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Clean Energy Council

3 May 2012

Commissioners
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235
By website: www.aemc.gov.au

Dear Commissioners,

Ref: EPR0022 AEMC's Directions Paper: Power of Choice - giving consumers options in the way they use electricity

The Clean Energy Council (CEC) is the peak body representing Australia's clean energy and energy efficiency industries with around 600 members.

Its priorities are to:

- create the optimal conditions in Australia to stimulate investment in the development and deployment of world's best clean energy technologies;
- develop effective legislation and regulation to improve energy efficiency; and
- work to reduce costs and remove all other barriers to accessing clean energy.

The CEC works with members and the government to identify and address the barriers to efficient industry development in the energy efficiency and stationary energy sector.

INTRODUCTION

The CEC is pleased to comment on the AEMC's Review on the Power of Choice - giving consumers options in the way they use electricity Directions Paper to advise on options to improve Australia's energy efficiency.

The CEC commends the AEMC's commitment to improve the opportunities for demand side participation (DSP) in the National Electricity Market (NEM) and to maximise the use of DSP in the market. DSP is a vital component of Australia's bid to reduce its carbon emissions and an important complementary measure to the introduction of a carbon price. DSP is also crucial to managing the rising costs of network investment which are expected to continue driving retail electricity cost increases over the next decade. There are growing concerns around the nation regarding rising electricity bills. A report prepared for the CEC by ROAM Consulting in March 2012 found that network costs are the greatest contributor to electricity price rises in

Australia, accounting for 40-50 per cent of all household bills[1]. Without supportive market conditions and effective engagement with consumers to address the barriers and facilitate the uptake of DSP measures, rising electricity network investment costs will continue to place upward pressure on electricity prices.

Consumer Participation

As indicated in the CEC's response to the AEMC's Power of Choice Review Issues Paper, community appetite for energy efficiency is strong. A nationwide survey of 1000 participants conducted by Auspoll for the Clean Energy Council in June 2011 found that Australians wanted more support to save energy and money on their electricity bills. Ninety five per cent of people surveyed said they were concerned by rising energy costs and 89 per cent said they were willing to take action to use less energy. 73 per cent of Australians would welcome more information on how they could use less energy or use it more efficiently; however half knew little or nothing at all about the key aspects of their energy use. This reiterates the importance of access to information and data on electricity usage for consumers to be able to make informed choices about the way they use electricity.

The CEC commends the AEMC's recognition that consumers require information, education, incentives and technology to make informed choices about the way they use electricity and the need for incentives for network operators, retailers and other parties to facilitate and respond to consumer choices.

In order for consumers to take action to reduce or modify their electricity consumption they need to be able to see the differences that specific actions may make on their energy use. This can only be done by being able to easily access and interpret information on their actual energy consumption over the day through the use of electricity smart meters that display, in real time, consumption. Ideally this capability should be integrated with web based customer portals, phone applications or in-home displays.

To avoid the delays and uncertainties associated with the implementation of programs such as the Victorian Smart Meter rollout, appropriate consultation is required with consumers and the industry prior to any further implementation of DSP actions. Effective consultation and education will also assist to build community acceptance and buy-in, as has been demonstrated in the Victorian example, where a lack of consultation has created significant issues for ongoing use of these devices.

Improvements need to be made to the existing rules to ensure that providers are able to provide up-to-date non aggregated and easily interpreted data to consumers. The CEC recommends a central repository such as the Commonwealth information hub to capture the information collected by the smart meters and provide analysis of usage and trend patterns for use by consumers and industry. Allowing third-party access to the aggregated information with

[1] Impact of renewable energy and carbon pricing policies on retail electricity prices (update), ROAM Consulting, March 2012

the presence of appropriate privacy and security provisions will also assist in the provision of DSP products and services by private industry.

The CEC recommends demand side action being supported by a coordinated government and industry led education and information campaign to assist business and residential consumers to make informed choices about their own electricity usage and the wider benefits to the energy market. There are many DSP options on the market and while a wide choice will contribute to market efficiencies, information on the DSP options available needs to be provided clearly and simply to consumers in order to avoid presenting unnecessary complexity. This is important because, as discussed above, many consumers have little understanding of electricity markets, networks or systems.

Improved and coordinated communication across the industry and government can best be addressed with the establishment of central authority such as an Energy Efficiency Authority to:

- improve partnerships with industry in future policy development and advice on implementation;
- improve the quality and coordination of information on energy efficiency supplied to residential consumers;
- identify potential for streamlining policies across the State and Federal Governments

This would need to be implemented with a range of policy mechanisms enabling investment in energy efficiency products, improved product labelling, and more effective information resources such as a trusted consumer guide. While the energy rating star system is a good start, better information on electricity consumption of appliances is required where the efficiency of the appliances can be easily compared to other similar appliances or a product average and its effects equated in electricity bills.

The role of price signals

The CEC understands the important role that the appropriate price signals play in encouraging the market to respond and to facilitate greater DSP in the residential, commercial and industrial sectors. The retail price of electricity is not a true reflection of the cost of supply and delivery of electricity to consumers. This is particularly evident in times of peak demand, as network investment costs closely reflect the need to service peak demand and wholesale electricity prices can spike significantly at these times.

Research by Simshauser and Downer[2] demonstrates the extensive cross subsidisation between energy users where residential customers with 'peaky' demand profiles are being subsidised by other consumers. Despite this, peak demand is continually growing. Recent estimates are that the top 10 per cent of capacity that the network must be designed to provide is utilised

[2] Limited-form dynamic pricing: applying shock therapy to peak demand growth, Paul Simshauser & David Downer, AGL Energy, February 2011

for only 1 per cent of the time[3]. This requires that billions of dollars are spent on network assets which are required for just a few hours a year, making a significant contribution to customer's electricity bills.

Currently, retail electricity costs are not really "prices" at all in the technical sense of a value determined by a market. As Iain McGill[4] argues, the more appropriate terminology for retail prices is a "schedule of fees", because costs imposed on consumers do not directly relate to the cost of supply at the point of delivery, but rather a series of approximations within a complex National Electricity Market framework. Costs associated with the electricity network are similarly constrained with expenditure on network maintenance and augmentation capped over five year periods which blunts price signals to consumers. Without the broad implementation of rational pricing mechanisms across the energy market (such as 'dynamic' time-of-use pricing systems which reflect wholesale prices) consumers are not exposed to the real costs of supply.

Misaligned price signals between the timeframe for peak tariffs and the wholesale price of electricity during these times need to also be addressed. While the timeframes for peak tariffs are generally between 7am and 11pm, the wholesale market price does not align to this time profile. In order to drive adjustments in electricity usage and increased customer recognition of the importance of DSP retail electricity prices need to more accurately reflect the occurrence of both peak and off peak wholesale electricity prices.

Consumers need to be incentivised to change their behavior and will only be able to respond to price signals provided these signals are able to be understood but accurately reflect their actual consumption patterns. The Simshauser and Downer[5] paper demonstrates an improvement in the load curve and a reduction in energy unit costs with the introduction of dynamic pricing.

While pricing options provide choice, regulation is required to limit the number of energy offers available and to maintain comparability and simplicity. Arrangements also need to be in place to assist vulnerable households, as they are under the current regime, and tariff prices will need to be monitored to ensure competition and fairness in the retail sector.

Networks

To facilitate efficient DSP, appropriate commercial incentives for third parties such as distribution network businesses, electricity retailers and Energy Service Companies (ESCO's) to invest in DSP are required. These businesses play a crucial role in DSP through developing their own DSP options, purchasing DSP related products or facilitating DSP activities such as

[3] Australian Government, Productivity Commission, Issues Paper on Electricity Network Regulation, February 2012.
[4] Associate Professor, School of Electrical, Engineering and Telecommunications, Joint Director (Engineering), Centre for Energy and Environmental Markets, UNSW.
[5] ibid

distributed generation. The current regulatory arrangements fail to provide the right incentives for investment in DSP. There is an inherent focus on the short term and incentives to increase investment in network infrastructure[6] without capturing the overall benefit of infrastructure deferral which leads to an underestimation of the value of demand side management.

In addition to incentivising DSP actions through the introduction of schemes such as a national energy savings initiative, other initiatives can also assist to better manage peak demand and capture long term benefits. Under pressure and funding from State and Federal Governments some distribution businesses (DBs) are already trialling innovative initiatives to reduce consumer's energy use at peak times. Options have considered voluntary load control programs, automated remote energy management systems, critical peak pricing and payments to businesses to reduce their energy use at requested times should also be further explored to facilitate consumer choices available to alter consumption patterns. Regulatory arrangements around DB licensing and revenue determinations may also need to be reviewed to enable new demand management technologies to be trialled in conjunction with consumers.

While embedded generation can play a pivotal role in DSP, a key barrier to the further deployment of these technologies lies within DBs. In particular issues with the connection process frameworks and the interaction between DBs and embedded generation proponents have been well documented[7]. The root causes of these issues include:

- The interpretation of the relevant legislative instruments to the favour of the DB. In many cases these instruments fail to recognise that the connection process is undertaken between an independent applicant and a *monopoly business*. It is important to distinguish this from the actions of a DB to manage its regulated assets. One sided terms in the legislation allow its interpretation as protecting the interests of one party over another. There is presently no incentive for a DB to process a connection application; rather it is an obligation of the DB's Distribution Licence. In conjunction, the introduction of a generator has the effect of reducing th*e DB's revenue fr*om energy delivered, whist increasing the complexity (and hence cost) of their network assets. An incentive mechanism is required to ensure that networks evolve efficiently and innovative approaches are developed.

These barriers are of particular concern when considering the applicability of embedded generation in a commercial or industrial setting, where these technologies can have the biggest impact on reducing demand. In many cases complications with connections or extortionate connection costs proposed by monopoly DBs without justification have caused proposed projects to fail.

Significant reform of the physical system and legislative instruments will be required to facilitate the widespread introduction of embedded generation. With regards to DSP functions the majority of this market falls into the non-registered generation category under the National Electricity Rules (Rules). The legislative frameworks around connections are currently

[6] Garnaut, 2011, *Garnaut Review 2011: 11 Electricity Transformation*, http://www.garnautreview.org.au/update-2011/garnaut-review-2011/chapter11.html
[7] Sustainability Victoria, Distribution Generation Experiences Analysis, October 2010

the subject of forthcoming rule amendments and the CEC supports ongoing changes to better facilitate access to the market by embedded generators.

One such change is that proposed by ClimateWorks[8] to streamline the connection process. While this is a sensible intermediate step the CEC is working on further enhancements to the Rules in conjunction with its members. A clearer standardised connection process will assist to address some of the barriers identified and better facilitate the capacity of these technologies to contribute the DSP.

Supply chain interactions

The current disaggregated nature of the market means it is not easy to capture the benefits across the supply chain. To capture the full value of DSP, coordination is needed in the supply chain to foster a competitive market. A competitive market will allow existing and new market entrants to provide the necessary choice and new services required to facilitate the most effective DSP. Regulatory support is needed to foster integration in the market. Third party aggregators could act to achieve the required coordination between consumers and other parties in the supply chain. The differing requirement of independent state based energy savings schemes currently present a barrier to all DSP providers and aggregators. Harmonisation of the existing state schemes or transition to a national scheme will alleviate these jurisdictional differences and assist to facilitate the role of aggregators in the market.

Closing

The Clean Energy Council looks forward to continuing engagement with the AEMC on its review of facilitating efficient investment in, operation and use of DSP. If you have any further questions please contact Felicity Sands via telephone on 03 99294100 or by email: felicity@cleanenergycouncil.org.au

Yours sincerely

<original signed>

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[8] ClimateWorks, Unlocking the barriers to Cogeneration Report, September 2011