SUBMISSION ON CONSULTATION PAPER FOR NATIONAL ELECTRICITY AMENDMENT (DISTRIBUTION NETWORK PRICING ARRANGEMENTS) RULE 2014

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Thankyou for the opportunity to make a submission to this consultation process. The following is my contribution.

Yours sincerely

Alan Pears AM

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Recommendations

1. The AEMC's interpretations of the National Electricity Objective and 'efficient cost reflective pricing' require further refining to ensure outcomes meet its intent, as well as the intent of policy on competition and reform.
2. In reviewing the future level of cost recovery built-into network charges, AEMC must include consideration of factors described in this submission that reflect a history of windfall profits, past capacity to influence regulatory settings linked to profits, and the reality that networks are no longer natural monopolies. Network operators should not be entitled to cost recovery as now defined.
3. New pricing structures should:
    a. Exclude high fixed charges that cannot be reduced by consumer action. Mandatory requirements should limit fixed charges to less than 10% of average bills of each consumer class and other limits discussed in this submission. In contrast, progressive introduction of capacity pricing and incentives to manage peak demand offer significant potential, subject to careful implementation
    b. Not only consider impacts on groups of consumers including low income, rural, tenants etc who may have limited capacity to understand and/or respond to complex pricing structures, but also require network operators to also proactively offer such consumers options that facilitate response, such as energy storage and management options/services, targeted energy efficiency measures, etc.
    c. When considering future network pricing, take into account past high profits of network operators, as well as their failure to support emerging energy solutions that are in the long term interests of consumers and to send appropriate price signals to activities that have increased costs, such as air conditioning, electric cooking and inefficient lighting.

Introduction

The NEM Objective has been clarified by the Productivity Commission as being focused on the long term interests of consumers. In the past, and even in this consultation paper, AEMC seems to have interpreted this as a relatively short term narrowly focused economic objective (see evidence from John Pierce, AEMC Chair, to the 2012 Senate Inquiry, as documented in Hansard) that places strong emphasis on maintaining the profitability of the incumbent players. Indeed, it could be argued that not just network operators, but AEMC and other energy policy makers have seen emerging competitors such as distributed generation and demand side action as external to the electricity industry as they define it. This has led them to ignore the potential to integrate them into the industry but, rather, to see them as a threat to the stability and viability of the traditional electricity industry.

Clearly the NEM Objective is long term and involves a broad economic perspective based on societal outcomes and benefits for consumers, not those for the incumbent industry.

As discussed below, interpretation of the term 'efficient cost reflective pricing', the focus of this consultation paper, must reflect the underlying intent of policy. The intent should not be to maintain the profits of incumbents, but to ensure that consumers gain best value in broad societal terms from their contributions.

Where a network operator makes poor decisions, it is reasonable for its shareholders to carry the cost, as long as the interests of consumers during transition can be protected. For example, if a network operator cannot recover costs because of poor past decisions, the consumer is best served

if they take actions such as writing down asset value, accepting losses, or selling the operation to someone else at a price that allows the buyer to operate it on a commercial basis.

What is 'efficient cost reflective' pricing'?

On page ii of the Consultation Paper it is stated that:

> Australian Energy Regulator (AER). The rules create a framework which guides those businesses to achieve prices which are efficient and therefore benefit all consumers. It is this framework that the rule change requests address.

It must be recognised that, in most energy policy, the 'devil is in the detail'. The way the term 'efficient' pricing is defined influences the extent to which the outcome is of benefit to all consumers. So it is essential to define 'efficient' carefully, to ensure that it reflects benefit to all consumers. It should be kept in mind that the shareholders of network businesses are NOT necessarily consumers and, as energy reform progresses, this will increasingly be the case.

It is a time of rapid change and uncertainty. Electricity networks are increasingly exposed to competition from emerging alternatives, including gas, local generation, energy efficiency and demand management. Therefore the presumption that networks are natural monopolies is no longer valid.

The present policy approach is focused on the costs of network operators, and a presumed entitlement to recover all costs and make substantial profits. This is seriously flawed. SCER has proposed an approach based on long run marginal costs (LRMC).

Where a network owns substantial existing assets, it is appropriate to base their costings on a mix of marginal costs of new assets and maintenance/phased replacement of ageing existing assets, taking into account realistic asset values and depreciation. Even then, the level of charges proposed may not be competitive with other options when the comparison is based on societal costs. The long term costs of alternatives to traditional supply should inform the prices network operators can charge and regulators must ensure network operators cannot engage in anti-competitive behaviour to block emerging competitors. The failure of AEMC to become expert in assessing the costs and benefits of emerging alternatives is a key problem that undermines the lack of capacity to bring discipline to network operator behaviour.

SCER (p.13 of consultation paper) interprets efficient pricing as providing a signal to consumers regarding the long term cost implications of their decisions. If a large proportion of the tariff is a fixed charge, this objective will not be met. This issue is discussed later.

The right of network operators to include 'transaction costs' in their development of tariff structures is a concern. With modern telecommunications and computer systems, transaction costs can be made very low. But if a network operator has a clunky system, it could claim high transaction costs. The option of a third party providing transaction services should be evaluated in any case where high transaction costs are claimed to be a major influence on a pricing structure or other arrangement.

'Cost reflective' must not be defined as covering incumbent network industry's costs:

This term should be applied to the societal least cost at which energy-related services can be delivered. Underlying this is the reality that consumers do not want electricity for its own sake: they want services to which traditionally supplied electricity may be an input, but which, increasingly can be provided in other ways.

Networks are not monopolies, despite the widely held belief that they are. Historically electricity networks have competed with gas. Today, they compete with an increasing range of distributed energy, energy efficiency and demand management options. While at present these options rarely allow a consumer to cost-effectively disconnect completely from the grid, they are moving in that direction.

Networks are not entitled to recover all their costs, and society is entitled to claw back some of their historical profits:

- They have benefited from 15 years of windfall profits due to high guaranteed rates of return relative to their level of risk as pointed out by Prof Ross Garnaut. It may be that in future they may face some risk, but this history of generosity must be considered. I note that the AER has recently proposed that network operators should receive a lower rate of return. While this is a step in the right direction, it does not recognise the fundamental reality.
- They have exploited their position to influence future demand forecasts, which have led to higher profits – AEMO only established effective forecasting capacity from 2012 and, previously, relied heavily on industry forecasts, as documented in their recent reports on forecasting. Since introducing independent forecasting, AEMO has consistently reduced future growth forecasts.
- They have used weak regulatory frameworks to appeal and undermine regulatory decisions to enhance profits. As AER chairman Andrew Reeves pointed out soon after his appointment, AER has simply not had sufficient power to control the industry. Again, improvements are occurring but much more needs to be done. The Productivity Commission, in its recent report on networks, proposed some interesting alternatives.
- They have arguably paid well above reasonable prices for assets when buying them. This has been based on expectations of profits, not the inherent value of ageing infrastructure.
- They have failed to make significant investments in development of emerging alternatives such as demand management and local generation. Indeed, they have used their position of market power to frustrate competition from these sources. This directly contravenes the NEM objective of encouraging fair competition.

While network owners can argue that they were responding to signals sent by a flawed market model, they have had plenty of time to bring the flaws to the attention of policy makers to be addressed if they were acting as responsible corporate citizens and taking into account the overarching objectives of public policy.

Should this review be based on Power of Choice?

Since the Power of Choice process, the Productivity Commission has released its detailed review of electricity networks. It is scathing, and suggests much more reform is needed than was proposed in the AEMC process.

This review is constrained by the requirement to meet section 6.18 of the NER: these enshrine the entitlement of network operators to collect sufficient revenue to meet their costs and other anti-competitive features.

Instead of hoping that new proposals for pricing will achieve the desired outcomes, it would be more effective to specify what the intended outcomes are and the contingency strategies that would be applied if there is a shortfall. AEMC can then monitor progress and, where outcomes fall short, implement the contingency strategies. This would create a clear message for network owners about the consequences of failure to deliver outcomes, rather than wasting time.

Sunk Cost Recovery and Fixed Charges

On p.16 SCER suggests sunk network costs should be recovered from consumers. Further, on p.63, the issues paper states:

> SCER has proposed to retain the existing principle relating to the recovery of total costs. This principle recognises that tariffs based on LRMC are unlikely to recover the total costs of the network. The residual sunk costs of the network must also be recovered, otherwise the financial sustainability of the DNSP may be compromised. This principle provides that the residual network costs must be recovered in a way that least distorts demand.

The entitlement of network operators to recover 'residual sunk costs' has not been justified. Given the history of poor decision making documented previously, it is time for consumers to claw back some of the excess profits and for network operators to pay for their exploitation of a flawed market model over the past fifteen years. Through an independent process AER should estimate the societal cost of this behaviour, and this should be deducted from cost recovery allowances.

Further, the value of existing assets as applied to pricing should be discounted according to specified methodologies that take into account the factors identified earlier (historical overpayment relative to risk, failure to adopt alternative solutions such as demand management in a timely manner, over-valuation of assets relative to true costs, etc) so that inflated costs cannot be used.

The methods for cost recovery proposed by SCER seem likely to undermine consumer empowerment and the adoption of emerging energy options by increasing fixed charges. This is a very dangerous option. Most other industries (eg transport fuel, food and goods sales) do not or cannot charge such fixed fees, and rely completely on unit prices or negotiation of long term contracts for revenue management. It should be noted that on p.64, the issues paper states:

> To guide the decision on which pricing approach should be included in the NER, SCER suggests 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.

Further:

> Ramsey pricing would appear to achieve the three factors outlined by SCER. That is, flexible pricing would be facilitated by allowing the introduction of LRMC pricing (by time and location) and then recovering residual costs through fixed charges. Potential

The SCER guidelines offer some hope that fixed pricing will be limited, but the later statement from AEMC raises red flags about the potential size of fixed charges. AEMC should review its position to take into account the potentially anti-competitive impacts of fixed charges. Careful supervision and additional guidelines or mandated limits, as proposed later in this submission, will be necessary.

High fixed charges undermine consumer response and are socially regressive. In order to avoid these problems AEMC should require that such charges must not exceed a small percentage of total retail bills. A maximum of 10% of the average customer class total bill, with an additional, tighter limit on the percentage of bills of small consumers (eg 10% of health card holder average bills) that meet social criteria should be mandatory.

Customer Classes

On p.17, SCER proposes:

> SCER has proposed to make the existing tariff class provisions mandatory for DNSPs.
>
> Under SCER's proposal, DNSPs "must" constitute a tariff class of customers on an economically efficient basis and avoid unnecessary transaction costs rather than only "have regard to" the need to do so. This will have the effect of reducing the discretion DNSPs currently have in developing tariff classes.

This is potentially discriminatory against consumers who are adopting emerging technologies or who comprise a subset of existing customer classes. For example, many assertions have been made on limited evidence that owners of PV systems do not contribute to reduction in peak demand while reducing revenue at other times. First, the fact that a customer's actions reduce revenue does not provide a basis for penalty pricing. Second, some studies dispute the claims about lack of peak reduction. Lastly, if provided with appropriate information, access to suitable technologies and services and price signals, PV customers could, in many cases reduce their peak demand, but networks have, in most cases, failed to offer such options.

It also potentially discriminates against subsets of consumers who have limited ability to invest in technology or behaviour changes, such as tenants, low income households, households under mortgage stress and households with children.

It may also preclude opportunities for third parties to aggregate particular types of consumers into groups that can act collectively to manage energy costs.

At a minimum there is a need for a mechanism that allows such issues to be considered in the provisions.

Interpreting the NEO

On p.23 the consultation paper states:

> The NEO refers to the three fundamental limbs of efficiency: allocative (efficient use of), productive (efficient operation) and dynamic efficiency (efficient investment). The AEMC will be required to form a balanced view of the rule change requests with respect to all three aspects of efficiency.[26]

It is fundamental that consideration of these 'limbs' be based on societal economic efficiency (including social and environmental factors), not 'business financial efficiency'. This is consistent with the NEO's emphasis on long term benefit for consumers. Further, the concept of dynamic efficiency means that care must be taken to avoid mechanisms that undermine innovation such as emerging competitors. Indeed, where such competitors seem likely to deliver lower costs in the long term, they should be actively encouraged. The opposite has been the case to date. Indeed, the SCER recommendation in its communique from the December 2013 meeting to defer introduction of rule

changes to facilitate demand side bidding after years of process undermines timely development of this important option. I do sometimes wonder whether SCER Ministers are actually on the side of the consumer: this concern was heightened by the strong criticisms of SCER made by the Productivity Commission in its recent report on networks.

PV and Networks

On p.55, the issues paper states:

> Network consumers with solar PV installations typically have much lower total usage than other network consumers because they consume energy from the installation during daylight hours. While their total usage is much lower, their peak usage is not typically reduced by as high a proportion because peak periods largely fall outside of times when the sun is brightest and solar PV generation is high. In general, network costs are driven by peak usage. If, for example, consumers with solar PV generation are charged flat or inclining block tariffs, they will pay less than similar consumers without solar PV generation even though they impose similar costs on the network.

This reflects the distorted and stereotyped view of the electricity industry. It is based on limited and selective data and on the reality that the industry has failed to provide information and incentives that would have influenced the investment behaviour of these households. For example:

- It depends what peak we are discussing. This statement may well apply in some locations where residential is the dominant load and electric cooking is dominant, but system and regional peaks are typically in mid afternoon. Areas without daylight saving will have later peak demand relative to solar energy availability.
- In many existing areas, trends in peak relative to existing network capacity have been very complex, being affected by installation of more air conditioners, trends in cooking technology and behaviour, high energy consuming TVs and computers, halogen lighting, etc. PV is just one element of this complex demand trend.
- In areas with traditionally high levels of installation of off-peak electric hot water, the shift away from that demand has meant the earlier peaks have become a more significant issue.
- In many tourist regions, summer peak demand, when PVs work best, is much higher and, because people occupy holiday homes all day, will be spread more across the day.
- PV installations in areas with a high concentration of commercial activity may well coincide with peak demand. Encouraging households to invest in PV systems in such locations by allowing them to deduct the retail financial savings from their own bills or other strategies could shift PV installation
- Apart from one network operator in WA I am not aware of any proactive strategies applied by network operators to influence PV investment, apart from opposition to feed-in tariffs and blocking ‘excess generation capacity’. Network operators must take responsibility for their failures, rather than be allowed to act like victims and seek support to engage in anti-competitive behaviour

We need public research that looks at demand profiles across a range of situations such as districts with high and low commercial activity, areas where electric cooking and hot water are high or low market shares, housing built before and after the introduction of the 2011 building energy regulations, etc before wide-ranging claims about PV impacts on networks can be made. We also

need research into the responsiveness of PV owning households to availability of add-on storage, demand management options, incentives to reduce evening peak demand through energy efficiency, etc.

At the same time, we also need to recognise that the failure to increase charges for heavy use of air conditioners and halogen lights at times of peak demand has meant an accumulated subsidy of millions of dollars has occurred without any attempt by most networks to manage the problems. This track record should be considered when contemplating applying aggressive pricing penalties to emerging alternatives.

Pricing Based on Long Run Marginal Cost (LRMC)

In principle this seems sensible. However, the devil is in the detail For example:

- What discount rate will be applied to future costs – a commercial or societal rate? How will expected future variations in costs (eg declining PV or storage costs) be considered? Will factors such as exposure to bushfire risk be included?
- Will options that reduce a customer's impact on future costs have fair access to markets? This is certainly not the case to date.

A lot of work will be needed to establish fair and societally responsible criteria.

Further, effective application of LRMC pricing is seriously hampered by the AEMC's obsession with allowing DNSPs the entitlement to recover all costs and make guaranteed profits, as discussed earlier.

Capacity Charges

While capacity charges intuitively make sense, some issues need careful consideration.

At present, retailer smart meter feedback to consumers is provided on an hourly basis. If a consumer downloads historical data it is in the form of half hourly data. The wholesale electricity market, I believe, uses 15 minute settlement periods. Which time period would be the basis of demand charging? This is important, because a 15 minute charging period can be significantly affected by short duration loads such as boiling kettles or initial start-up of heaters or coolers. Hourly data smooths such loads and also allows more flexibility for load management to reduce peaks without impacting heavily on consumer experience.

To be consistent with easily accessible consumer information it would seem to be hourly peak demand. But if this is selected, it should be mandated that shorter peak charging periods cannot be used by networks.

It would also be important to phase in such charging (although voluntary early adoption could be encouraged), as much of the peak load is associated with equipment that could be expensive to replace, such as inefficient electric cookers and plasma TVs.

The extent to which capacity charges are applied, whether just to the consumer's load or only when their peak coincides with stress on the supply system, is also a challenging question. Application to individuals is more easily understood, but may unfairly impact on some consumers, and may not efficiently address system costs.

The geographical aspect of capacity charging, as well as reliance on forecasts of trends in local demand would also increase the difficulty of pricing to recover costs.

Given the complications, a combination of offering voluntary tariffs and 'hastening slowly' with mandatory charges while conducting trials and research is probably the best approach.

Flexibility in pricing over time and certainty

Given the rapidity of change in the energy sector, it seems unwise to link scope for changes in pricing and other factors to the 5 year periods. But more rapid change potentially introduces confusion und undermines competition. One solution is to allow introduction of voluntary alternative tariffs at any time. Also, the AER in consultation with consumer groups could be given the power to approve more frequent changes, especially where their impacts were limited by transitional or voluntary provisions.

What would a socially responsible network operator be doing?

- Supporting active demand management by consumers where it is cost-effective from a societal perspective
- Rewarding those who install small scale renewable energy systems that include 'load smoothing' capability and/or energy storage to enable them to limit their peak demand and manage demand at times when the network and/or generation was under pressure, as well as to minimise consumer costs
- Offering innovative pricing models such as discounts for consumer commitments to limit peak demand (over hourly periods, and/or at times of system stress) while encouraging development and roll-out of technologies that would provide this capacity
- Incorporating storage into its network so that it could profit from buying low cost and selling high cost electricity into the market, while also managing load variations due to intermittent distributed energy supply and use
- Offering tariffs with low fixed charges, so that consumer response receives a strong signal. High fixed charges disempower consumers and are socially regressive, as they impact most on low income small households such as pensioners. They also undermine competition by reducing the benefit that can be captured through improved energy efficiency or distributed generation.

This approach is consistent with the Hilmer Report's original proposals for competition policy, where it states that competition frameworks should proactively encourage beneficial societal outcomes, not just rely on external regulation and other policies to manage such problems.

Conclusion

The consultation paper raises many important issues, but the solutions it proposes do not address many of them in ways that are consistent with the intent of the National Electricity Objective, the intent of Hilmer's approach to competition policy, or with broader social and environmental policy criteria. We have a long way to go.