# 12 Complementary reforms to support demand management

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| Key points |
| * Locking in the benefits from time-based network charges calls for complementary reforms to the incentive regulation of network businesses and retail price regulations. * Price and revenue caps link the revenue that can be recovered from network services to the amount of annual revenue approved under the AER’s building block determination. * Different caps, or combinations of caps, are applied to different distribution businesses, while all transmission businesses face a revenue cap. * Substantial changes to transmission pricing are not envisaged for some time, which leaves no immediate cause to change from a revenue cap for transmission services. * Isolating the incentive effects of either revenue caps or weighted average price caps (WAPC) for distribution businesses is complex, but the impact on incentives to set distribution network tariffs efficiently is important * While revenue caps provide stronger incentives for (non-price) demand management, alternative instruments can correct for the disincentive under WAPC. * Compared to revenue caps, weighted average price caps appear more consistent with distribution businesses having incentives to price efficiently. * The potential inconsistency of retail price regulation with the long-term interests of consumers has been acknowledged by all governments in the NEM, as recognised by the 2006 COAG agreement supporting a process for their removal in electricity. * However, retail price regulations remain in all jurisdictions excluding Victoria. * The success of the phased and coordinated suite of reforms proposed in chapters 10 and 11 rests squarely on pricing flexibility, competition and innovation in the retail sector. Therefore, although the removal of retail price regulation has been advocated widely, there is potentially much more at stake this time around. * The removal of retail price regulation is necessary to allow a vibrant and competitive retail market to develop. Further, since cross-subsidies between consumers would continue to be embedded in regulated prices, the removal of these regulations is needed to encourage retailers to pass-on more cost–reflective network charges to end-users. * There would be little point proceeding with the necessary reforms unless retail price regulations are removed (or a process engaged for their phased removal). * To support favourable outcomes for consumers choosing between retail offers, the removal of price regulation should be accompanied by access to more independent information to help support consumers make good choices. To support this, the AER could expand its existing online comparison tools. |
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The importance of smart meter technology as a prerequisite to cost-reflective pricing and more efficient adoption of other forms of demand management was discussed in chapter 10. Chapter 11 establishes the changes necessary to achieve a gradual progression to time-based network charges that reflect the additional costs of providing peak capacity.

This chapter looks at two complementary areas for reform:

* the incentives of network businesses under the current regulatory regime to set efficient prices and engage in demand management strategies (section 12.1) and
* market imperfections in the retail sector (section 12.2).

Addressing each is necessary to realise the benefits of cost-reflective network pricing and wider uptake of demand management.

## 12.1 Incentive regulation of network businesses

A key goal of adopting efficient network pricing is to control inefficient growth in investment in peak-specific distribution infrastructure. The incentive regulation framework should support this objective, but aspects of the current framework could reduce the incentive for network businesses to set efficient prices and engage in other demand management strategies (such as load management schemes).

These aspects of incentive regulation are addressed in this section. Given this purpose, the section does not seek to comprehensively assess the current regulatory regime of network businesses — chapter 5 discusses the incentive regulation framework broadly and, following specific reforms, its compatibility with benchmarking. Rather, the focus here is on ensuring that distribution businesses have the capacity and, where possible, appropriate incentives to implement efficient pricing. Regulatory arrangements to support non-price forms of demand management are also assessed in this chapter, with a view to ensuring the regime supports such options without weakening incentives for cost-reflective pricing.

### Revenue control mechanisms and cost-reflective pricing

Revenue control mechanisms, such as price and revenue caps, provide a link between what network businesses can charge for services and the ‘maximum allowable revenue’ (as calculated using the building block methodology (chapter 5)). They are an important tool in incentive regulation and have the potential to affect network business’ behaviour in managing risks, minimising costs, pricing efficiently and undertaking other forms of demand management.

The two main forms of control mechanisms are a revenue cap and a weighted average price cap (WAPC).[[1]](#footnote-1) A key difference between these caps is how various uncertainties affecting revenue recovery (such as from demand shocks or errors in forecasts) are adjusted for (if taken into account at all). As currently applied by the AER:

* revenue caps explicitly incorporate ex-post adjustments to revenues if the demand is not as forecast, to ensure that the business actually recovers the specified revenue cap — no more and no less[[2]](#footnote-2)
* under the price cap model, once ex-ante demand forecasts and weighted average prices are approved by the AER, no subsequent adjustment is made for errors in forecasts.

This section discusses the relative merits of different control mechanisms for distribution businesses. A key issue is to what extent a revenue cap or a WAPC provides the best incentive to set prices efficiently. The appropriateness of a revenue cap applying to transmission businesses is not evaluated. In the Commission’s view, given the differing characteristics of transmission assets, and the revenue implications of the proposed introduction of optional firm access (chapter 18), substantial changes to transmission revenue control mechanisms are not warranted at this time. Transmission businesses should continue to operate with revenue caps.

For distribution businesses, in the Commission’s assessment, a WAPC is more likely to facilitate adherence to efficient pricing principles than a revenue cap.[[3]](#footnote-3) The compatibility of a WAPC with efficient pricing incentives aligns with the AEMC’s assessment. In their view, a WAPC provides distribution businesses with a stronger motivation, than is provided by revenue caps, to price efficiently (at levels that reflect actual costs, especially at peak demand times on their networks):

… as a means to ensure that revenue recovered is sufficient to cover costs and therefore will set tariffs that discourage consumption at peak (where meeting that extra consumption will result in the network business incurring a loss). (AEMC 2012b, p. 20)

The AER similarly recognises the incentives for efficient pricing provided by a WAPC, but cautions that the expected benefit in distribution network service providers’ pricing has not been observed in practice (2012a, p.  47).[[4]](#footnote-4) However, the Commission notes that the apparent lack of evidence to support that a WAPC provides stronger incentives to price efficiently than revenue caps may be explained by several factors including:

* that smart meters are required to implement efficient pricing, and until there is a sufficient penetration (and utilisation) of smart meters, there will be little practical benefit from a WAPC
* directives from government to pursue equity objectives may derail a distributors’ desire to price efficiently. (box 12.1)

With the gradual rollout of smart meters, scope for the adoption and effectiveness of efficient pricing will be improved. Further, to allow a WAPC to support cost-reflective pricing, regulatory changes of the kind outlined in chapter 11 would continue to be necessary. Nevertheless, in the Commission’s view, although a WAPC provides a stronger incentive to distribution businesses to price their network efficiently than does a revenue cap, that incentive may not be sufficiently large on its own. This again reinforces the need for other reforms to facilitate efficient network pricing.

#### The relevance of other criteria

In the Commission’s view, the main purpose of the control mechanism should be to support (and certainly not detract from) efficient pricing. While a WAPC is most appropriate to support that goal, there is the contention that it:

* does not sufficiently constrain the potential for distribution businesses to recover revenues in excess of the approved annual allowance
* does not provide efficient incentives for non-price based demand management.

The relevance of these concerns, including whether they could be addressed more appropriately through other means, is discussed below.

##### Over-recovery of revenue

Distribution businesses subject to a WAPC and with a capacity to apply time-based network charges may over- or under-recover approved revenue for a range of reasons, including:

* because of variability in the prevailing weather conditions resulting in unforseen fluctuations in demand for peak capacity
* This is efficient on the basis that revenues are more closely linked to the consumption that imposes the greatest system-wide costs and necessitates investment
* because some customers, even when facing cost-reflective prices at times of peak demand, may make a choice to pay a high price and continue to use more power than forecast at peak times
* This is efficient provided that the prices paid genuinely reflect the costs of providing the additional network capacity at peak times (allowing the network company to invest more capital to provide the additional network capacity to meet this demand requirement).
* through unforseen growth in demand that is unresponsive to prices applying in non-peak periods
* This could (in part) be inefficient to the extent that the higher than forecast demand is linked to price discrimination by the network business — the practice of deliberately differentiating customers and charging higher prices to those that are unresponsive to prices than to others who are price sensitive.
* In practice, the Commission considers that there is limited scope for distribution networks to deliberately raise revenue by price discrimination under WAPC[[5]](#footnote-5). Nevertheless, the AER would have an opportunity to address any such concerns directly in the process of approving distributors’ pricing proposals.
* due to ‘errors’ in forecasts of demand that determine the WAPC. Such errors will be inevitable given variability in weather patterns over time and associated fluctuations in peak demand. However, provided the AER takes into account alternative forecasts provided by independent agencies like AEMO and benchmark forecasts against the experience of other DSPs over time, forecasting errors should reduce.

Accordingly, in the Commission’s view, the building blocks revenue determination, combined with a closer commitment to efficient pricing principles, should be the key means by which distribution businesses are bound to recover efficient costs. Further, the AER should ensure that demand forecasts are not systematically biased.

##### Incentives for demand management

With network prices that reflect the long-run costs of meeting peak demand, the main focus of (non-price) demand management is to achieve cost-effective short term deferral of network augmentation projects.[[6]](#footnote-6) Such demand management can take various forms including peak load management schemes, with participation of end-users facilitated through ‘side-payments’ to end-users (mostly commercial and industrial customers).

At the start of a regulatory period, businesses may not know the number of demand management projects they will undertake and what reduction in peak load will be achieved. As such, the WAPC is likely to be set based on demand forecasts that do not take account of the full potential for peak load reduction. Therefore, the demand management activities of distribution business may cause them to under-recover their approved revenue.

Recognising this, the AER administers a scheme — the Demand Management and Embedded Generation Connection Scheme — ‘part B’ of which compensates distribution businesses under WAPC for any revenue they forego from undertaking cost-effective non-tariff based demand management. The situation is automatically addressed for businesses under a revenue cap, as demand volumes are ‘decoupled’ from revenues through an ‘unders’ and ‘overs’ account that adjusts the revenue allowance from year-to-year.

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| Box 12.1 Some divergent thoughts on control measures |
| The AER is currently evaluating the choice of control mechanism for NSW and ACT distribution determination 2014-19. They have indicated a (preliminary) preference for revenue caps, indicating that a revenue cap is more effective at limiting over-recovery of revenues, which in their view outweighs the drawback of weak efficient pricing incentives (2012a, p. 47).  In reaching this preliminary position, the AER acknowledged that a weighted average price cap (WAPC) creates some scope for beneficial rebalancing[[7]](#footnote-7) of tariffs by distribution businesses, and is favourable for efficient pricing. However, having observed little evidence of efficient price structures in practice and concerns about distribution businesses raising substantial additional revenue under WAPC:  The AER considers that during the regulatory control period DNSPs were able to make windfall gains by increasing the price (above the general increase specified [by CPI-X] in the WAPC) of components of particular services experiencing sales growth above its forecast. (AER 2012a, p. 128)  The Commission notes that the regulatory period under consideration by the AER (2006–10) coincided with a sequence of hotter than average years, as was evidenced by the rate of growth in peak demand over that period (even in states where WAPC were not in use). As such, it is unclear what role (if any) WAPC had in causing or permitting such increased consumption, and whether that should be a concern given:   * extra revenue would be consistent with a potential increase in the underlying costs of distribution businesses, given that peak investment costs increase substantially with growth in peak consumption * even if price discrimination (targeting consumption that is less responsive to prices) did provide opportunities for businesses to make additional revenue, it would only translate into profits where the additional consumption (above forecasts) occurs in non-peak periods. |
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Give the objectives of the DMEGCIS, network businesses should have incentives to pursue non-price demand management programs that are broadly equivalent under either form of cap. A complicating factor is that, as discussed below, there is some contention about the effectiveness of the scheme — now called the Demand Management and Embedded Generation Connection Incentive Scheme (DMEGCIS).

The Commission considers that directly addressing any problems associated with the current operation of DMEGCIS operating with WAPC would be preferable to foregoing opportunities for more efficient pricing by choosing revenue caps as the control measure. Non-price demand management is also an important part of the broader objective of achieving network efficiencies. Accordingly, the DMEGCIS should be reviewed by the AER to ensure it operates effectively to support deferral of lumpy network expansion projects (on the same basis that efficient network pricing would support demand management on a permanent basis).

#### In summary

In the Commission’s assessment, a WAPC appears to be the preferable means of providing incentives for efficient network pricing, particularly in periods when consumers’ electricity usage imposes the greatest system-wide costs (which in turn should encourage customers to change their usage patterns). It would be difficult to implement cost-reflective pricing as efficiently using revenue caps.

### Incentive schemes for demand management

The DMEGCIS consists of two parts:

* part A — the Demand Management Innovation Allowance
* part B — the recovery of forgone revenue.

The scheme aims to assist distribution businesses to implement non-network alternatives, to manage the expected demand for distribution services in some other way, or to connect embedded generators. It is not meant to be the primary source of recovery for demand management expenditure. Rather, it is meant to act as an additional incentive where the initiative has not been included in the core revenue proposal when the distribution determination was made, or to correct disincentives inherent in the regulatory framework (such as under part B of the scheme directed at distribution businesses under WAPC) (AER 2012a).

The demand management incentive scheme has been criticised on a number of fronts. One is its limited use by distribution businesses. Another is that the forgone revenue component (part B) of the scheme fails to mitigate the disincentive to undertake demand management. EnerNOC, for example, said that while the scheme is intended to reimburse distribution businesses under WAPC to neutralise the disincentive:

… this is an awkward, inefficient approach, as each demand management project requires separate approval by the AER. As well as causing bureaucratic overhead, this leads to [Network Service Providers] perceiving a risk that they will not be reimbursed. (sub. 7, p. 2)

That compensation is contingent on a demand management project being ‘cost-effective’ adds an extra hurdle for distribution businesses, but at first inspection, it would appear to be a desirable feature of the scheme. Even so, it is an additional regulatory burden on network businesses operating under a WAPC (and the AER) that they would not face under a revenue cap.[[8]](#footnote-8) In the Commission’s view, the assessment of the cost-effectiveness of a demand management project should not be interpreted so strictly that it deters a distribution business from undertaking or even exploring potential demand management options. Nor should the scheme be overly burdensome to administer — the AER claims that the current scheme is costly to implement (AEMC 2012a).

Recognising the potential for shortcomings in the scheme’s operation, the AEMC has made an interim recommendation that it be reviewed by the AER. The Commission strongly supports the AER investigating scope to improve the DMEGCIS, given its critical role in ensuring that distribution businesses that are subject to a WAPC retain incentives for demand management.

### The value of information and innovation

The AER will require more detailed information to perform many of the new functions recommended by the Commission in the area of demand management. Information will be required to:

* accurately assess the costs and benefits of smart meters (draft recommendation 10.1)
* perform the functions suggested in draft recommendations 11.4 and 11.5. These include approving reasonable forward-looking forecasts of peak demand and estimates of the long run marginal cost (LRMC) of peak capacity, and modelling the demand responsiveness of end-users to cost-reflective pricing.

To help obtain the right information (and to encourage network businesses to develop expertise in demand management), the Commission considers that the AER should increase the innovation allowance component of the DMEGCIS.

Approval of innovation funds should cover pricing trials and other (peak) demand management experiments that meet relevant criteria. Conditions on the funds made available should recognise the beneficial impact of ‘spillovers’ from such research and trials and require the availability of trial data for wider public analysis. As such:

* pre-approval of funds should be required, which should ensure robust experimental design and consistent observation of variables, including characteristics of end-users. Where appropriate, progress payments should also be used, especially for larger projects. There should be a capacity to provide payments to retailers involved in the trials, as their participation and cooperation will be critical to the success and the learning from the trials
* final payment would require that all data be provided to the AER, which should then be ‘de-confidentialised’ data and made available to third parties for analysis, including academic institutions
* the data should be analysed to yield estimates of price responsiveness, assist with tariff design and inform the AER in undertaking cost-benefit analysis of smart meters (draft recommendation 10.1).

### Valuing the net-benefits of demand management

Non-network alternatives (distributed generation and demand management) may yield benefits in deferred investment that extend beyond a single determination period. Currently, when a network business chooses not to spend the approved capital allowance for a network augmentation and instead adopts a demand management solution, it is rewarded only until the end of the 5-year regulatory period. It is argued that this stymies some demand management possibilities that would deliver benefits beyond the regulatory period.

The exception is when network businesses seek ex-ante approval of expenditure for longer-term demand management projects from the AER (during the regulatory determination phase). The one case of which the Commission is aware is the AER’s approval of expenditure for Energex and Ergon to undertake demand management projects over the current 5-year regulatory period. Energex was approved $107 million in expenditure to permanently defer (avoid) investment in 144MW of network capacity (compared to the ‘business as usual’ load growth scenario).

In addition to the timeframe over which benefits are valued, some participants told the Commission that it is unclear that the market-wide net benefits (or net benefits to consumers) from demand management projects are valued within the current framework.

With the full implementation of the package of reforms proposed by the Commission, it is intended that all impediments that network businesses currently face in procuring funding for demand management projects would be negated. In particular:

* network businesses can defer network capital investments over the shorter term (within a regulatory cycle), depending on the annual deferral value of the capital (less expenses to implement the demand management solution). Chapter 5 has proposed changes to the incentive regulation framework that should ensure network businesses have incentives to reduce inefficient capital expenditure and have balanced incentives between operating and capital expenditures.
* over the longer term, cost-reflective network pricing (based on LRMC of providing peak capacity) is the appropriate demand management tool of distribution businesses (draft recommendation 11.3)
* the Commission has proposed a process for the roll-out of smart meters that sits outside of the normal regulatory determination process (draft recommendation 10.1)
* the case of Energex and Ergon suggests that network businesses already appear to have a capacity to obtain ex-ante approval of demand management funds (including for demand management assets delivering longer term benefits).

If the full implementation of the Commission’s package of reforms were to significantly fall behind schedule, additional measures may be appropriate. If there was evidence that opportunities for efficient demand management were being forgone by network businesses because of conflicting or weak incentives, the AER should investigate scope to provide network businesses with additional (efficient) penalties or incentives as appropriate to overcome this problem.

It is a separate issue whether businesses should explicitly be *rewarded* (paid above their costs) for implementing demand management projects that deliver net benefits to consumers — projects that provide a long-term market-wide benefit. Distribution businesses suggest that they lack efficient incentives because they do not earn a *share* of the market-wide net benefits. However, the practical difficulties and potential risks and uncertainties of valuing and allowing distribution businesses to share in the market-wide benefits from demand management approaches are significant. That is, in part, why the Commission did not recommend such an approach for funding smart meter rollouts, which is both a long-lived demand management asset and gives rise to market-wide benefits. Nevertheless, there may be grounds for the AER to investigate the appropriateness of any such payments to network businesses.

### The influence of the WACC

As discussed in chapter 5, the WACC may bias network business’s spending decisions away from ‘opex’ to ‘capex’, reducing the incentives for businesses to use pricing or other demand management methods to reduce such spending. Chapter 5 discusses options in this area. These matters are also being considered in the limited merits review and the rule change proposals put to the AEMC by the AER.

### Other changes proposed by the AEMC’s *Power of Choice* review

Addressing the incentives of network businesses (and all market participants) to adopt demand management is a focus of the AEMC’s *Power of Choice* review. The AEMC gives particular focus to securing demand-side participation from commercial and industrial end-users, where there is likely to be a high prospect of ‘low hanging fruit’.

The Commission has sought to avoid duplicating much of this review, including the AEMC’s proposal to allow reductions in load to be offered by demand aggregators to the NEM spot market. The Commission has not analysed the finer details of this proposal, but observes that:

* in principle, the AEMC’s proposal appears beneficial, pending the identification of any unintended consequences during the consultation process
* demand aggregators may be able to source load reduction more cheaply than retailers, and could also provide a link between the underlying market value of distributed generation sources and spot market outcomes
* removing barriers to demand aggregators participating in the spot market could allow more cost-effective load curtailment to address network congestion. (Given largely fixed negotiation and contracting costs, there are efficiencies in aggregating demand response for both network and wholesale purposes.).

Draft RECOMMENDATION 12.1

Coinciding with the gradual roll-out of smart meters to allow more cost-reflective network pricing, revenues from all distribution network ‘standard control services’ should be subject to regulated weighted average price (not revenue) caps. This should not apply to transmission businesses, which, given the complexities and lower net-benefits, should continue to be subject to revenue caps.

Draft recommendation 12.2

The Australian Energy Regulator should review the operation of, and the incentives provided by, the Demand Management and Embedded Generation Connection Incentive Scheme. In doing so, the Australian Energy Regulator should ensure that distribution companies’ incentives are appropriately aligned with the objective of achieving efficient demand management. The innovation allowance component of this scheme should also be increased.

Given the package of draft recommendations in this report, the Commission seeks feedback on what (if any) barriers remain in the National Electricity Rules (or the Australian Energy Regulator’s application of the Rules) that could impede an efficient level of demand management.

## 12.2 Retailers’ incentives and price regulation

Currently, retailers compete mainly on the price packages they offer to end-users, the efficiency of their billing approaches, and on the effectiveness of their marketing to attract new customers. To allow them to present an attractive package to customers, they have to be able to exercise tight control over their costs through activities such as:

* their capacity for efficient hedging,
* their ability to contract with generators (in some cases, through common ownership between retailers and generators to provide a natural hedge)
* their access to competitive finance to efficiently fund their working capital.

Industrial customers aside, retailers have little capacity or incentive to create new products for customers that would prefer lower electricity prices in exchange for reduced demand at peak times. This reflects that:

* retail price regulation in the residential market (and, in some jurisdictions, the small-medium business market) preserves the cross-subsidies from non-peaky customers to peaky consumers. This reduces the price advantages for consumers that are willing to curtail their peak demand use
* smart meters are not available to offer more innovative tariff packages, including demand management services.

The result is restricted choice for consumers.

Chapter 10 outlined a process for the gradual rollout of smart meters and chapter 11 outlined ways in which benefits could be delivered from that investment through the implementation of appropriately structured network charges. The benefits from each of those changes (and indeed the argument to implement these changes) would be jeopardised by a retail sector that lacked sufficient competition. Likewise, the benefits would be reduced if retail business were slow to adjust to a new market model (one in which consumers could be provided much wider choice in tariff offers and demand management services). Accordingly, to support the Commission’s package of reforms, an important preparatory reform is required — the removal of all retail price controls and the removal of compulsory default retail schemes that effectively place a cap on prices offered in the jurisdiction. The case for this reform is discussed immediately below, and the remainder of the chapter then assesses how the behaviour of retailers would be expected to change.

### Retail price regulation

Retail price regulation was introduced into the electricity (and telecommunications) markets with the deregulation of integrated monopoly services, as a transitional consumer protection measure until competition developed. It was to be subject to review and removal once full retail contestability had been established.

The merit of price regulation as an *interim* tool is not debated. However, once contestability between retailers is achieved, retail price regulations have little role to play, with competition among suppliers serving consumers’ interests most appropriately and keeping prices in check over the longer term.

Retail price regulation should not be used to address affordability issues, including by keeping prices artificially low. Doing so, even for short periods, can deter the entry of new retailers, cause the exit of existing retailers, and thus reduce potential competition, which ultimately leads to inferior outcomes for consumers in the longer term.

Accordingly, the Commission along with many others has previously advocated the removal of retail price regulation in the electricity market, recognising its potential inconsistency with the long-term interests of consumers (PC 2008; PC 2012b; DRET 2011). To date, only Victoria has removed retail price regulation in the electricity sector, despite a process for their removal having been agreed by COAG since 2006 (subject to assessment of contestability by the AEMC).

State regulators under delegation from the relevant Minister set regulated retail prices. The regulated ‘standing offer’ or a ‘notified’ price is then required to be available to residential and some smaller business consumers.[[9]](#footnote-9) Consumers can choose to purchase (unregulated) market offers, although these are effectively ‘capped’ by the standing offer, with market offers typically taking the form of a percentage reduction from the benchmark of the standing offer.

The emergence of competition is also affected by the amount of ‘headroom’ between the standing offer price and a retailer’s actual supply costs, since that margin provides the incentive for entry of new retailers. If there is no headroom, or worse still the regulated standing offer price is held below costs, the likelihood of a vibrant retail market is significantly reduced. Incumbent retailers would also start to exit the market.

The dependency between the regulated and unregulated product is reinforced by some consumers’ perceptions that a control on prices signals a ‘good deal’, discouraging them from ‘switching’ to a potentially cheaper market offer. (A lack of switching or customer inertia can further stifle competitive outcomes and frustrate the achievement of lower prices.)

However, there is evidence that consumers can do significantly better under most market rates offered by competing retailers than remaining on a regulated product and, as indicated in figure 12.1, usually to the tune of several hundred dollars a year. (This does not apply in Tasmania, where there is only one retailer, and there is little evidence of cheaper deals in the ACT given the incumbent’s dominant market position.) Also of concern is that some analysis has found a disproportionately large share of consumers on the more costly regulated retail product are on low incomes (ESCOSA 2006).

In Queensland, the standing offer has removed significant ‘headroom’ following the introduction of the 12-month tariff freeze in July 2012. As such, market offers would now generally be above the regulated rate and the removal of retail price regulation would likely see prices increase in the short term. While this measure to artificially hold down prices was motivated to lower the cost of living, in the longer term, such a measure will not best serve consumers’ interests. Rather than through retail price regulation, the underlying cost pressures that are causing prices to increase need to be addressed, including by the suite of measures proposed in this report.

Because retail price regulations hinder the development of a competitive retail market, prices may initially rise when they are removed if incumbent retailers take advantage of their market power to increase profits. However, any increase in profits would quickly attract new entrants to the market and increase competition, resulting in lower prices over the longer term. Nevertheless, governments may prefer to adopt a more gradual approach to remove price regulation in jurisdictions where regulated price settings have prevented a competitive retail market developing. That could include the phasing out of price regulations by making them progressively less ‘binding’ over time, but with a view to withdraw their influence on the market permanently once competitive outcomes are more certain. During any such process, it would be important to raise consumer awareness about the ability to get a ‘better deal’ from purchasing electricity services from the market. (However, any such communication should not be presented as a guarantee, since there may be some less scrupulous retailers — as is the case in any competitive market.) Consumer awareness and ‘caveat emptor’ remain important considerations as for most products that consumers buy every day.

Governments would clearly be interested in minimising risks for consumers whose inexperience in purchasing their electricity services from a competitive market could result in them signing on to a worse deal. Similarly, it could help to drive competition by shining a light on the relative competitiveness of retail market offers. To that end, there would be benefits in ensuring that consumers have access to an independent source of comparison information when choosing among retail contracts. Already, online sources of comparison information exist, but maintaining the independence and, in turn, consumers’ confidence in such information is crucial. A national online tool would be most effective to brand and market to consumers, which could build on the existing ‘energy made easy’ online comparison site established and maintained by the AER (as part of its new retail responsibilities under the national energy customer framework).

While previous grounds for removing retail price regulation were sound, the fact that most consumers do not have smart meters has significantly limited the scope for more innovative time-based tariff offers to drive competition at the retail level and efficiencies in the network. This suggests that the potential benefits for consumers from the removal of retail price regulation may be even greater in future than when it was initially agreed by COAG.

The success of the phased and coordinated suite of reforms proposed in chapters 10 and 11 rests squarely on pricing flexibility, competition and innovation in the retail sector. There would be little point in proceeding with the necessary reforms unless retail price regulation is removed to:

* help retail competition to develop further, including by attracting the entry of new retailers into regulated market segments
* support innovation.

The obstacle created by retail price regulation is that it gets in the way of consumers facing more efficient price signals — a point widely acknowledged by participants:

What is clear is that exposure to efficient prices is likely to be the most significant driver of change to end use electricity demand. However, this is unlikely to happen whilst retail price setting remains largely in the hands of government. (Loy Yang Marketing Management Company, sub. 25, p. 3)

With progression towards efficient time-based pricing of network tariffs, retailers will play a key role in fashioning and re-packaging tariff offers to meet a wide range of consumer preferences and needs. This includes different levels of exposure to peak prices, different levels of price smoothing (in exchange for an appropriate premium) and different billing periods to assist with budgeting.

Figure 12.1 Annual savings from market offers**a**

Frequency of offers (vertical-axis) by category of annual dollar savings (horizontal axis) when compared to the standing offer in 2012b

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| Annual savings from market offers compared to the standing regulated offer. This figure demonstrates the annual price savings in New South Wales.Annual savings from market offers compared to the standing regulated offer. This figure demonstrates the annual price savings in Victoria.  Annual savings from market offers compared to the standing regulated offer. This figure demonstrates the annual price savings in South Australia.Annual savings from market offers compared to the standing regulated offer. This figure demonstrates the annual price savings in Queensland. |

a Excludes green energy offers b A broad geographical range of postcodes surveyed (n=10); assuming medium range annual consumption of 2100kWh. c While Victoria no longer has retail price regulation, standing offer tariffs are still gazetted (under the Electricity Act 2000) to apply in cases where customers have not yet entered into a market contract. d Annual price savings may not reflect the current potential for savings, given the recent ‘freeze’ of regulated retail charges (tariff 11).

*Data source*: http://www.switchwise.com.au/

To assist households in managing their exposure to higher peak prices in the future, and to take advantage of opportunities to make savings by shifting the timing of their electricity use, retailers will need to add value to their existing service range. This will be likely to involve providing:

* electricity demand management services, including assessments of household appliances and bill consultations
* add-on technologies to optimise the use of smart meters, provide real time consumption information, warnings in advance of peak consumption days, warnings about bills exceeding a pre-agreed threshold in a billing cycle, and, where desired by consumers, to facilitate load control services, or automate other aspects of electricity use.

Price regulations applied to a time-based tariff would be extremely complex and costly for state regulators to administer in order to avoid locking-in cross-subsidies for peaky users (box 12.2). This mainly reflects that the authorities determining regulated prices would find it difficult to adjust for the changing average load profile (and associated cost) of supplying the group of customers served by the regulated (load weighted average) price.

In summary, the Commission considers that all state and territory governments in the National Electricity Market should remove all retail price regulation of electricity. The exception would be where the Australian Energy Market Commission advises that there is strong evidence that competitive pressures would be weak after the removal of the regulation and could not be addressed by consumer awareness measures. Proposals to open up the Tasmanian market to competition have recently been put forward by an expert panel and should be progressed by the Tasmanian Government as soon as possible, drawing on advice and input from the AEMC.

A second best option, should governments refuse to remove retail price regulation, would be for governments to agree to phase out retail price regulation according to a strict timetable. That should include implementing consumer awareness measures and any necessary structural reforms suggested by the AEMC to develop workable competition. Such phased removal should be completed by 2015. Regardless of any such timetable, retail price regulation should not apply in network regions where smart meters have been (or would soon be) rolled-out and time-based network charges could be introduced, including to business customers.

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| Box 12.2 The impracticality of regulating a time-based retail price |
| It would be very challenging for a regulatory authority to appropriately calculate the regulated price of a time-based retail product. In particular:   * the price that would recover a retailer’s efficient costs would change with the timing of a customer’s actual consumption, which would vary from season to season and year-to-year * the weighted price that reflects the *average* load profile of a potentially large group of consumers would be too high for some households and too low for others — in effect ‘writing a cheque’ from less peaky users (which typically also have lower incomes) to ‘peakier’ users * since those households with peakier patterns of use would not bear the costs of their electricity use, any incentive for them to reduce their peak consumption and shift power use to non-peak times is substantially weakened. The upshot is a higher average price, reflecting the need for an inefficiently high level of investment in peak-specific capacity, which may further distort efficient consumption choices * less peaky users on the regulated tariff could source a better deal from the retail market, so would migrate from the regulated tariff. Predicting the rate that less peaky consumers take-up market offers would be difficult, with estimates of the average consumption profile and regulated price of the group remaining on the regulated product requiring accurate information and sophisticated analysis.   Another major obstacle for implementing and administering price regulation on cost-reflective tariffs is that it would be difficult to incorporate geographic differentiation of charges into a single regulated product.  To counter these problems, the regulated price would have to:   * be set often (which would incur an extremely high administrative cost) * increase substantially over time (which could risk government interference).   Realistically, any regulated price could only be re-weighted and calculated annually, which could lock-in significant errors. The extent of errors would depend upon the accuracy of assumptions about:   * the price responsiveness of consumers to the structure and level of time-based prices * the representativeness of the estimated average load profile of the group of households served by the tariffs, which as noted above, would be a moving feast as consumers switched to cheaper market offers.   Even if errors were minimised, cross-subsidies and inefficient consumption behaviour would continue, driving prices higher than they should be over the longer term. |
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### How would retailer behaviour change?

The retail tariff faced by an end-user embodies network charges, wholesale energy costs, hedging and other costs, and the retailer’s margin (figure 11.1 in chapter 11). The network component is sometimes partially or completely ‘hidden’. As such, the extent of demand responses by customers to more cost-reflective network pricing depends in part on the intermediary role played by retailers.

In the residential market, retailers mostly hedge the variability in wholesale energy prices on behalf of the majority of their customers. (They similarly smooth variability in energy prices for business customers, but usually to a lesser extent.) Retailers achieve such price smoothing in a variety of ways: either by hedging arrangements, through contracts with generators or, in rare cases, by taking the price risk directly themselves.

Cost-reflective network charges will have little effect on consumers if retailers do not have incentives to pass through at least some form of those time variant charges in their retail offers.

It would not be efficient (or financially sustainable) for retailers to maintain the same level of (almost universal) smoothing of time dependent network charges as they currently do for wholesale energy costs. Smoothing variability in network prices would effectively take the form of risk pooling or insurance to cover the much higher cost of peak consumption. Irrespective of whether a retail business purchased such insurance from the market or ‘self-insured’, commercial incentives would usually call for some degree of risk-reduction — and a passing-through of price risks to customers to correct for the moral hazard[[10]](#footnote-10) from high peak consumption. In the electricity market, another risk management approach in regard to network price variations might take the form of demand management. That could include some level of price exposure for customers and the availability of load management programs.

In the longer run, any incumbent retailer that maintained a business model of smoothing all variability in energy *and* network charges would risk making lower returns unless customers were prepared to pay a large premium for this service. Customers who would prefer to avoid paying such a premium would be likely to switch to another retailer who offered a discounted time-based product. Such a scenario would transpire as new retailers or competing incumbent retailers progressively offered more innovative products, which could lure customers with genuine bill savings through a combination of time-dependent tariffs and demand management services to manage price risks.

The AEMC *Power of Choice* review found that retailers already generally pass through the structure of network charges in a way that closely resembles their original form. Where the network tariff is flat, it is teamed with a flat energy usage charge. If a network charge included some time-based components in the tariff, the overall retail charges also incorporated that variation.

Conversely, KPMG was sceptical about the appetite for retailers to pass through price variability in tariffs (2008). In particular, KPMG noted concern among retailers about losing customer share from complex tariff offerings. As of mid-2009, more than three-quarters of the end household customers serviced by Ausgrid’s then integrated retail arm were exposed to an (untargeted) ‘time of use’ (TOU) network charge which followed the TOU tariff (applied by Ausgrid as a distributor). However, of those customers with an external retailer, only an estimated half of these faced TOU tariffs from their retailer of choice (Energy Australia 2009, p. 9).

The key quandary for network businesses is, in practice, what degree of demand management by retailers would materialise, since hedging and bill smoothing may distort consumption responses to cost reflective network prices. If network businesses engaged early with retailers in explaining their tariff setting process, it would allow retailers time to prepare their marketing strategies and offers to consumers and could help support a higher rate of pass-through of tariff structures to end-users.

While retailers would be free to decide how to include the relevant network tariff into their retail offer, it is expected that retailers would put forward a range of tariff offers, including, perhaps, the option of a flat tariff. However, the price of a flat retail tariff would have to reflect the overall cost of supplying an individual consumer and would need to include a premium for the ‘insurance’ against any price risks. (In such cases, particularly ‘peaky’ users could potentially face a hefty premium.[[11]](#footnote-11)) While some consumers may of course be prepared to ‘wear’ the extra cost of the flat tariff, many consumers would prefer to reduce future bill increases by taking up innovative retail offers that encourage consumers to shift the timing of their power use. Where beneficial to consumers, tariff options could be complemented by information (such as online access to real-time usage data and relevant charges) and technologies (such as direct load control or a home area network) to assist with energy management. Providing such technologies (and education about how to use them to respond to price signals) would represent a key role for retailers.

In summary, despite the possibility that some retail products offered may reduce the price exposure of consumers at peak times by some smoothing of network tariffs, the Commission expects many retailers would choose to pass through cost reflective network tariffs, resulting in more efficient outcomes. Further, the prospects of a national wholesale energy hedging market developing (chapter 18) may help increase retail competition (reducing the trends towards the ‘gentailer’ business model) and lessen any risks from the removal of retail price regulation (box 12.3).

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| Box 12.3 The prospect of a national hedging market will strengthen retail competition |
| The emergence of ‘gentailers’ (retailers that also own generation assets) as a business model to internally hedge price volatility and quantity risks raises questions about retail contestability.  Currently, hedging markets are state based with a spot price determined at each state’s regional reference node. Hedging markets are similarly confined to within state boundaries. A national hedging market could enhance retail contestability, as a new entrant retailer could more readily access financial products to manage price and quantity risks, and could use contracts with out of state generators.  Chapter 18 suggests two key changes that would help to support a national hedging market and retail contestability:   * implementation of an Optional Firm Access regime for transmission, which will support firmer hedging options across state boundaries (draft recommendation 18.1) * the possibility of increasing the transparency of hedging positions, principally to monitor market power issues but also to better inform retail entrants. (The costs and any risks of this option have not yet been fully explored.). |
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Nevertheless, there is a risk that retail competition and contestability may not develop with an efficient degree of pass-through of cost reflective network tariffs as foreshadowed. If this were to occur in some retail markets, there would be an option (at that point in time, rather than pre-emptively) to require that a retail tariff took a certain form. That could be implemented under the NECF (or other jurisdictional legislation) and include:

* mandating the pass-through of critical peak network charges to ensure consumers face charges commensurate with the costs of their consumption
* placing complementary obligations on retailers to inform customers of demand management options, such as direct load control of peak intensive appliances offered by distribution businesses, or requiring retailers to provide demand management technologies and services themselves.

Such measures should only be used if it were evident that retail tariffs did not develop to offer customers a choice of products, including opportunities to pay less for the use of the network by shifting the timing of consumption. Further, a decision to implement a regulated approach should not be taken lightly given that stronger regulation of the sector is likely to suppress the contestability of the market over the longer term.

draft RECOMMENDATION 12.3

Where retail price regulation exists, the Australian Energy Market Commission should review the market for effective competition.

* In jurisdictions where the Australian Energy Market Commission advises that retail price regulation should be removed, the relevant state or territory government should remove retail price regulation as soon as practicable.
* Where the Australian Energy Market Commission advises that there is strong evidence that competitive pressures would be weak with the removal of the regulation, and could not be addressed by consumer awareness measures:
* ***it should suggest any structural reforms that would be necessary to develop workable competition. These reforms should be promptly progressed by the relevant jurisdictions, and retail price regulations should be removed by no later than 2015.***

1. The Rules allow the AER to choose a control mechanism to apply to each distribution business. Currently, distribution businesses in NSW, Victoria and South Australia are subject to a weighted average price cap, while Queensland and Tasmania are subject to revenue caps, and the ACT to a maximum average revenue cap (which is similar to a WAPC). All transmission businesses are subject to revenue caps. [↑](#footnote-ref-1)
2. In practice, where time-based pricing is not adopted, the application of ‘side constraints’ — restrictions on year-to-year price increases within a regulatory cycle (cl. 6.18.6) — may interfere with the intent of recovering exactly the approved revenues over a regulatory cycle. [↑](#footnote-ref-2)
3. While revenue caps could be modified to provide incentives similar to a WAPC, they are likely to be more complex to set up and regulate. Moreover, under such approaches, price signals to customers are likely to be less directly linked to each consumers’ contribution to network costs (as year-to-year adjustments would be lagged, prices in the subsequent year would be either higher or lower than the efficient level, which will distort consumption decisions). [↑](#footnote-ref-3)
4. In the absence of smart meters (which can allow time of use and critical peak pricing), it is not clear what the AER would consider as evidence of efficient pricing. [↑](#footnote-ref-4)
5. To the extent that profits do rise, however, this may be considered ‘the price’ of businesses having incentives to efficiently price peak consumption and also bear the risk of year-to-year variability in revenues (return on peak investments) (Ausgrid 2012a). [↑](#footnote-ref-5)
6. The ‘payoff’ for network businesses to undertake non-price demand management projects (under either a price or revenue cap) would be the short-term value of deferring a planned network investment (less the costs of achieving the required reduction in peak consumption). Direct load control of household appliances (as proposed in chapter 10) could be a candidate to allow the short-term deferral of network investments. Where smart meters are available to implement efficient pricing, network prices (that signal the LRMC of providing peak capacity) would provide end-users with an incentive to participate in such programs. However, an additional ‘side-payment’ could be offered to consumers accepting direct load control, which would signal the value of deferring a lumpy network investment. Similarly, industrial and commercial sources of load reduction could be offered ‘side payments’ if they could provide a cost effective means of delaying the timing of a lumpy network investment. [↑](#footnote-ref-6)
7. Rebalancing is a broad term used to describe the removal of cross-subsidies in tariffs or making tariffs more cost-reflective. That can include rebalancing between residential and other users, rebalancing between peak and non-peak periods, or rebalancing between fixed and variable charges. [↑](#footnote-ref-7)
8. Since, under a revenue cap, the difference between actual and forecast volumes are automatically adjusted for in subsequent years. [↑](#footnote-ref-8)
9. The prices set are intended to ensure an electricity retailer can recover costs that an ‘efficient’ retailer would expect to incur. Each electricity retailer must submit an application to the state regulator outlining its expected costs for the period ahead. The retailer is also provided with a ‘reasonable’ margin (on top of retail operation, energy, network costs), which ranges from 3-10 per cent depending on the jurisdiction (RBA 2010). The phasing out of retail price regulations has usually commenced with the removal of price regulation for large business customers, followed by small to medium business customers (a change recently signalled to occur in NSW (Macdnald-Smith 26-Sept. 2012, p. 12 AFR)), and residential customers usually the last customer segment reviewed. [↑](#footnote-ref-9)
10. That is, the likelihood that consumers would not seek to limit their consumption at peak times given they do not bear the associated cost. [↑](#footnote-ref-10)
11. This could encourage peaky users to reduce their peak consumption (and reduce their flat tariff), or transfer to a different retail tariff. [↑](#footnote-ref-11)