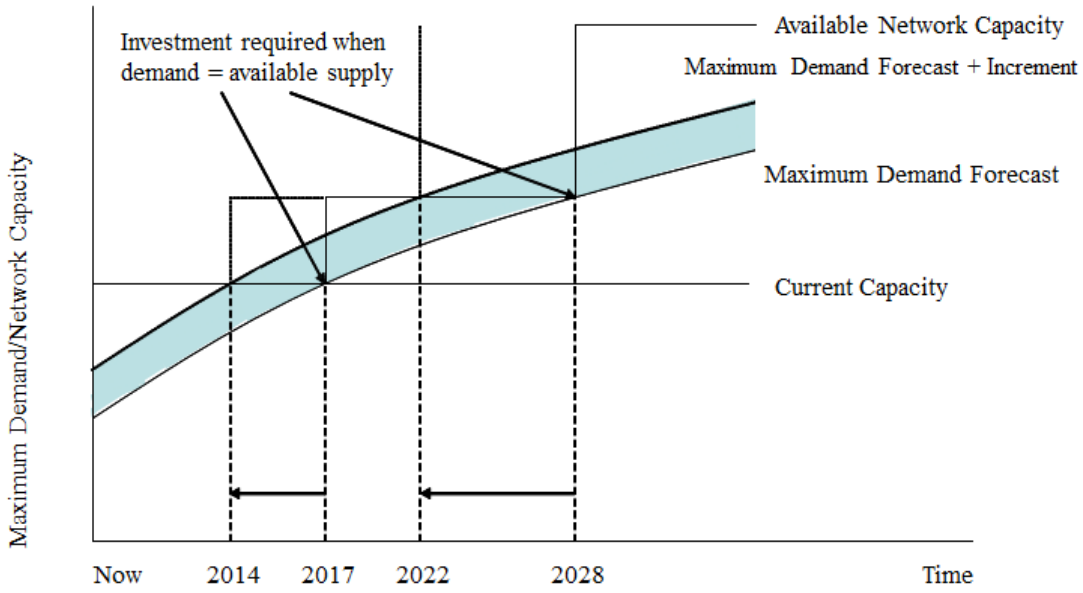
130 NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014, p.15.

131 Ibid.

132 Ibid., pp.14-16.

The perturbation methodology is illustrated graphically in Figure A1.2

**Figure A1.2 Perturbation methodology**




Source: NERA workshop presentation on cost reflective network pricing - Sydney, 26 February 2014.

The stepped line above represents the base case for projected increases to distribution network capacity, optimised in terms of their order and timing so as to meet demand growth at least cost (net present value (NPV)). The dashed stepped line represents the same projected increases to capacity, but brought forward as required to meet the forecast demand plus some assumed permanent increment.

LRMC is calculated as the change in the present value of capital plus operating expenditure required to meet the increment in demand divided by the present value of the marginal change in the demand increment, which is represented by the shaded area between the demand forecast with and without the increment.

While the figure above focuses on a sustained increase in demand, it is important to recognise that the perturbation methodology can also be used to assess the impact on costs of sustained decrements in demand. This approach could be undertaken to assess the benefits of demand management initiatives in constrained parts of the network, ie the cost savings associated with deferred capital expenditure.

A key strength of the perturbation methodology is that it takes the lumpiness of network expenditure into account. Where a small increment is applied in areas of the network with excess capacity and low forecast demand growth, then the LRMC derived from a perturbation will also be low, reflecting the fact that the change in incremental demand will have little impact on the base case investment program in that part of the network.

Conversely, where that same increment is applied in an area of the network where demand growth is expected to be high and capacity is limited, it will change the base substantially by bringing forward an immediate lumpy expansion in capacity. The LRMC price signal will reflect the fact that an increase in demand will bring forward

investment in this part of the network, whereas in other parts of the network it may not. Hence, the perturbation method is better suited than the AIC method to providing locationally specific price signals. The AIC averages out these effects and consequently provides much less efficient signals to consumers about their contribution to the need for network investment.

However, while the perturbation methodology more efficiently signals LRMC, it is also a more complex methodology to implement compared with the AIC methodology. It requires a number of additional steps to be taken, such as calculating how existing investment programs would change under a range of different demand and generation investment scenarios. The perturbation methodology also requires that an appropriate demand increment is chosen as the basis of the perturbation. LRMC estimates will differ significantly depending on the size of the demand increments or decrements used in the calculation.

NERA considers that in order to justify the use of more complex methodology, the size of demand increment should be sufficient to cause a significant increase in the DNSP's capital expenditure. For this reason, NERA suggests that the perturbation methodology should only be applied in a targeted fashion. For example, it could be applied in those areas of the distribution network where appropriate metering is in place and DNSPs judge that efficient price signals can lead to the avoidance or deferment of significant network expenditures.

The Commission agrees with NERA's views and notes that DNSPs already identify and collect significant information for their annual planning reviews about those areas of the network where augmentation is most likely to be needed in the future.[133] They could use this annual planning review information to help determine where and when the application of the perturbation methodology or some other more sophisticated methodology is likely to deliver the most benefits.

For the remainder of the network where no network constraints are anticipated in the foreseeable future or advanced metering is not in place, then simpler approaches to calculating forward looking costs, such as the AIC methodology, may be sufficient.

The Commission considers that there is merit in providing flexibility to use either LRMC methodology, or other accepted methodologies, depending on how strong the LRMC price signals need to be in order to send signals to consumers about the cost or benefit of undertaking or deferring additional network expenditure.

Consequently, as discussed in Appendix A2, the Commission's draft rule does not prescribe any particular methodology for calculating LRMC. The draft rule instead focuses on providing guidance for DNSPs on what the LRMC methodology should target in terms of sending efficient pricing signals. This approach allows for more sophisticated methodologies, such as the perturbation methodology, to be used where the benefits exceed the costs of doing so.

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133 Clause 5.13.2 of the NER requires DNSPs to annually publish a Distribution Annual Planning Report that provides information about expected future operations of their network over the next five years. This report includes information on forecasts, capacity, system limitations, network projects, and other information on DNSPs' planning processes and activities.

## A2 Sending efficient network pricing signals

**Summary**

- Appendix A1 sets out that network tariffs will be efficient where they send signals to consumers about the cost of providing network services, through network tariffs that reflect LRMC.
- Under the current requirement in the pricing principles to take into account LRMC in tariff setting, DNSPs have not had sufficient obligations to send signals to consumers about the cost of providing network services through network tariffs which reflect LRMC.
- The COAG Energy Council has proposed to introduce a requirement for DNSPs to base network tariffs on LRMC. It has proposed that, in basing network tariffs on LRMC, DNSPs should have regard to the costs of meeting demand at peak times, the extent to which LRMC varies by location and the transaction costs of sending price signals.

*Draft rule*

- The draft rule requires DNSPs to send signals regarding the cost of providing network services through a requirement to base network tariffs on LRMC.
- The draft rule provides guidance and clarity to DNSPs, consumers and the AER through a high level definition of LRMC.
- The draft rule provides DNSPs with the flexibility to implement LRMC based network tariffs in the way which best suits their network characteristics, and allows innovation and development of LRMC based network tariffs, by not specifying the method(s) for calculating LRMC.
- The draft rule provides further guidance to DNSPs in calculating and applying LRMC through a set of factors that DNSPs must take into account:
    - the costs associated with providing network services at times of peak demand;
    - the costs associated with providing network services at different locations within the network;
    - the extent to which consumers are able to receive and respond to price signals; and
    - the costs and benefits associated with that method.

### A2.1 Introduction

Appendix A1 sets out that LRMC is the most appropriate measure for signalling the cost of providing network services to consumers. This Appendix addresses how LRMC should be specified in the NER.

This Appendix is structured as follows:

- section A2.2 outlines the operation and application of LRMC under the current pricing principles;
- section A2.3 sets out the COAG Energy Council's rule proposal for LRMC based network tariffs;
- section A2.4 summarises stakeholders' views on the proposed changes; and
- section A2.5 provides analysis of the key issues and the reasons for the Commission's draft rule.

## A2.2 Current pricing principles

The current pricing principles prescribe that DNSPs must "take into account" the LRMC of providing network services when setting each component of their network tariffs.[134] To meet this requirement DNSPs must actively consider LRMC, but it is up to DNSPs to determine how, or if, LRMC should influence network tariffs.[135] For example, a DNSP may meet this requirement by calculating LRMC, stating the reasons it does not consider LRMC relevant and then developing network tariffs completely separate from their LRMC calculations. This provides DNSPs with significant discretion in determining the extent to which network tariffs reflect the LRMC of providing network services.

In practice, under the current pricing principles, LRMC has not played a key role in network tariff setting. In meeting the "take into account" requirement DNSPs have generally calculated LRMC and then compared estimates against established network tariffs, or stated reasons why LRMC estimates should not be applied to developing network tariffs. For example, to comply with the requirement in the most recent round of pricing proposals, most DNSPs published LRMC estimates,[136] and some DNSPs compared the estimates to network tariffs for consistency,[137] but DNSPs did not generally use LRMC in developing network tariffs.

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134 Clause 6.18.5(b)(1) states that a tariff, and if it consists of two or more charging parameters, each charging parameter for a tariff class, must take into account the long run marginal cost for the service or, in the case of a charging parameter, for the element of the service to which the charging parameter relates

135 The AEMC specifically considered the meaning of requirements to "take into account" in the Final Rule Determination of the Economic Regulation of Network Service Providers rule change in 2012: http://www.aemc.gov.au/getattachment/396b3f96-d020-47ab-8038-e2f36514fcf2/Final-Rule-Determination.aspx p.36.

136 See: Endeavour Energy, Endeavour Energy Direct Control Services Initial Pricing Proposal 2014-15, 21 May 2014, p.59. Ausgrid, Ausgrid Network Pricing Proposal for the Financial Year Ending June 2015, May 2014, p.18. ActewAGL, ActewAGL Distribution 2014/15 Network Pricing Proposal, June 2014, p.15. SA Power Networks, SA Power Networks Annual Pricing Proposal 2014-15, 28 May 2014, p.66. Jemena, JEN Pricing Proposal, 2014 pricing proposal, 31 October 2013,p.26. United Energy, United Energy 2014 Pricing Proposal, November 2013, p.43. Powercor, Powercor Australia Limited 2014 Pricing Proposal, 31 October 2013, p.52.

137 See: SA Power Networks, SA Power Networks Annual Pricing Proposal 2014-15, 28 May 2014, p.66. and Powercor, Powercor Australia Limited 2014 Pricing Proposal, 31 October 2013, p.52.

LRMC is not currently defined within the NER and the pricing principles do not provide guidance to DNSPs on the method of calculating LRMC, or how LRMC estimates should be applied to develop network tariffs. This provides DNSPs with discretion to choose the methodology for both calculating and applying LRMC.

In practice, as discussed in Appendix A1 DNSPs have generally chosen to calculate LRMC using the AIC approach, and have calculated network wide LRMCs by voltage level.[138] Further, where DNSPs have compared LRMC to network tariffs, the comparisons have focussed on average tariffs by voltage level, not components of tariffs which reflect the peak times that drive LRMC.[139]

## A2.3 Rule proponent's view

The COAG Energy Council considers that under the current provisions there is no explicit obligation on DNSPs to set tariffs that reflect LRMC and that in practice DNSPs have set network tariffs which have little or no relation to the LRMC of providing network services.[140]

To promote network tariffs that send signals about the costs of providing network services the COAG Energy Council has proposed amending the distribution pricing principles to include a requirement for DNSPs to base network tariffs on the LRMC of providing network services. Further, the COAG Energy Council has proposed that given the currently limited application of LRMC by DNSPs, further guidance is required. It has proposed a number of factors which DNSPs must have regard to in setting LRMC based network tariffs. These factors include:

- the additional costs associated with demand at times of greatest network utilisation (peak demand);
- the extent to which the LRMC of providing network services varies by location; and
- transaction costs.

## A2.4 Stakeholder views

This section summarises submissions to the consultation paper on how LRMC should be specified in the NER. The key areas include:

- Should LRMC be a mandatory obligation within the proposed pricing principles?
- How should LRMC operate within the pricing principles?
- Does LRMC need to be defined within the NER?
- Should the NER specify the method(s) for calculating LRMC?
- Should the NER provide guidance in calculating and applying LRMC to tariffs?

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138 See: Endeavour Energy Direct Control Services Initial Pricing Proposal 2014-15, 21 May 2014, p.59. Ausgrid Network Pricing Proposal for the Financial Year Ending June 2015, May 2014, p.18. ActewAGL Distribution 2014/15 Network Pricing Proposal, June 2014, p.15.

139 Powercor Australia Limited 2014 Pricing Proposal, 31 October 2013, p.52.

140 COAG Energy Council, rule change request, 18 September, p 6.

### A2.4.1 Should LRMC be a mandatory obligation within the pricing principles?

Stakeholders expressed mixed views on the COAG Energy Council's proposed mandatory requirement for network tariffs to be based on LRMC.

Within DNSPs' submissions there was significant divergence. For example, SP AusNet strongly endorsed the proposal, considering that LRMC based network tariffs are crucial for providing appropriate signals for network augmentation.[141] Networks NSW and Energex were opposed to a mandatory obligation and considered that the current requirement provides the appropriate flexibility.[142] The ENA considered that mandating LRMC has the potential to advance cost reflective distribution network pricing and improve the transparency of LRMC based pricing. However, the ENA did not support a mandatory obligation, and noted a number of practical concerns with implementation and the potential for increased compliance risk that it considered should be addressed in the Rule change.[143]

While noting concerns with LRMC as the specific measure of network cost drivers, the AER and MEU considered that the pricing principles should be tightened to require DNSPs to base network tariffs on the drivers of network costs.[144]

Consumer groups sought further information on the likely outcomes of mandating LRMC based network tariffs, particularly in regard to the tariff implications in an environment of falling peak demand and the geographic averaging of network tariffs.[145]

### A2.4.2 How should LRMC operate within the pricing principles?

Stakeholders generally considered that it is important that the role of LRMC within the pricing principles is clearly defined and that the obligations an LRMC principle places on DNSPs are consistent with the other pricing principles. Stakeholders were particularly concerned that a mandatory requirement to base network tariffs on LRMC would give rise to conflicts with the jurisdictional obligation and consumer impact principles.[146]

### A2.4.3 Does LRMC need to be defined within the NER?

Stakeholders generally considered that, if a definition of LRMC is included in the NER, it should define LRMC as a concept but it should not restrict the methodologies used to calculate LRMC.

Stakeholders expressed mixed views on whether a definition of LRMC was necessary within the NER. For example, Networks NSW considered that a definition is not needed because LRMC as a concept is generally well understood and accepted by the

141 SP AusNet submission, 19 December 2013, p.1.

142 Energex submission, 19 December 2013, p.12; Networks NSW submission, 19 December 2013, p.2.

143 ENA submission, 19 December 2013, p.4.

144 AER submission, 18 December 2013, p.3; MEU submission, December 2013, p.21.

145 SACOSS submission, 13 December 2013, p.14.

146 See, for example: ENA submission, 19 December 2013; AER submission, 18 December 2013, p.8.

industry.[147] The MEU favoured a definition on the basis that there is little point mandating LRMC based tariffs if LRMC itself is not defined.[148]

### A2.4.4 Should the NER specify the method(s) for calculating LRMC?

Stakeholders generally considered that the NER should not specify a method(s) of calculating LRMC within the NER. DNSPs and the AER submitted that there is currently no clearly superior method of calculating LRMC, and that DNSPs should have the flexibility to implement the method that best suits their network and consumer characteristics.[149]

### A2.4.5 Should the NER provide guidance in calculating and applying LRMC to tariffs?

Stakeholders expressed mixed views on the introduction of guiding factors for the calculation and application of LRMC.

The AER supported guiding factors. The AER considered that the key objective of LRMC based network tariffs is that DNSPs increasingly reflect cost drivers in network tariffs and that sub-factors to guide this targeting are necessary.[150]

DNSPs' submissions considered that sub-factors to guide the calculation and application of LRMC to target network cost drivers could be useful.[151] However, these sub-factors should not be binding as trade-offs will need to be made between the sub-factors. Further, the DNSPs considered that binding sub-factors would likely lead to inconsistencies within the pricing principles.[152]

## A2.5 Commission's analysis

This section analyses and provides the Commission's view of how LRMC should be specified in the NER in each of the key areas discussed in the previous section.

In addressing each of these issues, it is important that the NER provide an appropriate balance between flexibility and prescription. A principal consideration in balancing these outcomes is to preserve DNSPs' ownership of network tariffs. Without DNSPs being responsible for the development of their tariffs they will not have the flexibility or accountability to design and implement network tariffs that suit their network and consumer characteristics. However, this flexibility should not reduce the obligation on DNSPs to set network tariffs that send efficient price signals to consumers.

### A2.5.1 Should LRMC be a mandatory obligation within the pricing principles?

The current distribution pricing principles in the NER prescribe that DNSPs must "take into account" the LRMC for network services when setting their network tariffs. This

147 Networks NSW submission, 19 December 2013, p.35.

148 MEU submission, December 2013, p.56.

149 ENA submission, 19 December 2013, p.12;AER submission, 18 December 2013, p.5.

150 AER submission, 18 December 2013, p.5.

151 See: Ergon Energy submission, 19 December 2013, p.8.

152 ENA submission, 19 December 2013, p.10.

weak obligation provides significant discretion to DNSPs in the extent to which they reflect LRMC signals in their network tariffs.

In practice DNSPs have not set network tariffs that reflect LRMC. DNSPs have chosen network wide, flat or block structure tariffs and set tariff levels on these tariff structures without linkage to LRMC. These tariffs have little or no relation to the LRMC of providing network services, by location, time or level. The AER,[153] the Productivity Commission,[154] the Power of Choice review,[155] and the COAG Energy Council[156] have all noted that these tariffs do not send efficient price signals to consumers about the costs of providing network services.

Under the current regulatory arrangements, DNSPs do not face a sufficient incentive to set network tariffs that reflect the costs of providing network services. The pricing principles should therefore provide a mandatory obligation for DNSPs to signal the cost of providing network services to consumers through tariffs that reflect the LRMC of providing network services.

### A2.5.2 How should LRMC operate within the pricing principles?

LRMC will be the first step for DNSPs in developing their network tariffs under the new pricing principles. This is important as LRMC will form the basis of the pricing signals that should be sent to consumers and therefore should be the starting point for tariff design. DNSPs will then adjust these tariffs based on LRMC to recover their total efficient costs, to comply with the consumer impact principle and to comply with any applicable jurisdictional pricing obligations. These adjustments are discussed in detail in Appendices A3 to A5.

In adjusting LRMC based tariffs to meet these requirements, the underlying principle is that the adjustments are made in the way that least distorts the price signals regarding the cost of providing network services sent through LRMC based network tariffs.[157]

153 AER, *Discussion Paper, Matters relevant to the framework and approach*, ACT and NSW DNSPs 2014-19, control mechanisms for standard control electricity distribution services in the ACT and NSW, April 2012, p.17.

154 Productivity Commission, *Electricity Network Regulatory Frameworks*, Productivity Commission Inquiry Report Volume 1, April 2013, p.430.

155 AEMC, *Final Report, Power of Choice Review – giving consumers options in the way they use electricity*, 30 November 2012, p.149

156 COAG Energy Council, rule change request, 18 September 2013, p.6.

157 To achieve this underlying principle, the new pricing principles in the draft rule specify that costs not recovered through LRMC based network tariffs are to be recovered in a way that minimises any distortion to usage decisions and that adjustments made to network tariffs to comply with the consumer impact principle and jurisdictional obligation principles must be made to the minimum extent necessary.

To require DNSPs to use LRMC as the starting point for network tariffs, but allow adjustments from these tariffs to meet these requirements, the new pricing principles in the draft rule specify that network tariffs must be based on the LRMC of providing network services.[158]

### A2.5.3 Should LRMC be defined within the NER?

Under the new pricing principles, LRMC is an important guiding principle in network pricing. LRMC is currently not defined in the NER.

LRMC is an economic concept which is used in a variety of markets in different contexts (for example, market power analysis in the wholesale market). To provide certainty and clarity to DNSPs, the AER and consumers, it is important to provide a definition of LRMC in the context of distribution network pricing. A definition of LRMC within the NER will reduce the potential for debate on the meaning of the LRMC and target the application of LRMC to signalling the costs caused by users of the network.

It is important that defining LRMC does not restrict DNSPs' choice of method(s) of calculating LRMC. The definition should therefore define the concept without restricting the ways in which it is calculated and applied.

The definition of LRMC included in the draft rule is:

> "The cost of an incremental change in demand for direct control services provided by a Distribution Network Service Provider over a period of time in which all factors of production required to provide those direct control services can be varied."

### A2.5.4 LRMC methodology

Appendix A1 and NERA's report discuss the advantages and disadvantages of the available well-accepted methods of calculating LRMC.[159] Importantly, there is no single clearly superior method in the context of distribution pricing because the different methods have benefits and detriments which depend on the specific circumstances of the DNSP.

The perturbation methodology provides the most accurate LRMC estimates when calculated at a localised level. However, the perturbation methodology produces volatile estimates and could be difficult to implement widely as it is data and time intensive to calculate.

The perturbation methodology may be best applied in situations where a clear network constraint exists in a particular area of the network, so that the network would benefit from sending strong network cost signals, and consumers are capable of receiving and responding to price signals regarding the constraint.

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158 The Gilbert and Tobin advice attached to the ENA submission to the consultation paper provides a useful guide to the interpretation of the requirement for DNSPs to base network tariffs on LRMC. See: ENA submission, 19 December 2013, p.A-4.

159 See NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014.

The AIC methodology is able to be calculated for small and large groups of consumers without much complexity and effort. It also provides broad signals to each group of consumers regarding network costs from increased demand. However, the AIC methodology relies on averaging network costs and therefore does not provide the specific signals of the costs of network constraints that the perturbation methodology can provide.

Another methodology is the 500MW model, which is currently used in the United Kingdom. The method is able to provide price signals about the costs of capacity at peak times by location and is relatively straight forward to calculate. However, the method is based on the underlying assumption of demand growth, which is not currently applicable for many DNSPs within the NEM. It may be appropriate in times where peak demand is generally rising across the network.

Given that the ideal method varies depending on the specific circumstances of the DNSP, the Commission considers that it is not appropriate to prescribe a specific method within the NER and has not done so in the draft rule.

Discretion to choose their LRMC method will provide DNSPs with the flexibility to select a method that best suits their network and consumer characteristics at the time. Flexibility in the choice of method will allow DNSPs to develop and innovate in how they determine the methodology for sending network cost signals that are based on LRMC.

### A2.5.5 Factors to guide the calculation and application of LRMC

Under the current pricing principles, when DNSPs have taken into account LRMC in tariff setting, it has not produced meaningful price signals to consumers because DNSPs' calculation and application of LRMC have not focussed on the drivers of network costs. For example, when DNSPs have taken into account LRMC, they have typically calculated network wide LRMC by voltage level and then compared LRMC estimates to non-time varying tariffs. These tariffs have not sent network cost signals to consumers because they do not target the specific locations and times of peak demand which drive network costs.

There is a risk in specifying that DNSPs must base network tariffs on LRMC, but not specifying the method for doing so, that DNSPs may continue to calculate network wide LRMCs and apply LRMC estimates through non-time varying tariffs. To provide guidance to DNSPs when calculating and applying LRMC, the NER should include factors to be considered to target the key drivers of network costs.

The calculation and application of LRMC should also be driven by practical considerations of the costs of implementing LRMC based tariffs and the likely benefits from consumers responding to the price signals they provide. These factors are currently included in the NER and are retained.[160]

160 Clause 6.18.5(b) of the NER states that: A tariff, and if it consists of 2 or more charging parameters, each charging parameter for a tariff class: must be determined having regard to transaction costs associated with the tariff or each charging parameter; and whether retail customers of the relevant tariff class are able or likely to respond to price signals.

It is important that DNSPs have the flexibility to make appropriate trade-offs between these factors. The DNSPs should therefore be required to have regard to these factors but not be bound to follow any one approach. The Commission therefore considers that, in meeting the requirement to base network tariffs on LRMC, DNSPs must take into account the factors described below.

### The costs and benefits associated with calculating, implementing and applying that method

It is neither practical nor beneficial to calculate an individual LRMC for every network consumer. While individual LRMC estimates could provide efficient pricing signals to consumers, the costs of DNSPs calculating such estimates would be prohibitive. Furthermore, the benefits of individual estimates are likely to be small because efficient price signals can be sent to consumers that cause similar network costs by grouping them together through tariffs. The benefit of sending granular network cost signals through LRMC based network tariffs must be balanced against the cost of the exercise.

### The extent to which consumers are able to receive and respond to price signals

A key consideration in assessing the benefits of sending efficient price signals through LRMC based network tariffs will be the ability of consumers to receive and respond to price signals. For example, where consumers have accumulation metering they will not be able to receive time varying prices. Under this guiding factor DSNPs will need to take into account the limited signals that can be sent to consumers with accumulation metering when assessing the benefits of undertaking granular LRMC estimates.

### The additional costs likely to be associated with meeting demand at times of greatest utilisation of the relevant part of the distribution network

The quantum of network costs that particular consumers cause is, in part, dependent on the degree to which a network consumer's consumption is coincident with the demand of all other consumers within the network, and thus requires the shared network to be augmented. The application of LRMC calculations to network tariffs should therefore focus on network tariffs reflecting the costs of meeting demand at peak times.

### The location of consumers that are assigned to the relevant tariff and the extent to which costs vary between different locations in the distribution network

Similar to the issue of LRMC reflecting the costs of coincident peak demand, LRMC based pricing should take into account the extent to which LRMC varies by consumer's location in the network.

The LRMC of providing network services will vary by location as well as by time. LRMC can vary by changes in location within a distribution network. This is because peak demand and the network augmentations it drives are not necessarily related to whole of system peak demand. Instead, they are often related to localised peak demand. To provide efficient, cost reflective network price signals, these localised augmentation costs need to be reflected in LRMC based network tariffs. This will send efficient signals to consumers by reflecting augmentation costs to existing consumers

and allowing potential consumers (particularly large business consumers) considering where to locate within the network to take into account the costs of locating in different areas.

## A3 Recovering total efficient network cost

**Summary**

- This Appendix sets out the Commission's consideration on how residual costs should be recovered.
- Network tariffs based on the LRMC of providing network services will generally not recover the total efficient costs of providing network services due to network costs involving a high proportion of fixed costs and exhibiting significant economies of scale. The difference between the total cost of providing network services and the costs recovered through LRMC based network tariffs is known as the residual cost.
- DNSPs currently recover the majority of residual costs through flat and block–structure energy tariffs. Chapter 4 highlights the outcomes under this approach, including:
    - Consumers with high total energy use that use proportionally low amounts during peak times pay more than the network costs they cause, while consumers with low total energy usage but high peak use pay less than the costs they cause.
    - Consumers are not able to make efficient consumption and investment decisions because they are not able to compare the value they place on using the network with the costs of providing network services.
- The COAG Energy Council's rule change proposal requested that the AEMC review the approaches for the recovery of residual costs.

*Draft rule*

- To enable DNSPs to continue to provide safe and reliable network services to consumers in the long run, DNSPs must be allowed to recover their total efficient costs of providing network services. The draft rule does this by providing that the total revenue expected to be recovered from all tariffs must permit the DNSP to recover its expected revenue for the relevant services that is determined in accordance with the AER's distribution determination.
- DNSPs should allocate their total efficient costs to individual network tariffs so that each tariff is cost reflective. The draft rule does this by requiring that the amount of revenue expected to be recovered from each tariff must reflect the total efficient costs of providing network services to the consumers that are assigned to that tariff.
- To maximise the benefits of providing efficient pricing signals to consumers under LRMC based network tariffs, DNSPs should recover the difference between LRMC based tariffs and total efficient costs in a way that minimises distortions to consumers' usage decisions. The draft rule does this by requiring DNSPs to recover their revenues in a way that minimises distortions to the price signals for efficient usage that would be sent by LRMC based tariffs.

## A3.1 Introduction

This Appendix discusses the COAG Energy Council's proposed pricing principle for the recovery of total efficient costs.

This Appendix is structured as follows:

- section A3.2 outlines the operation and application of total efficient cost recovery under the current pricing principles;
- section A3.3 sets out the COAG Energy Council's rule proposal for total efficient cost recovery;
- section A3.4 summarises stakeholders' views on the proposed changes; and
- section A3.5 provides analysis of the key issues and the reasons for the Commission's draft rule.

## A3.2 Current pricing principles

In developing the new principle for the recovery of total efficient network costs it is important to have an understanding of the process of the recovery of total efficient network costs under the current revenue determination process and pricing principles. This section provides an explanation of the recovery of total efficient network costs in three parts:

(i) an explanation of the relevant economic concepts;

(ii) the requirements under the current pricing principles; and

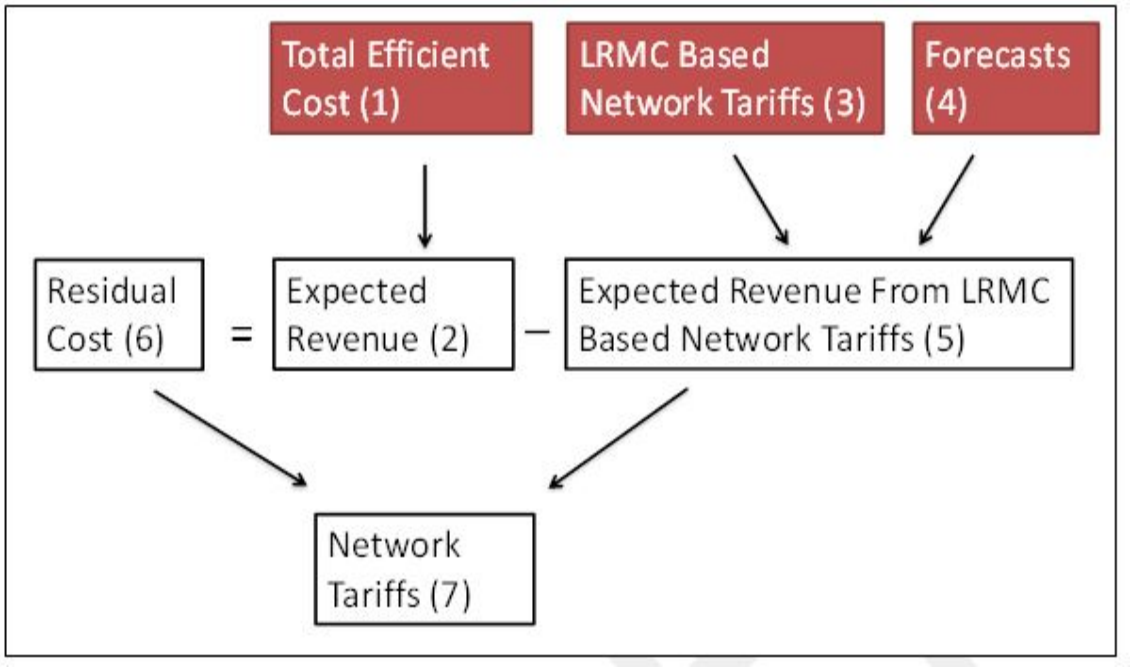
(iii) DNSPs' current methods of recovering of total efficient network costs.

### A3.2.1 Relevant economic concepts

Appendix A1 sets out that network tariffs which reflect the LRMC of providing network services will provide efficient pricing signals to consumers. However, because distribution networks are characterised by large sunk costs and significant economies of scale, network tariffs that reflect LRMC are unlikely to recover the total efficient costs of providing network services. The difference between total efficient cost and the revenue recovered from LRMC based tariffs is called the residual cost.

Figure A3.1 displays how we expect the concepts of expected revenue, total efficient cost, LRMC and residual cost to operate under the draft rule. The seven steps are described below.

**Figure A3.1 Expected revenue, total efficient cost, marginal cost and residual cost in network pricing**




*Step one – total efficient costs*

The AER sets the maximum amount of revenue for network services that a DNSP may recover in total from all of its consumers over a five year regulatory control period.[161] That amount is based on a forecast of the total efficient costs that the DNSP will incur to provide network services to those consumers.

*Step two – expected revenue*

Total efficient costs are smoothed across the regulatory control period to provide the expected revenue that the DNSP is allowed to recover in each year of the regulatory control period.

*Step three – LRMC based network tariffs*

The DNSP develops network tariffs based on the LRMC of providing network services. This is discussed in Appendix A2.

*Step four – forecasts*

Forecasts of quantities for all of the network tariffs and tariff components are made.

*Step five – expected revenue from LRMC based network tariffs*

The expected revenue from LRMC based tariffs is calculated by multiplying LRMC based tariffs by the forecasts. For example, under a two-part tariff, the fixed charge is multiplied by the forecast number of consumers and the energy charge is multiplied by the forecast energy usage.

161 Under the NER, regulatory control period must be not less than 5 years. In practice, all DNSPs' regulatory control periods to date have been five years.

*Step six – residual costs*

Residual costs for a year are the difference between the expected revenue for that year calculated in step two and the expected revenue from LRMC based tariffs for that year calculated in step five.

*Step 7 – network tariffs*

This step involves two important decisions. First, the DNSP must calculate the total costs which it wishes to recover from each tariff class and then, within the tariff class, each tariff. Second, the DNSP must decide which tariff components (for example, fixed or variable charges) it wishes to recover the residual costs of the tariff from and then increase those tariff components above the LRMC based levels.

### A3.2.2 The current pricing principles

As set out in Appendix A2, under the current pricing principles DNSPs must take into account the LRMC of providing network services when setting network tariffs.[162] Further, DNSPs must determine network tariffs having regard to transaction costs and whether consumers are able or likely to respond to price signals.[163]

In relation to recovery of residual costs, the current pricing principles specify that if DNSPs may not recover the expected revenue from these tariffs, DNSPs must adjust their tariffs to recover their expected revenue with minimum distortion to efficient patterns of consumption.[164]

### A3.2.3 Current total efficient cost recovery by DNSPs

Appendix A2 highlighted that DNSPs do not currently set network tariffs on the basis of LRMC. Without network tariffs that are based on LRMC, DNSPs do not assess or disclose the magnitude of residual costs in setting their network tariffs, and provide limited information regarding the approach they take to recovering residual costs.

This makes assessment of the current residual cost recovery methodologies difficult. However, submissions to the consultation paper and NERA's report on efficient network pricing provide an indication of the magnitude of residual costs and the methodologies that DNSPs have used to recover residual costs.

#### Magnitude of residual costs

Step six of Figure A3.1 highlights that the magnitude of residual costs is dependent on total efficient network costs, the LRMC of providing network services and forecasts of all tariff components. In particular, differences in LRMC result in large fluctuations in the magnitude of residual cost because LRMC varies significantly depending on demand conditions. For example, when peak demand is generally rising, the LRMC of providing network services is likely to be high, and as a result residual costs will be low. However, when peak demand is flat or falling, as it is in many networks currently,

162 Clause 6.18.5(b)(1) of the NER.

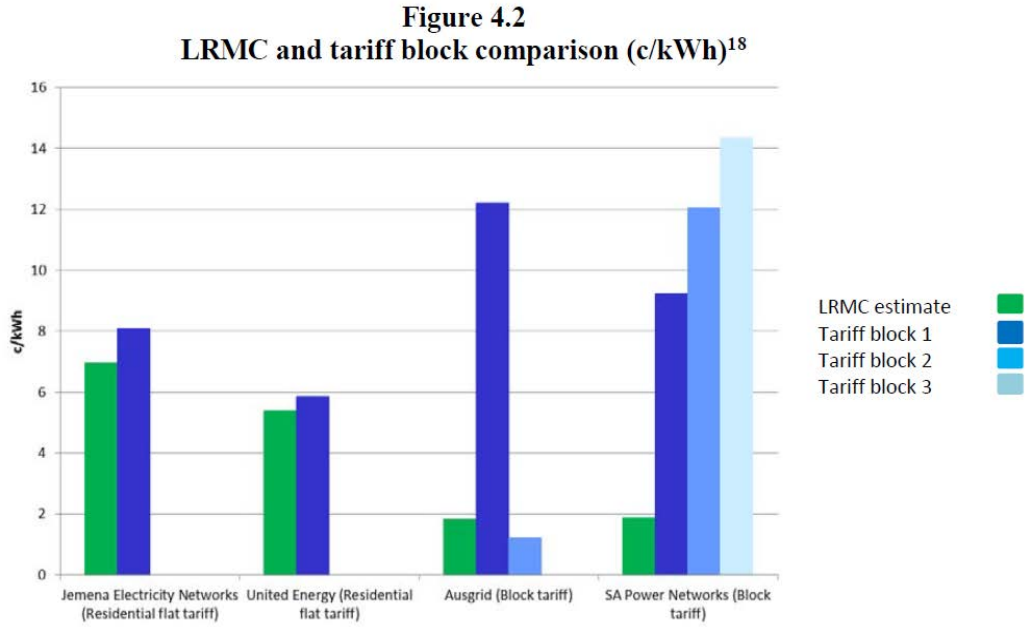
163 Clause 6.18.5(b)(2) of the NER.

164 Clause 6.18.5(c) of the NER.

the LRMC of providing network services will likely be low, resulting in residual costs making up the majority of total efficient cost recovery.

NERA's report highlights the differing magnitude of residual costs under different conditions.[165] For example, Figure A3.2 provides NERA's comparison of DNSPs' LRMC estimates with energy tariffs. NERA notes that the mark-ups above LRMC represent the recovery of residual costs. Notably, the residual cost varies significantly depending on the LRMC estimate, with SA Power Networks' lower LRMC resulting in a large mark-up while the higher LRMC estimates of Jemena and United Energy require only small mark-ups.

**Figure A3.2 Comparison of LRMC with tariffs**




Source: NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014, p.20.

Note: The Ausgrid tariff illustrated in this figure is a three-part declining block tariff with a price of 0 c/kWh for tariff block 3.

NERA's case studies estimating LRMC in Ausgrid's network also highlight the large variations in LRMC that can occur within a distribution network and the impact that such variations have on the magnitude of residual costs. For example NERA estimated LRMC as $157/kW/year in the Kogarah zone substation area and $23/kW/year in the Hornsby zone substation area.[166] If Ausgrid had applied these estimates as the basis of network pricing the residual costs would have been small in the Kogarah zone substation area while they would have made up the majority of total efficient costs in the Hornsby zone substation area.

165 NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014.

166 NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014, p.30.

In submissions, DNSPs' emphasised that in the current conditions of falling demand, residual costs will be significant, often vastly outweighing the revenue recovered from LRMC based tariffs.[167] For example United Energy submitted that in the current environment only 6 per cent of capital expenditure was devoted to augmentation and therefore LRMC would be very low and the majority of total efficient costs would be recovered through residual costs.[168]

### Approach to allocating residual costs to tariffs

An important factor in the recovery of residual costs is the allocation of total efficient costs to tariffs. As highlighted in step seven of Figure A3.1, before residual costs can be allocated to tariff components they must be allocated to tariffs. This involves subtracting the LRMC revenue expected to be recovered from each tariff from the total efficient cost allocated to each tariff.

There is little transparency over how total efficient costs are currently allocated to network tariffs because network tariffs are not based on LRMC. However, Networks NSW submitted that DNSPs have traditionally performed this task through complex cost allocation methodologies that attempt to equitably allocate the annual revenue requirement to each network tariff using historical network usage patterns and accounting cost concepts.[169] Energex noted that it continues to use such methodologies, using a fully distributed cost model to allocate total efficient costs to tariff classes and then to tariffs in the most economically efficient and cost reflective way.[170]

The NER also provides guidance in the allocation of costs to groups of consumers. DNSPs' expected revenue for each tariff class must lie between stand-alone and avoidable cost[171] and the rate of change of expected revenue from each tariff class is limited by the side constraints.[172] However, as noted in Appendices A6 and A7, because these controls operate at the tariff class level they provide little direct guidance or constraint on cost allocation to individual tariffs or consumers.

### Approach to recovering residual costs

Despite the lack of transparency referred to above, examination of total tariffs provides a high-level indication of current approaches to residual cost allocation. For example, DNSPs have generally chosen two-part and block–structure tariffs for residential consumers, leaving the recovery of residual costs to either non-time based energy charges or fixed charges.

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167 See, for example: CitiPower and Powercor Australia submission, 19 December 2013, p.3.

168 United Energy submission, 19 December 2013, p.2.

169 Networks NSW submission, 19 December 2013, p.14.

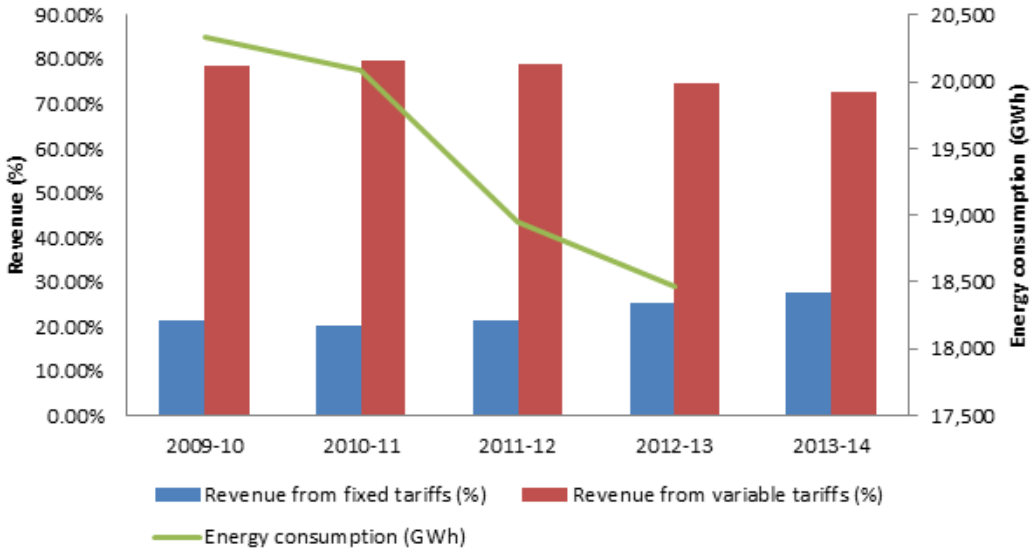
170 Energex submission, 19 December 2013, p.14. Energex provides further explanation of the fully distributed cost model in its annual pricing proposal, see p.50. http://www.aer.gov.au/sites/default/files/Energex%27s%20approved%20annual%20pricing%20proposal%20%E2%80%93%202014%E2%80%9315.pdf

171 Clause 6.18.5(a) of the NER.

172 Clause 6.18.6 of the NER.

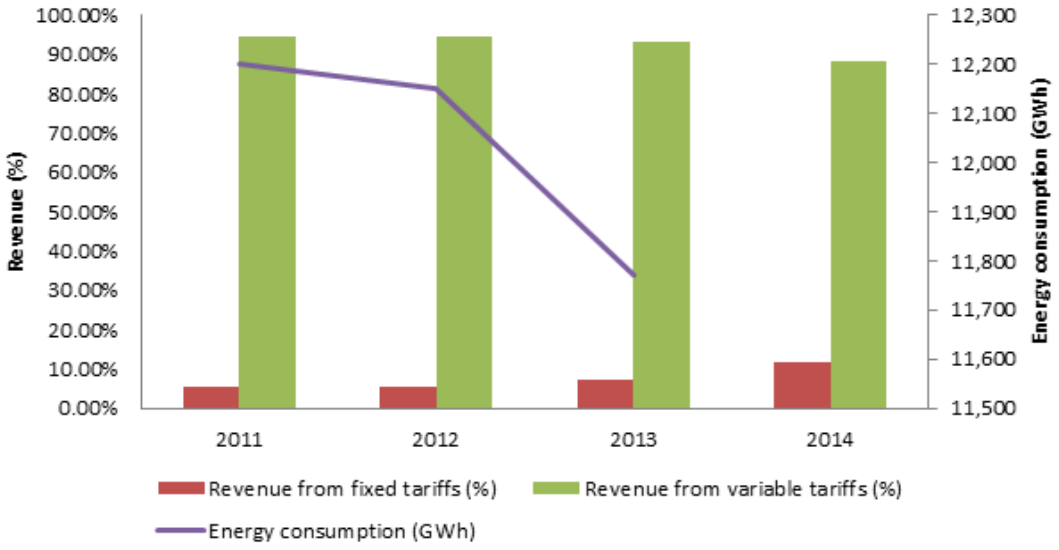
Figures A3.3 and A3.4 below show the revenue recovery from energy and fixed charging components for residential consumers in NSW and Victoria in the 2009-14 and 2010-15 regulatory control periods.

**Figure A3.3 NSW DNSPs' residential consumer revenue and energy consumption[173]**




Source: NSW DNSPs' 2009-10 to 2013-14 annual pricing proposals.

**Figure A3.4 Victorian DNSPs' residential consumer revenue and energy consumption[174]**




Source: Victorian DNSPs' 2011 to 2014 annual pricing proposals.

173 Energy consumption data is not yet available for 2013-14, revenue for 2013-14 is based on 2013-14 network tariffs and 2012-13 consumption.

174 Energy consumption data is not yet available for 2014. Revenue for 2014 are based on 2014 network tariffs and 2013 consumption.

Figure A3.3 and A3.4 highlight that in practice DNSPs have recovered the majority of revenue through the energy component of such network tariffs. The figures also show that in recent years as energy consumption has declined, DNSPs have begun to recover a higher proportion of residual costs from fixed charges. However, even in very recent years the vast majority of revenue is still recovered from the energy based components of network tariffs.

## A3.3 Rule proponent's views

The COAG Energy Council did not propose changes to the current pricing principles for the recovery of total efficient costs. Instead, the COAG Energy Council considered that in deciding upon the appropriate pricing principles for recovery of total efficient costs, the AEMC should review the merits of Ramsey pricing, postage stamp pricing and other applicable methodologies.

To guide the decision on which pricing approach should be included in the NER, the COAG Energy Council suggested that three factors should be taken into account:

- allowing for recovery of residual costs in a way that does not distort or undermine flexible pricing, where flexible pricing is available;
- potential impacts on particular classes of consumers; and
- the appropriate balance between potential impacts on particular classes of consumers and efficient pricing.

## A3.4 Stakeholder views

The Commission notes that stakeholders interpreted Ramsey and postage-stamp pricing in significantly different ways. As a result, the Commission considers that to base its analysis on these concepts is not informative. Instead, in taking into account submissions and in formulating a total efficient cost recovery principle, the Commission will be informed by the economic principles (and submissions on the economic principles) that underpin Ramsey and postage-stamp pricing. That is:

- Ramsey pricing recovers residual costs by assigning mark-ups above marginal cost in inverse proportion to the elasticity of demand, thereby minimising distortions to efficient patterns of consumption; and
- postage-stamp pricing recovers residual costs through unit charges that do not vary with consumption or location, applied as widely as possible so as not to affect existing utilisation of the network.

### A3.4.1 Context of total efficient cost recovery under the new pricing principles

Stakeholders generally considered that in developing a principle for the recovery of total efficient costs it is important to address the likely magnitude of residual costs in the future and the practical effect that any principle is likely to have on consumers.[175]

175 AER submission, 19 December 2013, p.6; ENA submission, 19 December 2013, p.6.

Stakeholders also considered that it was important that the total efficient cost principle provide clear and consistent guidance to the AER, DNSPs and consumers. Stakeholders considered that the principle as proposed by the COAG Energy Council did not provide this guidance, particularly in relation to the interaction between the total efficient cost recovery principle and the other pricing principles.[176]

The MEU considered it is important that DNSPs do not have the opportunity to change their approach from one year to the next as this creates a great deal of uncertainty for consumers and retailers in their energy costs. Further, such changes would lead to a great deal of reluctance from retailers to invest in and promote products linked to DNSP pricing if DNSPs were free to change their approach from year to year.[177]

The ENA considered that the NER should allow distribution networks flexibility over how these residual costs should be recovered, and not specify an approach or approaches.[178]

### A3.4.2 Allocating total efficient costs between consumers

The AER submitted that residual costs should be apportioned in a cost reflective way. The AER considered that there is no one applicable method for this to occur but that apportionment should be consistent with stand-alone and avoidable cost principles and that it should focus on assigning those costs attributable to specific consumers to those consumers.[179]

The ENA noted cost allocation and efficient pricing are often two separate questions and that the rule change does not address or distinguish between the two.[180] DNSPs differed on opinions of cost allocation. For example, Networks NSW considered that this is not an economic question while Energex considered that it currently allocates total efficient costs on the basis of its fully distributed cost model and should be allowed to continue to do so.[181]

The MEU notes that transmission pricing is based on allocation of the revenue in proportion to the replacement costs of the assets used to provide the service. The MEU considers that this approach is relatively simple and addresses the issue of the recovery of sunk costs. Further, if such costs are then allocated in proportion to each consumer's demand at times of coincident peak demand in the network, then a high degree of equity is achieved.[182]

Consumer groups were concerned that higher costs could be allocated to consumers with inelastic demand, particularly residential consumers, if the inverse to elasticity principle is applied to allocating costs between consumers.[183]

176 AER submission, 19 December 2013, p.6; ENA submission, 19 December 2013, p.6.

177 MEU submission, 19 December 2013, p.71.

178 ENA submission, 19 December 2013, p.C-9.

179 AER submission, 19 December 2013, p.6.

180 ENA submission, 19 December 2013, p.6.

181 Network NSW submission, 19 December 2013, p.14; Energex submission, 19 December 2013, p.14.

182 MEU submission, 19 December 2013, p70.

183 Ellipson and TEC submission, 19 December 2013, p.8.

### A3.4.3 Assigning mark-ups to LRMC based network tariffs

The AER considered that mark-ups above marginal cost should be assigned to fixed charges as this would result in the least distortion to efficient patterns of consumption as consumers are least responsive to changes in fixed charges.[184]

DNSPs considered that assigning mark-ups inversely to price responsiveness is the most efficient approach but that it would have equity implications for consumers. DNSPs also considered that the pricing principles should provide flexibility for them to balance these competing interests because flexibility would allow them to introduce innovative solutions aimed at achieving both efficiency and equity objectives.[185]

Consumer groups generally opposed the introduction of higher fixed charges and considered that there were efficient alternatives, including demand charges, that would reduce distortions without resulting in higher charges for low consumption consumers.[186]

## A3.5 Commission's analysis

This section sets out the Commission's analysis and explains the pricing principle in the draft rule for total efficient cost recovery.

### A3.5.1 Context of total efficient cost recovery under the new pricing principles

As set out in Appendix A2, calculating LRMC based tariffs will be the first step for DNSPs in developing their network tariffs under the draft rule. This is important as LRMC will form the basis of the pricing signals that should be sent to consumers and therefore should be the starting point for tariff design. Adjustments to LRMC based tariffs to recover total efficient costs will be the second step in setting network tariffs.

After setting out network tariffs based on LRMC and adjusting them to recover total efficient network costs, DNSPs will adjust those network tariffs to comply with the consumer impact and jurisdictional obligation principles. Importantly, under the consumer impact principle, DNSPs are required to minimise the impact on consumers of network tariff changes. This may include slowly transitioning consumers to new network tariffs that meet both the LRMC and total efficient cost recovery principles. The jurisdictional obligation and consumer impact principles are explained in Appendix A4 andA5.

Submissions from stakeholders emphasised that residual costs are likely to make up the majority of total efficient costs in falling demand environments, such as in many networks currently. The Commission recognises the magnitude of residual costs will vary significantly based on demand conditions within each DNSP's network and considers that the new pricing principles need to provide an appropriate framework and guidance for the recovery of total efficient costs regardless of the magnitude of residual costs.

184 AER submission, 19 December 2013, p.6.

185 ENA submission, 19 December 2013, p.C-9.

186 Uniting Care submission, 19 December 2013, p.7.

### A3.5.2 Objectives of a total efficient cost recovery principle

There are three objectives of a total efficient cost recovery principle.

First, the principle allows DNSPs to recover their total efficient costs of providing network services. This is necessary to maintain DNSPs' financial sustainability, which allows DNSPs to continue to reliably and safely provide network services in the long run. The amount of a DNSP's total efficient costs is determined in the AER's regulatory determination and is equal to the expected revenue calculated under that determination, as explained in section A2.2.1.

Second, to achieve the network pricing objective of tariffs that reflect the efficient costs of providing network services it is important that total efficient costs be allocated to network tariffs to reflect the costs of providing network services to the consumers that are assigned to each tariff.

Third, to allow consumers to make efficient use of the network, total efficient network costs should be recovered from tariffs in a way which does not distort efficient pricing signals. This means that mark-ups above LRMC based tariffs to recover total efficient costs should not distort consumer's usage decisions.

In meeting these objectives, it is important that the total efficient cost recovery principle provides an appropriate balance between flexibility and prescription. A key consideration in balancing these outcomes is to preserve DNSPs' ownership of network tariffs. Without DNSPs being responsible for the development of their tariffs, they will not have the flexibility or accountability to design and implement network tariffs that suit their network characteristics and challenges and the particular circumstances of their consumers. However, this flexibility should not reduce the obligation on DNSPs to transparently set network tariffs that send efficient price signals to consumers.

A number of stakeholders submitted that equity considerations should be directly addressed in the total efficient cost recovery principle, specifically by limiting increases in fixed charges. Under the new consumer impact principle, DNSPs will need to consider the impact on consumers from any network tariff changes, including the impacts of higher fixed charges. However, a specific prohibition on increasing fixed charges could directly conflict with the objectives of this rule change by locking in inefficient network tariffs. Chapter 4 addresses this issue in more detail.

### A3.5.3 The new principle for recovering total efficient costs

#### Recovering total efficient network costs

The AER's distribution determination sets the maximum amount of revenue for network services that a DNSP may recover in total from all of its consumers over a five year regulatory control period. That amount is based on a forecast of the total efficient costs that a DNSP will incur to provide network services to its consumers. The AER then smooths the maximum revenue across the regulatory control period to provide the expected revenue that DNSPs are allowed to recover in each year of the regulatory control period to allow DNSPs to recover their total efficient costs.

To enable DNSPs to continue to provide safe and reliable network services to consumers in the long run, DNSPs must be allowed to recover their total efficient costs of providing network services. The draft rule does this by providing that the total revenue expected to be recovered from all tariffs must permit the DNSP to recover its expected revenue for the relevant services as determined in accordance with the AER's distribution determination.

### Allocating total efficient costs to tariffs

To achieve the network pricing objective of tariffs reflecting the efficient costs of providing network services it is important that total efficient costs are allocated to network tariffs to reflect the costs of providing network services to those consumers.

While this allocation is important, there is no one efficient method of allocating total efficient costs to network tariffs. This is because allocating total efficient costs involves the allocation of costs which have already been incurred, to network tariffs which charge for current and future use of the network. Brattle and NERA explain this in detail in their reports.

Brattle's report highlights the importance to consumer outcomes of allocating total efficient network costs to tariffs. However, Brattle note that the methods of allocation used by regulators and network businesses have traditionally been targeted at achieving a 'fairness' principle, with the cost allocation techniques utilised overseas designed to achieve 'fair', but not efficient, outcomes in assigning sunk costs.[187]

NERA's report explains that before residual costs can be allocated to tariff components, total efficient costs must be allocated to tariffs. NERA considers that stand-alone and avoidable cost should act as bounds for the allocation of total efficient costs. Within these broad bounds, the general principle should be that tariffs should encourage optimal use of existing infrastructure by consumers.[188]

Under the draft rule, the revenue expected to be recovered from each tariff must reflect the DNSP's total efficient costs of providing network services to the consumers that are assigned to the tariff. In meeting this requirement DNSPs will need to set out their methodology for allocating total efficient network costs to tariffs as part of the pricing methodology in their TSS and then will need to set tariff levels in accordance with that methodology within the regulatory control period. However, reflective of the fact that there is no one ideal method for this allocation, DNSPs will have discretion to choose this method.

The draft rule also provides an appropriate balance between flexibility and prescription. DNSPs will have the flexibility to choose the appropriate method, taking into account their own network and consumer characteristics. The AER will be able to check that the method meets the pricing principle and is applied to set network tariffs in each year of the regulatory control period.

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187 The Brattle Group, *Structure of Electricity Distribution Network Tariffs: Recovery of Residual Costs*, Report Prepared for the AEMC, August 2014, p.iii, 11.

188 NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014, p.9, 27.

### Recovering total efficient costs with minimum distortion to efficient price signals

After total efficient costs have been allocated to consumers through network tariffs, mark-ups above LRMC based network tariffs must be assigned to individual tariff components to recover residual costs.

Appendix A2 sets out that consumers will be provided with efficient pricing signals and be able to make efficient network usage decisions when network tariffs are set on the basis of LRMC. To allow consumers to make efficient usage decisions DNSPs should be required to recover residual costs in a way which minimises any distortions to those efficient price signals.

The underlying principle that minimises distortions to efficient usage decisions is to assign residual costs to tariff components in inverse proportion to consumers' responsiveness to that tariff component. Brattle and NERA's reports both emphasise that this is the key for recovering residual costs efficiently. For example, Brattle states:

> "Residual costs should be recovered from the various services provided by the firm and the various groups of customers served in inverse proportion to the respective price elasticity of demand. The intuition behind this rule is that the broader goal is to have efficient tariffs based on LRMC, and that departures from LRMC induce inefficiencies. The magnitude of the inefficiencies is minimized if the movement in prices away from LRMC is concentrated on those tariffs or parts of the tariff which have the smallest elasticities."[189]

While the principle is clear, the mark-ups above LRMC resulting from its application depend on the characteristics of DNSPs' networks and consumers, and the price signals necessary to be sent to consumers through LRMC based tariffs. NERA highlights this issue, stating:

> "[In assigning mark-ups] ultimately the choice is not an either/or decision. In practice judgement is applied on the extent that additional revenues are recovered via a fixed supply charge or mark-ups on consumption or capacity tariffs. The guiding principle to the application of this concept should be the implications for use of the existing infrastructure by the customer."[190]

The Brattle and NERA reports highlight that in making this decision there are a range of options depending on the applicable network tariff structure, type of consumers and network characteristics. For example, the metering technology of the consumers subject to the tariff will play an important role in recovering total efficient costs because where advanced metering technology is in place, DNSPs will have a wider range of tariff

189 The Brattle Group, *Structure of Electricity Distribution Network Tariffs: Recovery of Residual Costs*, Report Prepared for the AEMC, August 2014, p.iii.

190 NERA, *Economic Concepts for Pricing Electricity Network Services*, A Report for the AEMC, 21 July 2014, p.8.

components through which to recover residual costs. Chapter 4 and Brattle's report discuss these options in more detail.[191]

While the examples in the Brattle and NERA reports are indicative only, they highlight that in minimising distortions to efficient usage decisions there is no one specific approach that should be applied in all circumstances.

In particular, analysis from both reports demonstrate that this principle does not require that residual costs are recovered though increases to fixed charges. Many consumer groups were concerned that higher fixed charges could adversely affect vulnerable consumers. Brattle's report sets out several approaches that could be used to recover residual costs in a way that does not involve increases in fixed charges or minimises the impact of any increases in fixed charges on vulnerable consumers. The consumer impact principle discussed in Appendix A4 will also require DNSPs to minimise the impact of price changes on consumers, for example by gradually transitioning to new network prices over more than one regulatory period.

The draft rule implements the principles suggested by NERA and Brattle by requiring DNSPs to recover their revenues in a way that minimises distortions to the price signals for efficient usage that would be sent by LRMC based tariffs.

The ideal method of minimising distortions to the efficient pricing signals sent to consumers from LRMC based tariffs depends on each DNSP's network and consumer characteristics, and the types of price signals being sent. The draft rule provides the flexibility for DNSPs to tailor their approach to these circumstances by not requiring a specific approach to minimising distortions to efficient usage signals.

191 The Brattle Group, *Structure of Electricity Distribution Network Tariffs: Recovery of Residual Costs*, Report Prepared for the AEMC, August 2014.

# A4 Consumer impact principle

**Summary**

- There is no specific requirement in the current pricing principles in the NER to require DNSPs to have regard to the impact of network price changes on consumers.
- The COAG Energy Council has proposed replacing the current pricing principle in the NER that requires DNSPs to take into account consumers' ability to respond to price signals, with a broad consumer impact principle.
- There may be cases where a consumer impact principle and the new pricing principles designed to require DNSPs to set cost reflective network tariffs ('the cost reflectivity principles') will produce outcomes that are inconsistent. For example, cost reflective network tariffs may involve significant price changes for some consumers, but consideration of consumer impacts may justify gradually transitioning to those new prices over time.

*Draft rule*

- A specific consumer impact principle that places an obligation on DNSPs to set network tariffs which consumers understand, and to minimise the impact of network tariff changes on consumers, will allow consumers to make efficient long term consumption and investment decisions and will minimise the impacts on consumers of the transition to cost reflective pricing.
- DNSPs will be required to vary from network tariffs that meet the cost reflectivity principles only to the minimum extent necessary to meet the consumer impact principle. In practice, this is likely to require DNSPs to gradually transition to more cost reflective network tariffs over time if changes in network tariffs would result in significant impacts on consumers.
- To provide a clear and transparent network tariff setting process, where DNSPs depart from cost reflective network tariffs due to the consumer impact principle, they will be required to set out these changes in their TSS.
- Current clause 6.18.5(b)(2)(ii) requires DNSPs to take into account consumers' ability to respond to price signals. This clause should be removed as it overlaps with the new consumer impact principle and its impact on the method of recovering residual costs is unclear.

## A4.1 Introduction

This Appendix discusses the COAG Energy Council's proposal to introduce a consumer impact principle into the NER.

This Appendix is structured as follows:

- section A4.2 outlines the treatment of consumer impacts under the current pricing principles;
- section A4.3 sets out the COAG Energy Council's rule proposal for a consumer impact principle;
- section A4.4 summarises stakeholders' views on the proposed principle; and
- section A4.5 provides analysis of the key issues and the reasons for the Commission's draft rule.

## A4.2 Current pricing principles

The current pricing principles do not include a specific requirement for DNSPs to have regard to consumer impacts in setting network tariffs.

The current side constraint provisions are intended to provide protection to consumers from large changes in network tariffs. The protections afforded to consumers through the side constraint provisions are discussed and evaluated in detail in Appendix A7. Importantly, because the side constraints apply at the tariff class level, they limit average price changes for large groups of consumers but do not provide protection from tariff changes for individual consumers or groups of consumers on a specific tariff (within a tariff class).

The current pricing principles, under clause 6.18.5(b)(2)(ii) of the NER, require DNSPs to have regard to consumers' ability to respond to price signals. This clause can be interpreted in a variety of different ways. For example, the clause could be interpreted to require DNSPs to set tariffs consumers are able to respond to, or it could be interpreted to require DNSPs to recover residual costs from consumers that are least likely to change their behaviour in response to an increase in their network tariffs.

## A4.3 Rule proponent's view

The COAG Energy Council has proposed to replace clause 6.18.5(b)(2)(ii) of the NER with a broad consumer impact principle. The principle would specify that tariffs must be determined having regard to the impact that they would have on retail consumers.

This proposed change by the COAG Energy Council reflects three key concerns under the current provisions.

First, for efficient network pricing signals to be effective, consumers must be able to relate their usage decisions to the tariff structure and be decide whether to respond to the signals sent by those tariffs. This requires DNSPs to take into account more than just the efficiency properties of their network tariffs. For example, residential consumers typically have little to no familiarity with demand based tariffs and may not be able to respond to the incentives provided until they better understand how such tariffs work. The COAG Energy Council proposed that this new principle would mean that DNSPs are likely to address such considerations when developing their network tariffs.

Second, in the change to require cost reflective pricing, changes to network tariffs may have large impacts on consumers. This principle will require DNSPs to take into account the impact of such price changes on consumers. This may lead to DNSPs to consider transitioning to efficient network tariffs over time to reduce the impact of sudden network tariff changes.

Third, as currently worded, clause 6.18.5(b)(2)(ii) of the NER could encourage DNSPs to shift their costs onto consumers that are least likely to change their behaviour in response to an increase in their network tariffs.

The proposed change by the COAG Energy Council would substantially broaden the existing principle. The COAG Energy Council did not provide any guidance on the scope of a consumer impact principle but suggests that the way DNSPs are to comply with the proposed principle is principally through its new consultation framework on the TSS. Under this consultation framework, DNSPs would be required to develop a TSS that would detail the impacts on consumers, and this must be informed by the views of stakeholders.

### A4.4 Stakeholder views

Stakeholders generally supported the introduction of a consumer impact principle.[192] However, stakeholders requested further information regarding the objectives, scope and methods that DNSPs could employ to comply with the principle.[193]

During consultation stakeholders were asked whether an AER guideline would be useful in providing this information. Many stakeholders supported this option.[194] Other stakeholders suggested that further guidance should be provided within the NER, particularly in relation to the scope and objectives of the consumer impact principle.[195]

Stakeholders expressed mixed views of what the objectives of a consumer impact principle should be. Consumer groups focussed on equity considerations, particularly limiting increases in the fixed component of network tariffs to low income consumers.[196] Other stakeholders focussed on economic objectives, including consumers' ability to respond to price signals and the impacts on consumers' decision making from large network tariff changes.[197]

Stakeholders were also concerned with how a consumer impact principle would operate within the pricing principles. Specifically, how would DNSPs set network tariffs which complied with both the consumer impact principle and the cost reflectivity principles?[198]

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192 See: AER submission, 18 December 2013, p.7; Ergon Energy submission, 19 December 2013, p.10; SACOSS submission, 19 December 2013, p.19.

193 Energex submission, 19 December 2013, p.15.

194 See: SACOSS submission, 19 December 2013, p.19; ENA submission, 19 December 2013, p.C-11.

195 Ergon Energy submission, 19 December 2013, p.10.

196 PIAC submission, 19 December 2013, p.7.

197 See, for example, AER submission, 18 December 2013, p.7.

198 ENA submission, 19 December 2013, p.C-11.

## A4.5 Commission's analysis

### A4.5.1 Purpose of a consumer impact principle

There are two main roles of a consumer impact principle in promoting the NEO.

First, to provide an obligation on DNSPs to set network tariffs that consumers are capable of understanding, and therefore capable of responding to the signals that network tariffs are intended to provide. This is particularly important in the context of moving towards more cost reflective network tariffs because, where consumers are not able to relate their usage decisions to the design of the network tariff, they will not be able to make efficient consumption and investment decisions regarding their use of the network.

Second, to provide an obligation on DNSPs to take into account the impacts of network tariff changes on consumers as a result of their proposed network tariff changes. Large increases in network tariffs will have a significant impact on consumers and potentially undermine confidence in the regulatory framework. In addition, large network tariff changes reduce consumers' ability to make efficient long term investment and consumption decisions by sending inconsistent price signals.

As noted above, consumer groups submitted that the consumer impact principle should be extended to directly target equity objectives. For example, PIAC submitted that DNSPs should not be allowed to raise fixed charges, so that consumers are able to reduce their energy bills by lowering consumption.[199] Under the new consumer impact principle, DNSPs will need to consider the impact on consumers from any network tariff changes, including the impacts of higher fixed charges. However, a specific prohibition on increasing fixed charges could directly conflict with the objectives of this rule change by locking in network tariffs which do not reflect the cost of providing network services. Chapter 4 and Appendix A3 address this issue in detail.

### A4.5.2 Further guidance for a consumer impact principle

Further guidance was requested by stakeholders on what a consumer impact principle incorporated and how DNSPs could meet the requirements of a consumer impact principle. In particular, DNSPs considered that further guidance is necessary as, without it they would be subject to compliance risk. The AER also considered that further exploration of the aims of a consumer impact principle was necessary.[200] Submissions from consumer groups considered that an AER guideline could provide further clarity on the COAG Energy Council's proposed consumer impact principle.[201]

The Commission considers that it is most appropriate to provide guidance within the NER on the requirements of the consumer impact principle. This principle comprises two elements. First, the NER will define the consumer impact principle as requiring DNSPs to set network tariffs that consumers are able to understand and to minimise the impacts on consumers from network tariff changes. Second, the NER will set out

199 PIAC submission, 19 December 2013, p.7.

200 ENA submission, 19 December 2013, p.C-11; AER submission, 18 December 2013, p.7.

201 See: SACOSS submission, 19 December 2013, p.19; Ellipson and TEC joint submission, 19 December 2013, p.9.

guiding factors which DNSPs must have regard to in meeting each part of the consumer impact principle.

By specifying these requirements within the NER, the objectives and scope of the principle are clearly defined. Further, by providing guidance within the NER instead of a guideline, DNSPs, the AER, and consumers are provided with a stable setting for the introduction of the consumer impact principle. This is important because, in meeting the consumer impact principle, DNSPs will need to make long term decisions regarding transitioning consumers to cost reflective network tariffs. This will require consultation and engagement with consumers and will impact on network planning decisions.

It is important to recognise that small consumers do not see network tariffs directly, and only pay them to the extent that retailers pass them on. In complying with the consumer impact principle, and its guiding factors, a key element will be DNSPs consulting with retailers to gain an understanding of how retailers are likely to pass on changes in network tariffs.

### Consumers must be capable of understanding tariffs

In demonstrating that consumers are capable of understanding their proposed tariffs DNSPs must have regard to the following:

***The type and nature of the consumers subject to the relevant tariff.***[202]

When DNSPs are introducing new tariff structures they will need to take into account the differing levels of knowledge and ability to understand tariff structures of various types of consumers. For example, residential consumers have little familiarity with demand tariffs. If a DNSP sought to move all of its consumers on to demand tariffs it would need to be able to demonstrate that residential consumers were capable of understanding, and therefore responding to the price signals of, such tariffs. A key part of this consideration will be the trade-off between cost reflectivity and complexity in network tariff design. For example, network coincident peak demand tariffs are more cost reflective than an anytime maximum demand tariffs but are much more difficult for consumers to understand.

DNSPs will be able to demonstrate that different types of consumers are capable of understanding tariffs through a range of measures. For example, where significant changes have been proposed to tariff structures, some DNSPs have chosen to undertake trials with a small number of consumers to assess consumers' ability to understand and respond to tariff structures.[203]

***The information provided to, and the consultation undertaken with, consumers.***

A key part of DNSPs demonstrating that consumers understand tariff structures will be through providing information and consulting with consumers. Where a DNSP

202 The specific language included in the NER for the guiding factors uses existing defined terms in the NER. For example, the existing defined term "retail customers" is used instead of "consumers".

203 SA Power Networks is currently trialling capacity based tariffs for residential consumers in South Australia.

consults with consumers directly, or through consumer groups or a retailer, it will be able to provide evidence that consumers are able to understand tariff structures.

### DNSPs must minimise the impact of tariff changes on consumers

In demonstrating that they have minimised the impact that their proposed changes in tariffs will have on consumers, DNSPs must have regard to the following:

***The extent to which consumers can choose the network tariff to which they are assigned.***

Where DNSPs set network tariffs which consumers are able to opt-in or opt-out of, the impact of changes in network tariffs is likely to be reduced because consumers may be able to minimise the impact of the price change by changing to another network tariff.

***The extent to which consumers are able mitigate the impact of changes in network tariffs through their usage decisions.***

Where consumers are able to reduce bill increases from changes in network tariffs by changing their use of the network, the impact of network tariff changes will be reduced. This is especially important in taking into account the impact of changes in different charging parameters. For example, where DNSPs increase fixed charges consumers are not able to reduce bill increases through usage decisions, while increases in time varying energy rates allow consumers to reduce bill increases either through reducing overall network use or changing use from peak to off-peak periods.

***The desirability for network tariffs to comply with the cost reflectivity principles, albeit after a reasonable period of transition, which transition period may extend over more than on regulatory control period.***

Appendix A2 and A3 highlight the divergence between current network tariffs and cost reflective network tariffs. DNSPs will likely make significant changes to network tariffs to comply with the new cost reflectivity principles in future regulatory control periods. The time that DNSPs take to transition from current network tariffs to cost reflective network tariffs will be an important aspect of this change. There will be a trade-off in terms of maximising the benefits of cost reflective network tariffs by transitioning consumers to cost reflective tariffs quickly, and the benefits of reducing consumer impacts by minimising large network tariff changes.

This guiding factor requires DNSPs to have regard to this trade-off. For example, DNSPs may decide to transition quickly to critical peak pricing for large business consumers in an area with a forecast network constraint. The benefits from a fast transition would be large and the consumer impacts reduced by the large business consumers' ability to change usage out of the critical peak periods. Alternatively, DNSPs may choose to transition small business consumers from flat energy based tariffs to time based capacity tariffs over more than one regulatory control period. The consumer impact of such a change would be significant which would need to be weighed against the network benefits.

### A4.5.3 Making trade-offs between cost reflective pricing and the consumer impact principle

There may be cases where the consumer impact principle and the new cost reflectivity principles produce outcomes that are inconsistent. This inconsistency could arise in instances where cost reflectivity may mean that changes in network tariffs potentially result in large price changes for some consumers.

To allow DNSPs to make the necessary trade-offs, DNSPs should be required to set network tariffs that vary from the cost reflectivity principles to the minimum extent possible to comply with the consumer impact principle. It is important that DNSPs not be able to disregard the cost reflectivity principles to reduce consumer impacts or provide simpler tariffs. However, where consumers face tariffs which they cannot relate their usage decisions to, or that send inconsistent price signals, the gains from efficient pricing which the cost reflectivity principles are designed to achieve will not be realised.

In making this trade-off, it will be important for DNSPs to set out how and why they have made the trade- offs between the cost reflectivity principles and the consumer impact principle.

In demonstrating compliance with the pricing principles in the TSS under the proposed new pricing framework, DNSPs will be required to set out the network tariffs that would best meet the cost reflectivity principles and the adjustments they have made from these tariffs to meet the consumer impact principle. This will provide a clear and transparent tariff setting process. Notably, many DNSPs submitted that they currently make trade-offs between efficient pricing and consumer impacts. The key difference under the new pricing principles will be that these trade-offs will be transparent and assessed against the cost reflectivity and consumer impact principles by the AER.

### A4.5.4 Consistency between the consumer impact principle and the side constraints

There is a potential overlap between the side constraints and the impact of network tariff changes element of the consumer impact principle. This issue is discussed in detail in Appendix A7. Importantly, the side constraints provide limited protection from the impacts of network tariff changes on consumers. The side constraints only apply at the tariff class level and do not address the impacts of network tariff changes on individual consumers or tariffs. In contrast, the new consumer impact principle applies to each tariff, and requires DNSPs to consider the impact of network tariff changes on consumers, not just minimise average network tariff changes at the tariff class level.

It is in this context that a broad consumer impact principle is required as it will provide consumers with protections from significant network tariff changes and allow appropriate transition to cost reflective pricing.

### A4.5.5 Removing the price responsiveness clause

Clause 6.18.5(b)(2)(ii) of the NER currently provides that in determining tariffs DNSPs must have regard to whether consumers of the relevant tariff class are able or likely to respond to price signals. The meaning of this clause is unclear and could be interpreted as relating to recovery of total costs. To provide clarity to stakeholders, allow the new total cost recovery principle to operate unhindered, and prevent overlap with the proposed consumer impact principle, clause 6.18.5(b)(2)(ii) should be removed from the NER.

# A5 Jurisdictional pricing obligation principle

**Summary**

- DNSPs must often meet network pricing requirements placed on them through jurisdictional obligations. These obligations are generally driven by social and equity policies of governments and can be inconsistent with the pricing principles in the NER.
- In instances where DNSPs are currently required to give effect to jurisdictional pricing obligations that are inconsistent with the pricing principles, they are able to make the necessary trade-offs due to the high level of discretion in applying the current pricing principles.
- Under the new requirements to base network tariffs on LRMC and recover total efficient network costs with minimum distortion to efficient usage decisions ('the cost reflectivity principles'), inconsistencies are likely to arise between jurisdictional pricing obligations and the cost reflectivity principles.[204]
- The COAG Energy Council has proposed a specific requirement within the NER that network tariffs must comply with relevant jurisdictional pricing obligations.

*Draft rule*

- The draft rules introduce a specific jurisdictional pricing obligation principle to allow DNSPs to set network tariffs that comply with both jurisdictional pricing obligations and (subject to such compliance) the new cost reflectivity principles.
- To realise the benefits of sending efficient pricing signals under the new cost reflectivity principles, the draft rule specifies that if DNSPs must depart from network tariffs that meet the cost reflectivity principles so as to enable them to meet their jurisdictional pricing obligations, they should do so only to the minimum extent necessary.
- To provide a clear and transparent pricing process, DNSPs will be required to set out the trade-offs they have made between the cost reflectivity principles and jurisdictional pricing obligations in their TSS.

## A5.1 Introduction

This Appendix discusses the COAG Energy Council's proposal to introduce a jurisdictional pricing obligation principle into the NER.

204 The requirements to base network tariffs on LRMC and recover total efficient network costs with minimum distortion to efficient usage decisions will be referred to collectively as the "cost reflectivity principles" from here on.

This Appendix is structured as follows:

- section A5.2 sets out the operation of jurisdictional pricing obligations under the current pricing principles;
- section A5.3 summarises the COAG Energy Council's rule proposal for a jurisdictional obligation principle;
- section A5.4 summarises stakeholders' views on the proposed principle; and
- section A5.5 provides analysis of the key issues and the reasons for the Commission's draft rule.

## A5.2 Current pricing principles

DNSPs are currently required to meet both jurisdictional pricing obligations and the pricing principles when determining their network tariffs.

There is no direct conflict between the current pricing principles and jurisdictional pricing obligations because DNSPs have a high level of discretion in applying the current pricing principles. For example, the principles only require DNSPs to take into account LRMC, and have regard to transaction costs and customers' ability to respond to price signals when determining network tariffs. This discretion allows DNSPs to meet jurisdictional pricing obligations by setting network tariffs which differ from those that would best meet the current pricing principles.

There are a number of examples of current jurisdictional pricing obligations that place requirements on DNSPs in network price setting that are potentially inconsistent with cost reflectivity:

- The Victorian Government orders for Victorian DNSPs on the implementation of the tariffs for Advanced Metering Infrastructure (AMI) – the most recent order made on 19 June 2013 provides instructions to DNSPs on how and when AMI network tariffs are to be assigned and the permitted time consumption bands.[205]
- In addition to the side constraints, in SA Power Network's 2009-14 regulatory control period SA Power Networks cannot raise the fixed charge for small customers by more than $10 per annum.[206]
- Uniform tariff policies are in place in Queensland, Tasmania and South Australia. Small customers must be provided with or offered the same tariffs regardless of location in these jurisdictions.[207]

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205 Victorian Government Gazette, Advanced Metering Infrastructure (AMI Tariffs) Order, No. S 216, 19 June 2013.

206 Clause 9.29.5(d) of the NER. This constraint is unlikely to apply in future regulatory control periods. The AER has the discretion to stop the application of clause 9.29.5(d) of the NER after SAPN's 2009-14 regulatory control period and has indicated in its preliminary and final framework and approach papers that it will do so.

207 Queensland Competition Authority, *Regulated Retail Electricity Prices 2013-14*, Final Determination, May 2014; Electricity Act 1994 (Qld), section 90; Electricity Act 1996 (SA), section 35B; Electricity Pricing Order (SA), 11 October 1999; Clause 9.48.4 B of the NER.

## A5.3 Rule proponent's view

To allow DNSPs to meet jurisdictional pricing obligations and the pricing principles, the COAG Energy Council has proposed that there should be a specific requirement within the NER that network tariffs must comply with relevant jurisdictional pricing obligations. While the rule change proposed by the COAG Energy Council does not make it clear how this requirement would address any inconsistency, the intent of the change is that primacy would be given to jurisdictional pricing obligations. This would allow DNSPs to vary network tariffs from those that comply with the pricing principles to meet jurisdictional pricing obligations.

## A5.4 Stakeholder views

Stakeholders generally acknowledged that there will be conflicts between jurisdictional pricing obligations and the cost reflectivity principles, particularly the requirement to base network tariffs on LRMC. The current jurisdictional pricing obligations, particularly uniform tariff policies in Queensland, South Australia and Tasmania, were cited as providing conflicting requirements for DNSPs.[208]

To provide clarity on how DNSPs are to meet both the cost reflectivity principles and jurisdictional pricing obligations, stakeholders considered that a jurisdictional pricing obligation principle that clearly sets out how DNSPs are to meet conflicting requirements should be introduced into the NER.[209] The ENA suggested this could be achieved by specifying that network tariffs are to comply with the relevant principles set out in the NER to the extent possible given jurisdictional pricing obligations.[210]

The MEU and the PIAC considered that transparency should be a key consideration in the adoption of a jurisdictional pricing obligation principle. They considered that, where DNSPs vary from cost reflective network tariffs to meet jurisdictional pricing obligations, they should set out these variations in their TSS and annual pricing proposals.[211] The MEU considered this a vital consideration as variations from cost reflective network tariffs should be able to be assessed by the AER and be scrutinised by consumers.[212]

## A5.5 Commission's analysis

The purpose of introducing a jurisdictional pricing obligation principle into the NER is to allow DNSPs to transparently meet jurisdictional pricing obligations while still meeting the requirements under the new cost reflectivity principles. Further, to realise the benefits of sending efficient pricing signals through network tariffs which meet the cost reflectivity principles, changes to network tariffs that meet the cost reflectivity principles should be to the minimum extent necessary to meet jurisdictional pricing obligations.

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208 ENA submission, 19 December 2013, p.C-9.

209 Ergon Energy submission, 19 December 2013, p.7; MEU submission, December 2013, p.72..

210 ENA submission, 19 December 2013, p.C-7.

211 MEU submission, 19 December 2013, p.72; PIAC submission, 19 December 2013, p.11.

212 MEU submission, 19 December 2013, p.72.

### A5.5.1 Allowing DNSPs to balance cost reflectivity and jurisdictional pricing obligations

Appendix A2 and A3 set out the new cost reflectivity principles in more detail. Under these principles DNSPs will be required to base network tariffs on LRMC and recover total efficient costs in a way that minimises distortions to consumers' efficient usage decisions. It is likely that a number of jurisdictional pricing obligations will directly conflict with these new principles because jurisdictional pricing obligations are driven by social and equity policy objectives while the new cost reflectivity principles are designed to send efficient pricing signals. This issue was reinforced in a number of submissions that highlighted that jurisdictional pricing obligations that are currently in place are likely to conflict with requirements to base network tariffs on LRMC.[213]

### A5.5.2 Maximising the benefits of cost reflective pricing

Chapter 4 sets out the benefits that are likely to arise from sending efficient network pricing signals under the new cost reflectivity principles. Movements away from network tariffs that satisfy the cost reflectivity principles will reduce these benefits. The Commission considers that to retain the benefits of sending efficient pricing signals, if DNSPs must depart from network tariffs that meet the cost reflectivity principles they should do so to the minimum extent necessary.

### A5.5.3 Providing a transparent network tariff setting process

Under the new pricing regime, where DNSPs make trade-offs to meet jurisdictional pricing obligations they will be required to do so transparently. In demonstrating compliance with the cost reflectivity principles in the TSS under the new pricing process, DNSPs will be required to set out the network tariffs that would best meet the cost reflectivity principles. DNSPs will then be required to set out the adjustments they have made to these tariffs to meet pricing requirements under jurisdictional pricing obligations.

### A5.5.4 Jurisdictional pricing obligations and the consumer impact principle

Appendix A4 sets out the new consumer impact principle.[214] Similar to the jurisdictional pricing obligation principle, the consumer impact principle requires DNSPs to adjust network tariffs which meet the cost reflectivity principles to the minimum extent necessary to meet its requirements. DNSPs will therefore need to set out adjustments to network tariffs that comply with the cost reflectivity principles in their TSS to meet both the jurisdictional obligation principle and consumer impact principle.

The introduction of the consumer impact principle may reduce the need for jurisdictional pricing obligations. By requiring DNSPs to explicitly take into account the impact that network tariff changes have on consumers, some of the objectives of

213 ENA submission, 19 December 2013, p.C-7; SACOSS submission, 13 December 2013, p.15; Energex submission, 19 December 2013, p.11.

214 The principle requires DNSPs to set tariffs which consumers are reasonably capable of understanding, and to minimise the impacts of network tariff changes on consumers.

jurisdictional pricing obligations could potentially be achieved under the pricing principles.

For example, the South Australian limitation on changes to the fixed component of residential consumers' network tariffs is designed to reduce the impact on consumers of increases in fixed charges. The AER has proposed not to continue the constraint in the 2014–19 regulatory control period because a broad consumer impact principle is a preferable option for providing protections to consumers from large increases in fixed network tariffs.[215]

215 AER, *Final framework and approach SA Power Networks Regulatory control period commencing 1 July 2015,* April 2014, p.78.

# A6 Tariff classes

**Summary**

- This Appendix sets out the Commission's consideration of the COAG Energy Council's proposed changes to the tariff class provisions in the NER.
- The NER currently requires the DNSPs to constitute tariff classes with regard to the need to group consumers on an economically efficient basis and the need to avoid unnecessary transaction costs. This provision provides DNSPs with significant discretion in designing their tariff classes.
- The COAG Energy Council's rule change request proposed changes to provide greater clarity and certainty on the setting of tariff classes. The rule change request did not specify any problems that are considered to have arisen as a result of how DNSPs currently set tariff classes.
- The proposed changes involved relatively minor wording changes that the Commission does not consider will add significantly greater clarity or make material differences to the factors that the DNSPs currently balance in developing their tariff classes. Under both the current and the proposed rule, the DNSPs must balance economic efficiency benefits and transaction costs.
- The Commission considers that a better alternative is to require the DNSPs to apply the new pricing principles to develop individual network tariffs that are cost reflective. Under this approach, it would not matter how broadly DNSPs constitute their tariff classes, as each network tariff would be cost reflective and send appropriate signals to consumers about the network costs caused by their usage. Tariff classes would retain a limited role, primarily in relation to how the side constraint provisions are applied.
- On this basis, the Commission has decided not to make the amendment proposed by the COAG Energy Council on tariff classes. Instead, the draft rule makes it explicit that the new pricing principles apply to individual tariffs.

This Appendix sets out the Commission's consideration of the COAG Energy Council's proposed changes to the tariff class provisions. The COAG Energy Council has raised concerns that DNSPs currently have significant discretion in how they group consumers into tariff classes for the purposes of network pricing and has proposed strengthening the NER requirements on how consumers should be grouped together into tariff classes.

## A6.1 Purpose of tariff classes

A tariff class is defined in the NER as "a class of retail customers for one or more direct control services who are subject to a particular tariff or tariffs."

The NER requires DNSPs to assign consumers to tariff classes. They are then required to set network tariffs for each tariff class in accordance with the distribution pricing principles and other applicable provisions in the NER.

The current tariff class provisions in clause 6.18.3 of the NER require DNSPs to allocate every consumer to one or more tariff classes and provide guidance on how consumers should be assigned or reassigned into those tariff classes. Specifically, clause 6.18.3(d) of the NER requires DNSPs to have regard to the following factors when constituting tariff classes:

- the need to group consumers together on an economically efficient basis; and
- the need to avoid unnecessary transaction costs.

The NER also govern the factors DNSPs need to take into account when assigning consumers to tariff classes or re-assigning consumers between tariff classes. Clause 6.18.4 of the NER requires DNSPs to assign consumers to tariff classes on the basis of one or more of the following factors:

- the nature and extent of their usage;
- the nature of their connection to the network;
- whether remotely read or other similar metering technology has been installed in the customer's premises as a result of a regulatory obligation or requirement;
- consumers with a similar connection and usage profile should be treated on an equal basis; and
- consumers with micro generation facilities should be treated no less favourably than consumers without such facilities but with a similar load profile.

As the NER currently apply, DNSPs have some discretion in how to balance the factors required in grouping consumers into tariff classes. As a result, DNSPs have to date taken a variety of approaches in assigning different consumers to different tariff classes. For example, tariff classes have been constituted by reference to voltage level, customer type, tariff structure or capacity. How consumers are allocated to tariff classes is relevant to provisions in the NER relating to distribution pricing principles, side constraints, and information provision to consumers.

## A6.2 Rule proponent's view

The COAG Energy Council's rule change request states "in order to provide greater clarity and certainty on the setting of tariff classes, it is proposed that clause 6.18.3(d) be amended so that the two sub-clauses are requirements rather than just matters to be taken into account."[216]

216 COAG Energy Council, rule change request, 18 September 2013, p.10.

The rule change request proposed a rule that would amend clause 6.18.3(d) as marked-up below:

> "(d) A *tariff class* must be constituted ~~with regard to~~ on the following basis:
>
> (1) ~~the need to group~~ *retail customers* must be grouped together on an economically efficient basis; and
>
> (2) ~~the need to avoid~~ unnecessary transaction costs must be avoided.[217]"

The rule change request did not set out any specific concerns about how tariff classes are currently set by the DNSPs or explain how the proposed rule is likely to change how tariff classes are determined.

## A6.3 Stakeholder views

There were mixed views from stakeholders on the COAG Energy Council's proposed changes.

The ENA did not support a mandatory requirement for grouping consumers on an economically efficient basis. They considered a more prescriptive approach could reduce the flexibility for DNSPs to weigh various factors important in determining tariff classes.[218] This view was supported by Networks NSW.[219]

SP AusNet supported the proposed amendment.[220] Origin Energy also supported the COAG Energy Council proposal because they considered that DNSPs currently had incentives to specify their tariff classes as widely as possible to maximise the flexibility with which they could vary their tariffs for different consumers under the side constraints, since these applied at the level of tariff class.[221]

Ellipson also noted that the current tariff class provisions "create too much flexibility in the distribution price setting process."[222] The Centre for Policy Development also supported the amendments proposed by the COAG Energy Council "as long as consumers are grouped by their contribution to peak demand."[223]

The AER was also supportive of the amendment to the tariff class provision and proposed that consideration of constituting tariff classes should extend to cost drivers such as voltage levels, location and consumer usage profiles.[224] On the other hand, the AER considered that the criteria for assigning and reassigning consumers to tariff classes in clause 6.18.4 of the NER were not clear.[225] The AER noted that consumers

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217 COAG Energy Council, proposed rule, 18 September 2013, p.26.

218 ENA submission, 19 December, p.11.

219 Network NSW submission, 19 December, p.15.

220 SP AusNet submission, 19 December 2013, p.20.

221 Origin Energy submission, 19 December 2013, p.8.

222 Ellipson submission, 21 March 2014, p.2.

223 Centre for Policy Development submission, 19 December 2013, p.3.

224 AER submission, 19 December 2013, p.9.

225 Ibid., p.10.

often did not know why they might be re-assigned to different network tariffs within a tariff class, resulting in significant increases in their network charges.[226]

## A6.4 Commission's analysis

In the Commission's view, the original purpose of requiring DNSPs to develop tariff classes appears to be to avoid cross-subsidies between groups of consumers that caused different levels of network costs.

The NER currently provides discretion to DNSPs in constituting tariff classes based on economic efficiency and transaction cost considerations. There is no explicit definition of economic efficiency in the NER. While DNSPs often justify the tariff classes they establish on the basis of economic efficiency, they interpret economic efficiency broadly. For example, as shown in Box A6.1, Ausgrid includes all its residential and small business consumers in one tariff class on the basis of these consumers being connected to the low voltage network. This type of approach to defining tariff classes is a common practice among DNSPs.

**Box A6.1: Example of Ausgrid's tariff class and applicable network tariffs**

Ausgrid specifies its tariff classes on the following basis:

- the voltage connection required (LV, HV and sub-transmission voltage);
- the usage of the customer (ie maximum demand exceeding 10 MW on more than 3 occasions over a 12 month period, or total usage of 40 GWh per annum); and
- the metering installed in the customer's premises.

Ausgrid has a range of different tariffs within each tariff class. For example, in the LV tariff class, comprising of all residential and small business consumers, it has the following tariffs:

- Residential inclining block tariff;
- Residential time of use tariff;
- Controlled load tariff;
- Small business time of use tariff < 40 MWh; and
- Small business time of use 40-160 MWh.

Source: Ausgrid 2013-14 Annual Pricing Proposal.

Under the current NER, DNSPs have to trade-off the benefits of economic efficiency and transaction costs, but can also consider other factors in developing their tariff classes. Under the COAG Energy Council's proposed changes, DNSPs would still need to make the trade-offs between economic efficiency and transaction costs. The only difference under the COAG Energy Council's proposed change is that DNSPs would

226 Ibid.

not be able to consider any other factors. It is unclear whether DNSPs currently consider any other factors.

The key consideration when determining tariff classes appears to be how to balance:

- the potential *economic efficiency* benefits of having a large number of tariff classes that allow a DNSP to have different tariffs that send customised network cost signals to individual consumers; against
- the *transaction costs* that would be involved in having such a large number of different tariff classes.

However, the Commission does not consider that it is clear that there are necessarily efficiency benefits in having a larger number of tariff classes. A single tariff class can contain several tariffs, as shown in the Ausgrid example in the box above. Each of those different tariffs can send customised network cost signals to different consumers even if all of those consumers are in the same tariff class.

Accordingly, rather than focussing on how *tariff classes* are determined, it is more important that DNSPs develop *tariffs* that are cost reflective and assign consumers to *a tariff* that sends the right pricing signal about the network costs caused by their usage.

The Commission therefore considers that it is more important to require DNSPs to apply the new pricing principles to individual tariffs. In this way, all network tariffs of the DNSP would be cost reflective and send efficient pricing signals to consumers that should be assigned to those tariffs based on the network costs they cause. The Commission's draft rule requires DNSPs to apply the new pricing principles to each individual tariff.[227] The new cost reflective pricing principles will apply to individual tariffs with the result that individual tariffs are cost reflective.

If the pricing principles apply to each tariff, then it is not clear that it matters whether there are a smaller number of tariff classes that each contain several tariffs, or a larger number of tariff classes that each contain only one tariff. The key outcome is that each tariff meets the pricing principles.

The COAG Energy Council considers that its proposed rule would provide clarity and certainty as to how tariff classes are determined. However, the Commission is of the view that the proposed rule would not materially enhance certainty because, like the current rule, DNSPs would still have broad discretion to determine tariff classes based on balancing economic efficiency and transaction costs requirements.

Given the considerations discussed above, the Commission has decided not to make the amendment proposed by the COAG Energy Council. Instead, the draft rule on the new pricing principles makes it explicit that the new pricing principles apply to individual tariffs. Consequently, it would not matter how broad a DNSP's tariff classes are or how many different tariffs are within a tariff class, so long as each tariff complies with the new pricing principles.

227 The only exception is that the draft rule retains the existing requirement in clause 6.18.5(a) of the NER that the stand alone and avoidable costs bounds continue to apply to tariff classes.

Under the new network pricing process, DNSPs will be required to set out their tariff classes and tariffs in their TSS. They will also be required to set out detailed information on the tariff classes, tariff structures and charging parameters to apply to each regulatory year of the regulatory control period, including the assignment and reassignment of consumers to various tariff classes and tariffs. This should help address some of the AER's concerns about consumers not understanding how and why they have been assigned or reassigned to different network tariffs.

# A7 Side constraints

**Summary**

- This appendix discusses the Commission's consideration on COAG Energy Council's proposed changes to the side constraints.
- The current side constraint provisions in the NER seek to limit the impact of network tariff changes on consumers. They specify that average network tariffs for each tariff class within a regulatory control period cannot increase by more than two percent above the average tariff increase for all consumers. Importantly, by applying at the tariff class level, this constraint does not limit increases in individual tariffs or specific components of tariffs.[228]
- The COAG Energy Council proposed two changes to the current side constraint provisions. First, to remove ambiguity that the current side constraint provisions apply to consumers with interval meters and second, to extend the application of side constraints across regulatory control periods so that the pricing constraint would apply in all years.

*Draft rule*

- Stakeholders generally considered that the side constraints provide inadequate protection to consumers from network tariff changes. While there were calls for a broader review of the side constraint provisions, this is outside the scope of the rule change. The introduction of a consumer impact principle, as set out in Appendix A4, specifically addresses the impacts on consumers of tariff changes. By introducing a consumer impact principle instead of stricter numerical price limits, DNSPs can retain flexibility to move towards efficient network tariffs while minimising the impacts on consumers of significant tariff changes.
- To provide clarity and consistency in the application of side constraints, clause 6.18.6(e) of the NER should be removed. This clause currently creates ambiguity over whether side constraints apply to consumers with interval meters.
- The draft rule does not extend the side constraints across regulatory control periods. This is because it will not result in material benefits to consumers and the consumer impact principle is a more effective solution to the concerns raised by the COAG Energy Council.

## A7.1 Introduction

This Appendix discusses the COAG Energy Council's proposed changes to the side constraint provisions.

228 The side constraints apply to the increase in weighted average tariff revenue which is a measure of average network tariffs.

This Appendix is structured as follows:

- section A7.2 provides a detailed explanation of the operation of the current side constraint provisions;
- section A7.3 summarises the COAG Energy Council's proposed changes to the side constraints;
- section A7.4 summarises stakeholders' responses to the side constraint elements of the consultation paper; and
- section A7.5 provides analysis of the proposed changes to the side constraint provisions in the NER.

## A7.2 Current side constraint provisions

The current side constraint provisions seek to limit the impact on consumers from significant network tariff changes. They specify that average network tariffs for each tariff class may not increase by more than two percent above the average tariff increase for all consumers. This means that the average tariff movement for the group of consumers included in a tariff class is similar to that of all other tariff classes.

There are four key elements to how the current side constraints apply. They include:

(i) the type and magnitude of the constraint;

(ii) the years in which they apply;

(iii) the tariff categories to which they apply; and

(iv) certain exceptions to the application of the side constraints.

These are briefly described below.

### A7.2.1 The type and magnitude of the constraint

The first element sets the numerical price constraint at CPI-X plus two per cent.[229] The X-factor is set by the AER through the revenue determination such that the DNSP can recover its allowed revenue. The effect of this is that distribution tariffs are free to move to recover the allowed revenue set by the AER, but rises beyond this are limited by the two per cent side constraint.

### A7.2.2 The years in which side constraints apply

The second element specifies that the side constraints apply to tariff increases from one regulatory year to the next within a regulatory control period. This provision means that the side constraints do not apply in the first year of a regulatory control period because tariff changes in the first year would be from tariffs from the last year of the previous regulatory control period.

229 When prices are falling in real terms, the side constraint between two regulatory years is set at CPI plus two per cent.

### A7.2.3 The tariff categories to which side constraints apply

The third element requires the side constraints to apply to network tariffs at the tariff class level. This allows DNSPs discretion to re-balance individual network tariffs (and tariff charging parameters) within a tariff class by more than the price constraint as long as this is compensated by other network tariffs (or tariff charging parameters) within the tariff class increasing by less than the price constraint.

Where DNSPs change tariff classes, the side constraints apply to the new tariff classes. DNSPs also have discretion to determine how to group consumers into tariff classes. This provides DNSPs with discretion to change tariff classes such that price changes meet the side constraints.

Boxes A7.1 to A7.3 provide some recent examples of movements in individual distribution tariffs with side constraint provisions where price changes in individual tariffs or charging parameters have been greater than the side constraints.[230]

**Box A7.1: Example of movements in individual tariffs with side constraints**

Table A7.1 below shows individual tariff price movements in SP AusNet's five highest revenue earning tariffs within its medium sized business tariff class in 2014. The side constraint applicable to SP AusNet that year was 16 per cent.

**Table A7.1 SP AusNet distribution use of system price change for medium business consumers in 2014**

| Tariff name | Average tariff change | Applicable side constraint |
|---|---|---|
| Medium single rate | 38% | 16% |
| Medium two rate 5day | 30% | |
| Medium demand multi-rate | 1% | |
| Medium two rate 7day | -16% | |
| Unmetered | 0% | |

Source: SP AusNet 2014 Pricing Proposal.

SP AusNet was able to change the price level of individual tariffs within the tariff class by more than the side constraint because the average price change of all the tariffs was within the side constraint limit.

230 The side constraints apply at the tariff class level and apply to the increase in weighted average tariff revenue which is a measure of average network tariffs. DNSPs are therefore allowed to increase individual tariffs by any amount above the side constraint limitation (subject to the pricing principles) as long as they have a compensating decrease in other tariffs within the tariff class. The compensating decrease must be such that the weighted average revenue from the tariff class increases by less than the side constraint.

**Box A7.2: Example of movements in individual tariff charging parameters with side constraints**

Table A7.2 displays the increases in fixed and variable charges for CitiPower's seven highest revenue earning tariffs in its residential consumer class in 2014. The side constraint applicable to CitiPower that year was 11 per cent.

**Table A7.2 CitiPower distribution use of system price change for residential consumers in 2014**

| Tariff name | Change in fixed charging parameter | Average change in variable charging parameters | Applicable side constraint |
|---|---|---|---|
| Residential single rate | 109% | 4% | 11% |
| Residential single rate - bulk | 109% | 10% | |
| Residential - flexible pricing | 109% | -6% | |
| Residential two rate 5d | 109% | -3% | |
| Residential two rate 5d - bulk | 109% | -6% | |
| Residential interval | 109% | -4% | |
| Residential interval - bulk | 109% | -6% | |

Source: Estimated from CitiPower 2014 Pricing Proposal.

CitiPower was able to change the price level of all of the fixed charging parameters within the tariff class by more than the side constraint because the average price change of all the tariffs was within the side constraint limit.

**Box A7.3: Example of changes in tariff classes**

In 2011-12 Ausgrid combined its residential and low voltage business tariff classes into one low voltage tariff class. Table A7.3 displays price increases for each individual tariff, the average price increase of each tariff class had the tariff classes not been combined and the average price increase under the combined tariff class.

**Table A7.3 Ausgrid distribution use of system price changes for low voltage consumers in 2011-12**

<table>
<tr><th>Tariff name</th><th>Average price change by tariff</th><th>Average price change by tariff class – old tariff classes</th><th>Average price change by tariff class – new tariff class</th></tr>
<tr><td>Residential Non-TOU Tariff</td><td>20%</td><td rowspan="2">16%</td><td rowspan="8">22%</td></tr>
<tr><td>Residential TOU Tariff</td><td>7%</td></tr>
<tr><td>Business Non-TOU Tariff</td><td>16%</td><td rowspan="6">28%</td></tr>
<tr><td>Business TOU</td><td>16%</td></tr>
<tr><td>LV 40-160 MWh</td><td>67%</td></tr>
<tr><td>LV 160-750 MWh</td><td>32%</td></tr>
<tr><td>LV >750 MWh</td><td>23%</td></tr>
</table>

Source: Estimated from Ausgrid 2011-12 Pricing Proposal.

Ausgrid was able to increase the average price level of the low voltage business tariffs by more than the side constraint because the average price increase of all low voltage tariffs was within the side constraint limit.

### A7.2.4 Exceptions to the side constraints

Under the fourth element, the side constraints only apply to standard control services.[231] Further, the NER currently allows the side constraints to be exceeded to the extent any additional revenues from certain approved adjustments to the DNSP's revenues after the revenue determination would cause the tariffs to increase by more than the side constraint.[232]

231 Clause 6.18.6(a) of the NER.

232 Under clause 6.18.6(d) of the NER certain elements of network tariffs are excluded from the application of side constraints, including: transmission charges, jurisdictional scheme obligations, pass-throughs and changes to the annual revenue requirement for within period updates to the return on debt.

Further, clause 6.18.6(e) of the NER specifies that the side constraints do not limit the extent that a network tariff for consumers with remotely read interval or other time-based metering technology may vary according to time or other circumstances of the consumers' usage.

## A7.3 Rule proponent's view

The COAG Energy Council considers that, under its proposed new network pricing framework, the TSS will be an important guiding document for changes in network tariff structures through the regulatory control period. As a result, it suggests that consumers will expect that the network tariff structures prevailing at the end of a regulatory control period will form the basis of those at the beginning of the next period, and that further substantial change will be proposed and evaluated through a subsequent TSS. The COAG Energy Council is of the view that this expectation is not reflected in the current side constraint rules which only apply within and not between regulatory control periods.

The COAG Energy Council considers that clause 6.18.6(e) of the NER lacks clarity on whether consumers with interval meters are exempt from the side constraint provisions. It considers that side constraints should apply to all consumers.

## A7.4 Stakeholder views

### A7.4.1 Application of side constraints across regulatory control periods

Stakeholders expressed limited support for extending side constraints across regulatory periods but were concerned about the potential impact of significant network tariff changes on consumers. Stakeholders consider limiting the impact of network tariff changes on consumers to be an important issue but do not consider that the current side constraints achieve this outcome.

DNSPs did not support extending the side constraints across regulatory control periods. They considered that the extension would lead to restrictions in moving towards cost reflective network pricing whilst not addressing impacts on consumers from network tariff changes. Further, DNSPs noted that there are other provisions within the NER and the COAG Energy Council's proposed changes that can achieve the goal of limiting the impact of network tariff changes on consumers.[233]

The AER considered that side constraints provide little constraint on tariff structures and that their application across regulatory control periods will not achieve the COAG Energy Council's goal. The AER noted that a new pricing process that includes consultation with consumers and a consumer impact pricing principle would be a better option to reduce the impact on consumers from network tariff changes. The AER considered that a broader review of side constraints is necessary.[234]

233 ENA submission, 19 December 2013, p.ii.

234 AER submission, 18 December 2013, p.18.

Submissions from consumer groups focussed on the inadequacy of the current side constraint provisions in limiting the impacts on consumers from network tariff changes. They expressed mixed views on their application across regulatory control periods, but recommended a strengthening of the provisions or the introduction of a broad consumer impact principle.[235]

### A7.4.2 Removal of interval meter consumers exception to the side constraints

There is widespread support for allowing side constraints to apply to interval meter consumers. Stakeholders considered that clause 6.18.6(e) is confusing and could be interpreted as not applying side constraints to consumers with interval meters.

DNSPs supported the removal of any restrictions on the application of the side constraints. For example, Energex considered removal of clause 6.18.6(e) would reduce ambiguity.[236]

The AER supported the removal of clause 6.18.6(e). It considered that the clause is redundant and lacks clarity.[237]

Consumer groups also supported the removal of clause 6.18.6(e). For example the SACOSS supported the application of side constraints regardless of the consumer's metering type.[238]

## A7.5 Commission's analysis

The role of side constraints is to provide some certainty on the extent of network tariff changes from one year to the next to limit the impact on consumers. Large increases in network tariffs will have a significant impact on consumers and potentially undermine confidence in the regulatory framework. In addition, large network tariff changes reduce consumers' ability to make efficient long term investment and consumption decisions by sending inconsistent price signals.

However, it is important to consider the role of the side constraint provisions within the wider regulatory framework. Specifically, the side constraint provisions should be considered in the context of the new consumer impact principle and consultation requirements in the TSS process.

### A7.5.1 Application of side constraints across regulatory periods

A key feature of the current side constraint provisions is that they limit network tariff changes at the tariff class level. Individual tariffs and charging parameters can therefore vary by any amount greater than the constraint as long as the average change in tariffs within the tariff class is within the applicable side constraint. This means the side constraints are not particularly effective in providing protection to individual consumers from network tariff changes. This is evident from price changes that have occurred for some consumers on different tariffs as shown in Boxes A7.1 to A7.3.

235 Ellipson submission, 21 March 2014, p.2.

236 Energex submission, 19 December 2013, p.16.

237 AER submission, 18 December 2013, p.19.

238 SACOSS submission, 13 December 2013, p.21.

If the effectiveness of the current side constraint mechanism is questionable in limiting impacts on consumers from network tariff changes from one year to the next within a regulatory control period, then extending side constraints to apply across regulatory control periods is unlikely to provide any material benefit to consumers.

Applying side constraints across regulatory periods is also unlikely to achieve the COAG Energy Council's aim of tariff structures at the end of each regulatory control period forming the basis of the structures in the first year of the next period. With side constraints applying to changes in average tariff levels across a tariff class rather than individual tariff structures and levels, DNSPs will continue to have discretion to change tariff structures and/or tariff levels as long as the average price levels within a tariff class do not change by more than the side constraint. Applying side constraints across regulatory control periods is therefore unlikely to restrict changes in tariffs across regulatory periods.

Further, under the new network pricing process with a TSS, such a provision is unlikely to be necessary as changes in tariff structures in the first year of the new regulatory control period will be subject to at least as much assessment and consultation as changes that occur within the previous regulatory control period. Under the draft rule, DNSPs will be required to describe how they have consulted with consumers and retailers on their proposed network tariffs before submitting a TSS that outlines their tariff structures to apply for each regulatory control period. The proposed TSS will then be assessed by the AER as part of the reset process as discussed in chapter 5.

There is also a potential inconsistency between applying side constraints across regulatory control periods and the new pricing principles. For example, if a DNSP is currently pricing in a non-cost reflective manner, it may be required to significantly change network tariffs to meet the new pricing principles. This may change the average prices of tariff classes. Applying side constraints may therefore prevent the implementation of cost reflective prices, even when such changes meet the consultation requirements and consumer impact principle.

In the Commission’s view a more preferable way of dealing with the impact of network tariff changes on consumers is through a specific consumer impact principle and consultation requirements on DNSPs as part of the broader network pricing process. Appendix A4 discusses the rationale for the introduction of a consumer impact principle which will require DNSPs to minimise consumer impacts from network tariff changes. The consumer impact principle would allow DNSPs to slowly transition consumers to cost reflective network tariffs where consumer impacts may be substantial. Such an approach reduces the need for side constraints as a consumer protection mechanism.

### A7.5.2 Removal of interval meter consumers exception to the side constraints

The NER should provide a clear and transparent framework for how network tariffs should be determined. The current wording of clause 6.18.6(e) has created uncertainty among stakeholders on whether interval meter consumers are exempt from the application of side constraint provisions. Submissions from DNSPs, the AER and consumer groups indicated that greater clarity is welcome.

As a matter of principle, the pricing framework and tariff provisions should apply consistently to all consumers. A consumer's metering type should not affect whether side constraints apply to the consumer. Consumers with interval meters require the same protection as consumers with accumulation meters. Submissions from stakeholders did not provide any reasons why consumers with interval meters should be treated differently.

The Commission therefore considers that the NER should be amended to remove any ambiguity in the application of side constraints for interval meter consumers through removal of clause 6.18.6(e).

# B Other requirements under the National Electricity Law

## B.1 Commission's considerations

In assessing the rule change requests the Commission considered:

- the Commission's powers under the NEL to make the rule;
- the consolidated rule change requests;
- the fact that there is no relevant Ministerial Council on Energy (MCE) Statement of Policy Principles;[239]
- the AEMC's *Power of Choice review* final report to the COAG Energy Council;[240]
- submissions received during first round consultation on IPART's rule change request and submissions received during consultation on the consolidated rule change requests;
- comments made by stakeholders as part of workshops and forums held as part of the consultation undertaken for the consolidated rule change requests;
- consultants reports from NERA and Brattle[241]; and
- the Commission's analysis as to the ways in which the draft rule will, or is likely to, contribute to the NEO.

## B.2 Commission's power to make the rule

The Commission is satisfied that the draft rule falls within the subject matter about which the Commission may make rules. The draft rule falls within section 34 of the NEL as it relates to the operation of the National Electricity Market (NEM)[242] and the activities of persons (including registered participants) participating in the NEM or involved in the operation of the national electricity system[243].

Further, the draft rule falls within the matters set out in schedule 1 to the NEL as it relates to items 16, 26, 26A, 26D and 26H of schedule 1 to the NEL,[244] as they relate to transmission and distribution system revenue and pricing.

## B.3 Revenue and pricing principles

In applying the rule making test in the NEL, the Commission has taken into account the revenue and pricing principles as required under section 88B of the NEL as described below.

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239 Under section 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a rule.

240 AEMC, *Power of choice review - giving consumers options in the way they use electricity*, Final Report, 30 November 2012.

241 Referred to in chapter 1 and published on the AEMC's website.

242 Section 34(1)(a)(I) of the NEL.

243 Section 34(1)(a)(iii) of the NEL.

244 Section 34(2) of the NEL.

### Recovery of efficient costs

Section 7A(2) of the NEL states that a network service provider (NSP) should be provided with a reasonable opportunity to recover at least the efficient costs it incurs in providing network services and in complying with a regulatory obligation or requirement or making a regulatory payment.

The draft rule provides the DNSPs with a reasonable opportunity to recover at least efficient costs through a specific provision for the DNSPs to be able to recover their total efficient costs, as determined by the AER in the distribution determination process, through network prices.

While the draft rule restricts the ability of the DNSPs to amend their price structures during the course of the regulatory control period, the DNSPs will able to recover their total efficient costs through annual adjustments to the level of their network prices. This will allow the DNSPs to account for unexpected changes to key pricing inputs.

### Effective incentives

Section 7A(3) of the NEL states that a NSP should be provided with effective incentives in order to promote economic efficiency with respect to the network services the NSP provides. The economic efficiency that should be promoted includes efficient investment in the systems used to provide network services, efficient provision of those services, and efficient use of the systems that provide those services.

The draft rule provides DNSPs with effective incentives that promote economic efficiency in their provision of network services through requiring DNSPs to base network prices on LRMC and take into account the costs and benefits of different methodologies for setting network tariffs. Such prices will encourage more efficient usage decisions by DNSPs' customers which, in turn, will result in DNSPs operating and investing in their networks in a more economically efficient manner. For example, LRMC based tariffs should result in a reduction in demand in constrained parts of the network during peak times, and so reduce the need for DNSPs to invest in infrastructure that is only used for short periods of time during peak periods.

### Charges for network services

Section 7A(5) of the NEL states that the price or charge for the provision of a network service should allow for a return commensurate with the regulatory and commercial risks involved in providing the network service.

The draft rule allows for the recovery of a DNSP's expected revenues as determined by the AER, which takes into account a return commensurate with the regulatory and commercial risks involved in providing network services.

### Economic costs and risks of potential for under and over investment

Section 7A(6) of the NEL states that regard should be had to the economic costs and risks of the potential for under- and over-investment by a NSP in the systems used to provide network services.

The draft rule requires the DNSPs to set network prices that send signals to consumers about the cost of providing network services. Consumers' responses to prices that reflect the costs of providing network services send efficient signals to network businesses in making investment decisions.

### Economic costs and risks of potential for under and over utilisation

Section 7A(7) of the NEL states that regard should be had to the economic costs and risks of the potential for under- and over-utilisation of the systems used to provide network services.

The draft rule requires DNSPs to set network prices that send signals to consumers about the cost of providing network services. These signals provide consumers with the information that is necessary to enable them to make efficient consumption and investments decisions about their network usage by comparing the value they place on using the network against the costs of providing network services. This provides an efficient level of use of the network.

The draft rule will also require the DNSPs to outline the price structures that they proposes to apply over the regulatory control period and the pricing methodologies that the DNSPs will use to calculate network price levels within the regulatory control period. This provides stakeholders certainty with respect to the pricing signals that they will be sent in relation to use of the network which will allow them to efficiently use the network.

## B.4 AEMO's declared network functions

Under section 91(8) of the NEL the Commission may only make a rule that has effect with respect to an adoptive jurisdiction if satisfied that the proposed rule is compatible with the proper performance of the Australian Energy Market Operator's (AEMO) declared network functions. As part of its declared network functions, AEMO is responsible for determining and publishing the transmission use of system (TUOS) charges for shared transmission network services in Victoria.

Under Chapter 6A of the NER, AEMO must publish TUOS prices applicable in Victoria for each regulatory year by 15 May. The draft rule does not amend this publication date for AEMO for publishing TUOS prices in Victoria. However, the draft rule will bring forward the publication date for modified load export charge amounts for each region from 15 March to 15 February each year. This means that AEMO, as the coordinating network service provider in Victoria, will need to publish the modified load export charge amounts applicable for Victoria earlier than is currently the case. The reason for bringing forward the publication of the modified load export charge in Victoria is to enable neighbouring regions to calculate their intra-regional transmission charges and incorporate them into the transmission charges that they must publish by 15 March each year.

The Commission considers that the draft rule is compatible with the proper performance of AEMO's declared network functions because it is consistent with AEMO's existing function of publishing TUOS prices for the shared transmission services. Further, the change to the publication date of the modified load export charge does not impact on AEMO's obligations associated with respect to planning or providing shared transmission services in Victoria.

# C Overview of current concession and hardship schemes

This Appendix provides an overview of current NEM jurisdictional government and Commonwealth Government concession and hardship schemes available to certain consumers.

Typically, Community Service Obligation payments (CSOs) are created by jurisdictional governments and the Commonwealth Government to assist vulnerable or low income consumers to meet their energy needs and costs. A CSO might involve either subsidising the retailer to provide non-commercial services or concessions on energy bills for a consumer that meets certain eligibility requirements. The range and level of CSOs is determined by each government and accounts for government spending as part of a broader range of concession programs.[245]

CSOs can be delivered to consumers in a number of different ways. They can either be provided directly to eligible customers as a rebate, through their retailer as a discount to their energy bill, or sometimes through community welfare organisations in the form of emergency payments. Table H.1 outlines NEM jurisdictional government and Commonwealth Government concession schemes and includes information regarding eligibility requirements and the level or amount of concessions currently available to eligible consumers.

With the exception of Victoria, most energy-related concession schemes are paid as a lump sum, irrespective of consumption levels. In Victoria, energy concession schemes are provided as a percentage discount of the total energy bill.

Eligibility for most state, territory and Commonwealth energy CSOs is determined according to whether the customer is eligible for a variety of Commonwealth concession cards. Concession cards commonly used to determine CSO eligibility include the Department of Human Services (DHS) Pensioner Concession Card (PCC), the Department of Veterans' Affairs (DVA) PCC, the Health Care Card (HCC) and the DVA Gold Card.

Eligibility to hold concession cards is typically tested through a combination of income and asset tests ('means tested'). DHS PCCs, for example, are available to a core group of government welfare recipients including job seekers, single parents and carers, age pensioners, and disability pensioners.

245 It should be noted that in Australia there is currently no operational definition employed by governments to define vulnerable consumers. The National Energy Customer Framework does not define vulnerable consumer, although it provides a regulatory process for retailers to implement hardship programs for customers experiencing either temporary or more permanent difficulties in meeting energy payments.

**Table C.1 Commonwealth and NEM jurisdictional energy concession schemes**

| Jurisdiction | Concession | Eligibility | Calculation | Concession |
|---|---|---|---|---|
| **Queensland** | Electricity Rebate | Eligible customers hold a PCC, a DVA Gold Card (and receive the War Widow/er Pension or special rate TPI pension) or a Queensland Seniors Card. There are additional requirements on living arrangements. | | **$282.54 per year** |
| **Queensland** | Reticulated Natural Gas Rebate | Eligible customers hold a PCC, a DVA Gold Card (and receive the War Widow/er Pension or special rate TPI pension) or a Queensland Seniors Card. There are additional requirements on living arrangements. | | **$65.58 per year** |
| **Queensland** | Medical Cooling and Heating Electricity Concession Scheme | Eligible customers have a qualifying medical condition requiring cooling or heating and hold a PCC or a HCC. | | **$282.54 per year** |
| **Queensland** | Home Energy Emergency Assistance Scheme | Eligible customers must have a concession card, be part of their energy retailer's hardship program or payment plan or have an income less than the Commonwealth Government's maximum income rate for part-age pensioners. | Scheme can provide up to $720 in any 12 month period for a maximum of two consecutive years. | **$720 per year** |
| **Queensland** | Electricity Life Support Concession Scheme | Eligible customers receive an oxygen concentrator or kidney dialysis machine free of charge from Queensland Health and hold a PCC, an HCC, a Health Care Interim Voucher, a Child Disability Allowance or a Queensland Seniors Card. | Scheme offers a monthly concession (paid quarterly). | **Range: $32.11 - $47.95 per month** |
| **New South** | Low Income | Eligible customers hold a DHS PCC, a DVA PCC, an HCC or a DVA Gold Card marked | $235 per year as of July 2014, rate was $225 per year for 2013-14. The | **$235 per year** |

| | | | | |
|---|---|---|---|---|
| **Wales** | Household Rebate | with Totally and Permanently Incapacitated, Disability Pension or War Widow/er Pension. | rebate is 10 per cent higher for customers in retirement villages or caravan homes. | |
| **New South Wales** | Family Energy Rebate | Eligible customers receive the Federal Government's Family Tax Benefit A or B. | $150 per year as of July 2014, rate was $125 per year for 2013-14. Those customers eligible for the Low Income Household Rebate as well as the Family Energy Rebate have their combined rebates capped at $250 per year.<br>The rebate is 10 per cent higher for customers in retirement villages or caravan homes. | **$150 per year** |
| **New South Wales** | Medical Energy Rebate | Eligible customers cannot self-regulate body temperature and hold a DHS PCC, a DVA PCC, a DVA Gold Card or an HCC. | $235 per year as of July 2014, rate was $225 per year for 2013-14. The rebate is 10 per cent higher for customers in caravan homes. | **$235 per year** |
| **New South Wales** | Life Support Rebate | Eligible customers use certain approved medical equipment at home that is necessary to sustain life. | Amount payable depends on equipment type. | **Range: $0.05 - $1.66 per day** |
| **New South Wales** | Energy Accounts Payment Assistance Scheme | Households struggling to pay their energy bills due to a crisis or emergency situation. | Scheme delivered through vouchers that provide part-payment of electricity and natural gas bills. Community Welfare Organisation assesses situation for eligibility for vouchers. | **$50 voucher** |
| **Australian Capital Territory** | Energy Concession | Eligible customers hold a DHS PCC, a DVA PCC or a Low Income HCC. | Calculated on a daily basis with separate summer and winter rates. | **$322.10 per year** |
| **Australian** | Utility Concession | Eligible customers hold a DHS PCC, a DVA | Rebate added to existing energy | **$84.05 per year** |

| | | | | |
|---|---|---|---|---|
| **Capital Territory** | | PCC or a Low Income HCC. | concession. | |
| **Victoria** | Annual Electricity Concession | Eligible customers hold a PCC, an HCC or a DVA Gold Card. | Discount of 17.5 per cent off household electricity costs over $171.60, all year round. If annual electricity cost is larger than $2,763 per year, an Excess Electricity Concession application must be made. | **17.5 per cent discount off electricity costs over $171.60** |
| **Victoria** | Winter Gas Concession | Eligible customers hold a PCC, an HCC or a DVA Gold Card. | Discount of 17.5 per cent off winter gas bills over $62.40, after any retailer discounts have been applied. If winter gas bills are more than $1,462, an Excess Gas Concession application must be made. | **17.5 per cent discount on winter gas bills over $62.40** |
| **Victoria** | Service to Property Charge Concession | Eligible customers hold a PCC, an HCC or a DVA Gold Card. They have very low electricity usage - their electricity usage charge is less than the service charge. | If the electricity usage cost is less than the supply charge, the service charge is reduced to the same price as the electricity usage cost. | **The service charge is reduced to the same price as the electricity usage cost.** |
| **Victoria** | Non-mains Energy Concession | Eligible customers hold a PCC, an HCC or a DVA Gold Card. They rely on LPG, firewood or heating oil for domestic heating, cooking or hot water, access non-mains electricity via an embedded network or rely on a generator. | The amount of the rebate depends on the annual amount of non-mains energy purchased. | **Range: $44 - $484** |
| **Victoria** | Medical Cooling Concession | Eligible customers have a medical condition that affects the body's ability to regulate temperature and hold a PCC, an HCC or a DVA Gold Card. | | **17.5 per cent of summer electricity costs** |
| **Victoria** | Controlled Load Electricity | Eligible customers are charged a controlled load tariff for separately metered electric hot | Provides a 13 per cent reduction on the controlled load usage charges | **13 per cent off controlled load** |

| | | | | |
|---|---|---|---|---|
| | Concession | water or slab heating and hold a PCC, an HCC or a DVA Gold Card. Customers must have a dual element electricity meter or dual element smart meter. | throughout the year. | **usage charges** |
| **Victoria** | Electricity Transfer Fee Waiver | Eligible customers hold a PCC, an HCC or a DVA Gold Card. | Full waiver of the fee that is normally payable to the electricity retailers when there is a change of occupancy at a property. | **Removal of transfer fee** |
| **Victoria** | Life Support Concession | Eligible customers use an eligible life support machine and hold a PCC, an HCC or a DVA Gold Card. Qualifying machines use at least 1,880 kWh per annum. | Discount equals cost of 1,880 kWh of electricity used each year, based on the general domestic tariff of the customer's retailer. | **Full cost of 1,880 kWh per year.** |
| **South Australia** | Energy Bill Concession | Eligible customers receive an eligible Centrelink payment or hold a PCC, a DVA Gold Card marked with Totally and Permanently Incapacitated, Extreme Disablement Adjustment or War Widow, a Low Income HCC, a Commonwealth Seniors HCC or a State Concession Card. | Concession deducted from electricity account or in some cases reimbursed by cheque. | **Up to $215 per year** |
| **South Australia** | Medical Heating and Cooling Concession | In addition to the Energy Bill Concession requirements, eligible customers have a clinically verified medical condition which requires the frequent use of heating or cooling in the home. | | **$215 per year** |
| **Tasmania** | Electricity Concession | Eligible customers hold a PCC, an HCC, an ImmiCard (Bridging Visa E) or a Tasmanian Concession Card. | 125.71 c daily rate | **$458.84 per year** |

| | | | | |
|---|---|---|---|---|
| **Tasmania** | Heating Allowance | Eligible customers hold a PCC and must not have more than $1,750 in cash assets or $2,750 for married/de facto partners. | Payments of $28 made in May and September | **$56 per year** |
| **Tasmania** | Life Support Machine Rebate | Eligible customers use an approved life support system. | Daily discount rate depends on the life support system, ranging from 5 to 176 c per day. | **Range: 5 – 176 c per day** |
| **Tasmania** | Medical Cooling Discount | Eligible customers have a medical condition that requires the cooling of their residence. | 37.653 c daily rate | **$137.43 per year** |
| **Commonwealth** | Utilities Allowance | Eligible customers receive the Disability Support Pension, the Partner Allowance or the Widow Allowance. | Paid quarterly, A couple where both members are eligible, receives the same allowance as a single customer ($588.40), combined. | **$588.40 per year** |
| **Commonwealth** | Essential Medical Equipment Payment | Eligible customers medically require specific equipment or heating/cooling and hold a Commonwealth concession card issued by the DHS or by the DVA. | $143 per year to help with increases in home energy costs from the carbon price. | **$143 per year** |

# D Summary of further issues raised in submissions

Where relevant, stakeholder comments have been addressed throughout the draft determination. The table below summaries issues raised by stakeholders that were not explicitly addressed in the draft determination and the Commission's response to these comments.

| Stakeholder | Issue | AEMC Response |
|---|---|---|
| **Comments made in relation to IPART's Annual Network Pricing Arrangements rule change request** | | |
| AEMO | Changes to the timing of transmission price publication will not provide any benefit to Victorian customers and will likely increase the volatility of charges, potentially increasing costs to consumers. (p. 2) | The Commission acknowledges that there are not likely to be any material benefits of publishing transmission prices earlier in Victoria. This is because Victorian DNSPs set network prices on a calendar year whereas transmission prices are published on a financial year basis across the NEM. Under the draft rule, TNSPs in Victoria will continue to publish prices by 15 May. The only change will be the publication of the modified load export charge, which will need to be published by 15 February rather than 15 March. This will allow publication of interregional transmission charges across the NEM to be aligned. The publication date for transmission prices in other NEM jurisdictions will however move by two months in order to provide DNSPs in those jurisdictions will adequate notification of transmission charges to be recovered. |
| Aurora Energy | The side constraints mechanism limits the ability of DNSPs to take into account stakeholder views on network tariffs. (p. 2) | Under the draft rule there are new consultation requirements that require DNSPs to demonstrate how they have consulted with stakeholders and how they have taken into account views raised as part of this consultation.<br>Side constraints apply at the tariff class level and do not limit price changes for individual tariffs or consumers. |
| EnergyAustralia | Retailers get little time to consider the impacts of retail prices on different customer groups due to the current timing pressures. This has led to detrimental outcomes for particular groups. (p. 15) | The Commission considers that it is important that retailers receive advance notification of network tariffs so that they can consider these in the design of their retail tariffs. Accordingly, the draft rule also gives retailers at least six weeks advance notice of final distribution prices. |

| Stakeholder | Issue | AEMC Response |
|---|---|---|
| ENA | Linking the approval of annual pricing proposals to the statement of expected price trends is effectively a change in the price control mechanism for DNSPs. It would also increase the risk of under-recovery of allowed revenues, which would be contrary to the revenue and pricing principles. (p. 6) | DNSPs could provide more accurate information about likely trajectory of future network prices. The draft rule requires DNSPs to provide a schedule of indicative prices that will be updated on an annual basis.<br>However, these indicative price levels are not binding and DNSPs only have to explain any material differences between the indicative price levels and the proposed network prices as part of the annual pricing proposal. |
| ERAA | Many DNSPs are prohibited from discussing the details of annual pricing proposals. DNSPs should have to share more information and should consult on an ongoing basis. (p. 2) | The draft rule will encourage DNSPs to consult with stakeholders, including retailers on the design of network tariffs. As part of this consultation, DNSPs will need to provide more information to enable stakeholders to provide meaningful input on network tariff design.<br>The TSS will also provide stakeholders, including retailers, with information about the tariff classes, tariff structures and pricing methodologies to apply to network tariffs over the regulatory control period. |
| ESAA | DNSPs on price caps will face greater challenges in setting network prices earlier than DNSPs on revenue caps as they bear more risk in the price setting process. (p. 2) | The risks from the use of different price control mechanisms are best managed through consideration of the choice of the price control mechanism. The Commission considered this issue in its advice to the COAG Energy Council on the differences between actual and forecast data in network regulation in 2013.[246] |
| Ergon Energy | Statement of expected price trends and the annual pricing process should be unbundled so that DNSPs can update stakeholders on likely tariff structure and level changes mid regulatory year. (p. 5) | The Commission considers that providing stakeholders with clear information in relation to the tariff structures to apply over the regulatory control period through the TSS would be more beneficial to consumers than DNSPs providing a mid-year update on likely tariff changes.<br>The process for tariff structure changes has been unbundled from the annual pricing process and will occur as part of a separate process for amending the TSS. |

246 http://www.aemc.gov.au/Markets-Reviews-Advice/Differences-between-actual-and-forecast-demand-in

| Stakeholder | Issue | AEMC Response |
|---|---|---|
| Grid Australia | The Commission rejected a rule change request in 2009 that similarly proposed to move forward the publication of transmission prices from 15 May to 15 March. Both these rule changes have been proposed by New South Wales stakeholders, suggesting the issue is jurisdictional. (p.1) | The 2009 Transmission Network Prices Publication Date rule change looked at the timing of transmission pricing in isolation. One of the key issues raised in this rule change related to incorporating transmission prices into network tariffs in the initial regulatory year in New South Wales. This is an issue specific to New South Wales as it is the only jurisdiction where the TNSP and DNSP go through the regulatory determination process at the same time.<br><br>However, IPART's rule change request relates to the annual network pricing process as a whole. Feedback from other stakeholders indicates that the issues raised by IPART are relevant to all jurisdictions. |
| IPART | The additional benefits created by TNSPs and DNSPs having access to more up-to-date information when setting their prices is lost as a result of retailers not having sufficient time to reflect these tariff levels and structures in retail prices. (p. 2) | The draft rule requires DNSPs to publish distribution tariffs earlier, giving retailers at least six weeks' notice of annual network tariffs. This will give retailers more time to reflect network tariffs in their retail tariffs. |
| Origin Energy | The industry's reliance on estimation would be the same under IPART's proposal as it is under the current arrangements. However, IPART's proposal would allocate the risks associated with estimation to DNSPs, who are best placed to manage them. (p. 3) | The draft rule will reassign some of the pricing risks currently faced by retailers to DNSPs by requiring DNSPs to publish network prices earlier which will require greater use of estimated inputs. The Commission considers that this allocation of risk is appropriate, as DNSPs are better placed to manage these risks. |
| United Energy | While consumers may be interested in the extent of price increases and changes to tariff structures, small consumers may have limited knowledge of network tariffs. Retailers do not have an obligation to provide a consistent retail tariff structure as an overlay on the network tariff structure. (p. 5) | These comments have been noted. See AEMC response to similar issue raised by ENA on page 5 below. |
| **Comments made in relation to the consolidated Distribution Network Pricing Arrangements rule change – Pricing process** | | |
| ActewAGL | The proposed framework for the network pricing process is too prescriptive and goes beyond what is needed to | The new pricing process provides an appropriate balance between prescription and flexibility. While the draft rule places additional requirements |

| Stakeholder | Issue | AEMC Response |
|---|---|---|
| Distribution | provide consultation and certainty for consumers. (p. 3) | on DNSPs, they have been provided with flexibility to determine how best to meet these requirements. |
| Arrium | Changes proposed should be extended to TNSPs. (p. 1) | This issue is beyond the scope of the rule change. |
| AER | To provide certainty and to streamline reviews, resolving the timing issue needs to ensure that the information provided in pricing proposals is based on actual data, not forecasts. (p. 15) | The Commission considers that where possible, key pricing inputs should be made available in time for their inclusion in annual pricing proposals. |
| CitiPower and Powercor; Energex | There is no role for the pricing structure statement. It would be a duplication of the regulatory proposal and the annual pricing proposal. (p. 5; p. 2, 4-5) | Under the draft rule, the regulatory proposal, the TSS and the annual pricing proposal serve different purposes. The purpose of the TSS is to set out the tariff classes, tariff structures and pricing methodologies to apply across the regulatory control period. The purpose of the annual pricing proposal is to apply pricing levels to this information. The Commission does not consider that this is a duplication of requirements. |
| CALC | Rule change may provide more certainty to retailers in terms of advance notice of network tariff structures. This should assist retailers manage final retail prices thereby enabling retailers to provide more reliable price paths for retail customers. The extent to which retailers do this will vary across the jurisdictions. (p. 2) | The draft rule will provide for better outcomes in the competitive retail market by providing retailers with the certainty to provide consumers with more competitive and stable retail products. |
| Energex | The inability to adjust network tariff structures and pricing levels during the regulatory control period would adversely impact cost reflectivity and result in structures that are technically obsolete. (p. 3) | The Commission recognises that circumstances may arise within a regulatory control period that requires changes in tariff structures. The draft rule allows DNSPs to amend tariff structures in these circumstances provided that the DNSPs go through a transparent process to seek approval to amend their TSS. |
| Energy Efficiency Council | An energy market body should be tasked with consulting with energy users and other stakeholders to develop detailed guidance to help DNSPs develop tariff structures, as DNSPs are not incentivised to set efficient or equitable | It is important that DNSPs maintain responsibility for the design and implementation of their network tariffs. They have the best information on which to determine cost reflective prices for their network services. The draft rule will assist DNSPs in undertaking this task. It allows for appropriate |

| Stakeholder | Issue | AEMC Response |
|---|---|---|
| | tariff structures under the current rules. (p. 4) | consultation in tariff development with appropriate regulatory oversight from the AER. |
| ENA; NSW DNSPs | The pricing structure statement should support consumer engagement in a meaningful and timely way. If the document is used as a compliance mechanism, its value as a communication and engagement tool will be constrained. (p. v; p. 20) | Under the draft rule, DNSPs will have the flexibility to determine how best to engage and communicate with consumers and can use a variety of tools to support this engagement. DNSPs are required to demonstrate in their TSS how they took the views of stakeholders into account in the design of their tariffs. |
| ENA | There may be merit in providing more transparency on electricity bills for small customers. This may provide for more meaningful discussions with customers than just relying on the PSS. (p. 14) | For small customers, the practicality of providing more transparency in relation to the network charges that make up their retail electricity bill may result in more costs than the benefits it may provide. This issue is outside the scope of this rule change and would need to be separately assessed. However, the Commission notes that since retailers are primarily responsible for recovering network charges from consumers, it would be a matter for retailers to determine how best pass on the network price signals in a competitive retail market environment.<br><br>A key factor of the extent to which retailers provide consumers with information about all the input costs of their electricity bills would be determined by the demand for it by consumers. The Commission considers that this issue is best left to the competitive market and notes that retailers already have certain disclosure obligations on retail electricity bills under NECF and large consumers under the NER can already can request a breakdown of charges into distribution and transmission components (under Clause 6.23(a) of the NER). |
| ENA | If the pricing structure statement is binding, it would be inappropriate to incentivise DNSPs to comply by putting in place financial penalties and incentive mechanisms that pre-suppose that rule obligations are not met. Failure to comply with the rules is a compliance issue which should become a matter of AER enforcement action. (p. C5) | The draft rule does not contain financial penalties or a specific mechanism to incentivise DNSP to apply their TSS to their annual pricing proposals.<br><br>The draft rule requires the AER to approve a DNSP's annual pricing proposal if it is consistent with the approved TSS and compliant with the other rule requirements, including the control mechanism and side constraints. If the annual pricing proposal does not satisfy these requirements, the AER has the ability under the draft rule to amend the DNSP's annual pricing proposal |

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| | | to the extent necessary to approve it. |
| Grid Australia | DNSPs should engage with TNSPs on their pricing structure statement. TNSPs would be interested in the proposed methodology for pass-through of transmission locational signals to large customers. (p. 3) | These comments have been noted. There is a need for dialogue between TNSPs and DNSPs. The draft rule provides more certainty in relation to the timing of the network pricing process so that each group is more aware of opportunities to engage. |
| Grid Australia; MEU | Transmission charges should be transparently passed through to large consumers in a way that does not conflict with the objective of the rule change. DNSPs should also address the proposed methodology for pass through of transmission charges in the pricing structure statement. (p. 7; p. 33) | See the AEMC's response to comments made by the MEU on this issue in the comments made in relation to the consolidated distribution network pricing arrangements rule change - pricing principles section, below. |
| Jemena | Tariff structures may need to evolve over the regulatory control period to meet changes in legislation, technology, demand and customer views. (p. A-3) | The Commission agrees that there are a range of unexpected events that may require a DNSP to change the tariff structures set out in its TSS. The draft rule allows DNSPs to amend the tariff structures in their TSS if an unexpected event requires a change. |
| Jemena | If DNSPs do not comply with their approved pricing structure statement, the approval of network prices may be delayed. This would have implications for retailers and the competitive retail market. (p. B-3) | Under the draft rule, the AER maintains the ability to amend an annual pricing proposal to the extent necessary to approve it. This should provide an incentive to DNSPs to comply with the TSS and also allows for network prices to be approved at least six weeks before the commencement of the relevant regulatory year. |
| MEU | DNSPs should be required to provide an indication of the network tariff strategies and structures for the next 10 years. This should be in addition to the information DNSPs provide on the strategy and structure they propose to apply over the regulatory control period. (p. 30) | The draft rule does not prevent DNSPs from providing stakeholders with a 10 year tariff strategy if they consider that it is beneficial to do so. However, the Commission considers that it is not beneficial to require DNSPs to do so, as information contained within a 10 year strategy document is unlikely to provide stakeholders with any additional certainty beyond the information provided in the TSS for the five year regulatory control period. |
| PIAC | The pricing structure statement should be accompanied by a plain language summary to assist consultation by | The draft rule allows DNSPs flexibility to determine how best to consult with its stakeholders. This could include providing stakeholders with a plain |

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| | explaining issues to stakeholders who are not familiar with them. (p. 4) | English summary to accompany the TSS.<br>Under the draft rule, the AER must publish an issues paper on the proposed TSS and the regulatory proposal. This document is generally accessible to most stakeholder groups. |
| PIAC | AEMC should consult with retailers about the likelihood that retailers will pass through network tariffs in a manner that aligns with the intention of the rule change. (p. 12) | This issue is outside the scope of the rule change. It is up to the retailers to determine whether and how to pass through network tariffs. However, the Commission expects that retailers have a natural incentive to pass through the structure of network tariffs as this will minimise the level of risk that they are subject to. |
| SACOSS | The framework proposed should improve a range of market processes and outcomes. If the pricing structure statement does not reduce timing pressures and thereby enhance the efficiency of the process, then it should be reconsidered. (p. 10) | The Commission considers that the TSS will alleviate some of the timing pressures created by the annual pricing process. The TSS will enable a significant proportion of the network pricing task to be completed prior to the commencement of the annual pricing process. It is expected that this will improve the timeliness of the process. |
| **Comments made in relation to the consolidated Distribution Network Pricing Arrangements rule change – Pricing principles** | | |
| Arrium | Arrium considers that there should be a consistent approach across the NEM to adopting a minimum threshold at which consumers should have access to individually calculated network tariffs for large businesses. Further network tariff structures should standardise the measures of demand and ensure that the measures used are reflective of the costs to the network operator and provide an incentive to reduce demand. (p. 3) | Under the draft rule DNSPs are not required to adopt a consistent approach to minimum thresholds for individually calculated network tariffs or adopt standardised measures of demand. Instead, the draft rule requires DNSPs to set efficient network tariffs by requiring DNSPs to set network tariffs which reflect the costs of providing network services and provides DNSPs with the flexibility to do so in the way which best suits their network and consumer characteristics.<br>In practice, this may mean that more consumers have access to individually calculated network tariffs as DNSPs send more accurate price signals to large consumers. Further, cost reflective network tariffs will provide an incentive to reduce peak demand. |
| AER | The provisions relating to the economic basis of tariff class design and customer assignment only relate to the | The draft rule does not make specific changes to the provisions for assignments of consumers to tariffs within tariff classes. However, the draft |

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| | tariff class level. The rule change should explore, with particular regard to pricing structures statement consultation, if there is need for greater transparency on customer re-assignments within tariff classes. Any change to these provisions, applying them to a more detailed level would probably need to be considered together with other provisions that are set on tariff class level, such as the side constraints. (p.10) | rule makes a number of changes which will indirectly effect reassignments. These include:<br>• the consumer impact principle requires DNSPs to minimise the impact of tariff changes on consumers, which will include the impact of changes as a result of consumers being reassigned between tariffs;<br>• the cost reflectivity principles require DNSPs to set tariffs on the basis of LRMC and minimise distortions to efficient price signals in recovering residual costs, which will affect the nature of all tariffs; and<br>• the draft rule requires DNSPs to set out their tariff assignment policies in their TSS which will provide earlier notification to consumers. |
| ENA | Requests a broader approach than reforms to just distribution pricing. Including:<br>1. A regulatory framework that facilitates the installation, on an economic basis, of metering required to support consumers to respond to cost reflective pricing; that enables the benefits of distribution network derived benefits being passed on to consumers; and removes restrictions to the roll out of advanced meters by networks based on an economic business case.<br>2. A joint initiative between electricity networks, retailers and governments to inform and educate customers on the implementation of cost- reflective pricing and choices for customers.<br>3. A National Implementation Framework for Flexible Pricing that achieves a phased transition to the introduction of cost reflective pricing, based on defined consumption thresholds and customer initiated trigger events (such as the connection of solar PV, battery storage and electric vehicles and connections to new premises). | The final report for the Power of Choice review made a number of recommendations for future reforms to the electricity sector aimed at providing more opportunities for consumers to make informed choices about the way they use electricity based on the benefits that end use services provide. Changes to the distribution pricing arrangements are one of those reforms. A number of other reforms recommended in the Power of Choice review are currently being progressed through separate rule changes, including; expanding competition in metering and related services, customer access to information about their electricity consumption, AEMO obtaining better demand side information and reform of the demand management embedded generation incentive scheme for networks.<br>The Power of Choice review and this draft determination also recommend that governments review the structure of their energy concession and hardship schemes so that they deliver on their purpose in an efficient and targeted way. This review should occur at the same time as network businesses develop their new network prices over the next 12-18 months. |

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| | 4. The review and refocussing of customer hardship programs to support the introduction of sustainable cost reflective pricing.<br>5. The implementation of long-standing Council of Australian Governments (COAG) commitments to deregulate retail prices in all jurisdictions, where markets are sufficiently competitive. (p.ii) | |
| MEU | The MEU considered the impact of the rule change in promoting, or inhibiting, the development of demand-side participation should be addressed. (p.8) | The draft rule requires DNSPs to set network tariffs which reflect the costs of providing network services. This promotes efficient demand side participation by allowing consumers and providers of demand side solutions to make decisions to reduce network usage at peak times where the costs of doing so are less than the costs of providing network services. |
| MEU | The MEU considered the rule change should address how transmission prices are passed through to consumers by DNSPs. Including maintaining the locational price signals provided by transmission pricing. (p. 9) | Transmission charges are an input into the services that DNSPs provide to consumers. As part of the development of cost reflective network tariffs, DNSPs should treat transmission charges similarly to other costs that they incur in providing network services. |
| NSW Irrigators' Council | Irrigators are not a homogenous group in relation to electricity use and we therefore need a range of irrigation tariffs that better suit the needs and requirements the industry in NSW. (p.8) | The draft rule increases the opportunities for stakeholders to have a say in the development of network tariffs by requiring DNSPs to demonstrate how they have taken into account stakeholder views in the design of network tariffs.<br>The draft rule requires DNSPs to set efficient network tariffs by requiring DNSPs to set network tariffs which reflect the costs of providing network services and minimise the impact on consumers from network tariff changes. |