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Mr Ben Woodside  
Australian Energy Market Commission  
Level 5, 201 Elizabeth Street  
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Australia

online: <http://www.aemc.gov.au>

26 August 2011

Dear Ben,

**Demand Side Participation Review: Power of Choice – giving consumers options in the way they use electricity**

TRUenergy welcomes the opportunity to provide the following comments in relation to the Australian Energy Market Commission's consultation on the Issues Paper "Power of Choice – giving consumers options in the way they use electricity".

TRUenergy is one of Australia's largest integrated energy companies and is focused on becoming Australia's best customer-focused energy management group.

With the acquisition of EnergyAustralia, the Delta West gentrader rights and NSW generation development sites from the NSW Government in early 2011, TRUenergy has a portfolio of approximately \$7 billion of generation and retail assets and employs around 1,600 employees and contractors through major operational partnerships across South East Australia. TRUenergy provides gas and electricity to approximately 2.75 million household and business accounts in New South Wales, Victoria, South Australia, Queensland and the ACT.

As result of its acquisition of the EnergyAustralia brand and customer, TRUenergy is also involved in the Australian Government's Smart Grid Smart Cities Initiative.

TRUenergy thanks AEMC for the opportunity to provide a submission in relation to the Issues paper. Please feel free to contact me on (03) 8628 1632 should you wish to further discuss this submission.

Yours Sincerely,

A handwritten signature in blue ink that reads "Lana Stockman".

Lana Stockman  
Manager, Wholesale Regulation  
TRUenergy

## **Introduction**

The national electricity market (NEM) is intended to provide a framework to support a competitive market based on tensions between the demand and supply side to produce efficient prices.

Historically, relative cost structures in the industry have meant it has been more efficient to develop new generation, transmission and distribution capacity, than to develop demand side solutions. Supply side options have the ability to deliver large amounts of reliable energy to meet demand. Furthermore the cost of fuel in Australia has been low.

For these reasons, economics have driven the market to focus on development of supply side options. As a consequence investment in demand side participation has not been viable in most instances.

The historical focus on supply side solutions may now be changing due to the increasing cost of fuels, the impact of carbon pricing and the exhaustion of excess capacity in the grid causing increasing cost to meet peak demand.

The increasing costs for both energy (GWh) and capacity (MW) are coalescing into higher energy bills for consumers.

Consumers derive benefit from utilising energy consumption. Several questions now arise in the context of higher prices: Does the cost paid now exceed the derived benefits for each consumer? Are demand side options now becoming more competitive than supply side approaches to meeting future energy needs?

Consumers have the ability to maximise the utility of their consumption subject to minimising cost. Ensuring that consumers effectively participate by making informed choices is a crucial component of a competitive electricity market.

The key is to provide a competitive electricity market. While regulated retail prices and terms deliver controlled lower prices in the short term, to ensure long-term benefits it is essential that market structures support development of strong retail competition to drive improvements in efficiency and innovation. Demand side solutions are examples of exactly the type of innovation a competitive market that can rapidly respond to technology development can be expected to deliver.

Along with a de-regulated retail environment, a stable and consistent set of regulatory requirements is another key requirement to support demand side innovation. While in some cases regulatory intervention may be justifiable to address a proven market failure, such measures should only be considered after the full identification of the costs and benefits of the interventions and any associated wealth transfers have been clearly quantified.

In this area the subject of ongoing technology and commercial development such as the evolution of the demand side solutions, it is incumbent on regulators and government to avoid picking "winner and loser" technologies. Such strategies run the risk of further delaying future beneficial solutions by reducing incentives for investment in innovation.

Overall we note that the Rules should be neutral between demand and supply side to maximise long term customer benefits under the National Electricity Objective (NEO).

## **Methodology and Assessment criteria for identifying and evaluating market and regulatory arrangements for DSP**

TRUenergy supports the development of rigorous cost benefit analysis that identifies and quantifies the benefits, costs and wealth transfers associated with improvements in the market and regulatory arrangements that promotes the National Electricity Objective (NEO).

1. Chapter 3 outlines our approach to identifying "market and regulatory arrangements that enable the participation of both supply and demand side options in achieving an economically efficient demand/supply balance in the electricity market." Do you agree with our approach?

TRUenergy has some concerns with the approach proposed by the AEMC. It appears that the AEMC intends to develop a list of discrete DSP options that will be subsequently analysed. This

has the appearance of the regulator picking “winners and losers” as opposed to the market developing the best outcome. Furthermore, as noted by the AEMC, complementary conditions may need to be in place for the benefits of any particular option to be realised.

We would suggest that an alternative top-down approach is used where broad areas are defined such as load shifting, energy efficiency, and distributed generation. High level costs and benefits as well as key common requirements should be identified for each broad area.

Using load shifting as a simple example, high level benefits could be estimated by moving a percentage of peak loads to off peak periods. For example a key common element relative to any project utilising load shifting would be information supply to AEMO and distribution companies from parties shifting load.

At this stage the AEMC should assess what areas are going to provide the most significant value to the market and what the key common requirements are, but should not identify the specific participants, and technologies required to deliver these outcomes. This would allow the market to determine who and what is best delivered.

2. How should the benefits of DSP be measured? Can they be accurately quantified?

Yes, the benefits of DSP can be measured. The Electric Power Research Institute (EPRI) has produced a very comprehensive document that outlines the process to estimate the costs and benefits of a smart grid (EPRI, 2011). While some of the costs are relevant for the US market many of the costs and benefits are applicable to the Australian market. Similar methodologies can be developed for Australia and the development of an equivalent demand side costs and benefits report for the Australian market would be conducive to commercially developing demand side options.

Furthermore TRUenergy also supports the identification of all wealth transfers and costs, who will bear these wealth transfers and costs, and specifically the costs required of participants who will need to comply with regulatory changes.

We also reasonably expect that the AEMC apply rigour in quantitatively assessing the costs and benefits associated with any proposed demand side participation option. Where benefits can only be assessed qualitatively these should err on the side of caution. In our experience if it is not apparent how benefits can be quantified there is an increased risk of not being able to realise benefits to the degree expected.

3. What are appropriate discount rates to apply to DSP investments for the various parties across the supply chain?

For proposed Rule Changes and proposals to the MCE, TRUenergy would expect that the AEMC select a rate that is consistent with other regulatory interventions. The AEMC may choose to have regard to the direction provided by the Office of Best Practice Regulation (OBPR), Department of Finance and Deregulation.

“CBA measures the value people place on various outcomes, preferably using their willingness to pay as revealed by their market behaviour. Consequently, the preferred approach is to base the discount rate on market based interest rates, which indicate the value to the current population of future net benefits. Market interest rates determine the opportunity cost of any capital used by the government’s regulatory proposal – what it would have produced in its alternative use.”(Office of Best Practice Regulation, 2010)

TRUenergy would like to draw the distinction between the discount rate used by a regulator to estimate the economic costs and benefits associated with a market based change with the risk-adjusted discount rate used by business to assess the viability of commercial projects. The economic discount rate is used to calculate the present value of the difference between the expected benefits and costs of the proposal.

Costs are an input into this process and are based on market prices. These market prices are set by commercial entities seeking a risk adjusted rate of return. The market price is therefore inclusive of the risk adjusted rate of return by the commercial entity. There is no need for the

AEMC to determine what the risk adjusted rate of return is required by commercial entities (and this differs between different commercial entities). If market prices are not available then the AEMC can assess input costs by assessing the cost of the current state of technology and develop a forward price path through applying factors for a learning curve and economies of scale.

4. Are there other issues which we should consider in our assessment process and criteria?

The AEMC may also like to consider performing a risk assessment of various options taking into account factors such as the state of technology, complexity of implementation, options that promote market based solutions (as opposed to regulatory intervention), the degree to which an option is reversible (in the case it is a failure).

### Consumer Participation and DSP Opportunities

Consumers derive benefits from the use of energy, and these benefits greatly exceed the cost of supply. Until cost reflective prices exceed the value of the derived benefits there will be minimal consumption change in response to price drivers. For some consumers the costs may exceed the derived benefits therefore they may benefit from information on how to reduce costs.

5. What are considered the drivers behind why consumers may choose to change their electricity consumption patterns? Please provide examples or evidence where appropriate.

Key drivers for changes to consumer consumption patterns are price and knowledge. Efficient price signals provide consumers with information about when their discretionary consumption can be timed to maximise system wide benefits. But equally consumers need the knowledge about what options they have to respond to price signals and optimise their energy consumption. Consumer education about energy efficiency and demand management alternatives is an important area for ongoing development.

One of the key issues with using price as a driver in the current market conditions is that information received about consumption is often received ex-post. In the case of residential properties consumption information is often received several weeks after an event. This gives the consumer limited ability to respond to the price signal and since energy consumption is largely seasonal it is not until next year that the consumer will experience similar market conditions (and the awareness of the need to reduce consumption has diminished considerably).

TRUenergy would also like to note that the information technology environment is constantly changing and anticipates that online applications have untapped potential to support rapidly changing consumption patterns. Initially it would be expected that this technology would focus on early adopters, until more refined versions can be rolled out to a larger market. TRUenergy would be opposed to any regulatory intervention that required an IT application to be rolled out to mass market. The threat of such intervention will merely act to deter investment in innovation and further delay efficient demand management developments.

6. Chapter 4 lists some plausible DSP options that are currently used or could be used by consumers. Are there any other plausible DSP options currently used by consumers that have not been identified? Please provide description of measures and examples, where available.

The options listed broadly describe the types of options that are available. Within each option there are a number of different choices, and the list provided by the AEMC is representative of a small number of these choices. Again, TRUenergy would caution the AEMC of inadvertently picking "winners and losers".

One comment that TRUenergy would like to add, is that the AEMC should consider when certain DSP options that are currently available have peaked or are about to reach a saturation point. In these instances any further development of some options may only result in diminishing marginal returns.

7. Are there any DSP options that are currently available to consumers, but are not commonly used? If so, what are they, and why are they not commonly used (i.e. what are the barriers to their uptake)? Please provide examples and evidence if available.

Fundamentally TRUenergy feels that regulation of energy prices as well as the associated terms and conditions limits us from offering innovative DSP options to consumers who would value these options. Alternative pricing or terms and conditions that can support such developments are not supported under current regulations.

A well known example of regulation limiting the development of demand side developments is the current moratorium on critical peak pricing that has been imposed in Victoria. While critical peak pricing is not a product that will be attractive or efficient for all customers, there are likely to be some segments of the market, who would willingly select a product with this feature and use control over discretionary load to benefit from such a product. Such a market outcome would create a win-win outcome, with the customer benefiting as well as the wider system benefiting from the response to the peak price signal.

This is not to say that such pricing or product structures will benefit all customers. As such, mandating any one-size fits all product or pricing structure would be sub-optimal. The preferred approach is to allow the market to develop organically with retailers competing to identify groups of customers that can benefit from particular product innovations. Such outcomes require time to develop, but will be more flexible and able to evolve as new technology becomes available.

Some other DSP options that have been used in the past may not be proceeding due to a lack of commercial viability compared to alternatives. A classic example of this would be a firm introducing some form of load control technology that reduces load during periods of high demand. This requires an up-front capital expenditure, some ongoing operational costs and the benefit would be reduced energy costs.

From the firm's perspective this project is only economic if the reduced energy charges exceed the capital and operational expenditure. If this firm was to then attempt to sell the rights to the load control to increase the revenue, then a buyer would need to estimate the benefits. This can be done by assessing an alternative option, namely hedging in the financial markets against high energy prices say with a call option or some other cap product. This raises issues as a financial product is generally firmer than a best endeavours approach from a demand side option. Also financial contracts also have lower transaction costs (resulting from scale) as opposed to the typical bespoke nature of a demand side contract.

In summary until the value of the non-firm demand side response is less than the value from an alternative the DSP option will be unlikely to proceed.

8. Are there other DSP options that are not currently available to consumers, but could be available if currently available technologies, processes or information were employed (or employed more effectively) in the electricity (or a related) market?

There are potentially a myriad of options that could fall into this category. TRUenergy would support the development of an environment that would allow these options to be commercially developed in future without any need for government support and intervention.

A de-regulated market without regulation on price of energy terms and conditions is the best option to support the development of other DSP options.

### **Market conditions required for efficient DSP outcomes**

Fundamentally consumers should be able to make their own decisions in regards to the consumption of energy in order to maximise their own utility. To do this a consumer needs to be able to make an informed decision. This requires education and the provision of information.

In a competitive market suppliers will offer consumers a choice of products. However when this range of products is constrained by regulatory limitations, or removed entirely by mandated regulatory solutions then beneficial market developments will not be possible and less optimal outcomes are likely.

Additionally if there is frequent change in the regulatory environment this increases the risk for firms innovating in this area. How many times can a government change the "rules of the game" before investors stop investing in a sector?

To reduce costs it would be helpful to have a consistent approach across States where regulated solutions are imposed. The cost of "registering" similar products with different State authorities, or not being able to utilise the same systems to support products in different States imposes additional costs and barriers to innovation in the sector.

TRUenergy would also like to note that market distortions occur (including additional costs, and cross subsidisation) when the energy market is used as a lever to implement social policy and energy affordability.

9. What are considered the relevant market conditions to facilitate and promote consumer take up of cost effective DSP?

As noted earlier a general increase in the information and education around DSP options is a key market condition. Education and information provision needs to be focused on the consumer groups that that can provide the largest benefit. The New Zealand Energy Efficiency and Conservation Authority (EECA)<sup>1</sup> has a website that provides a wide variety of information in a central location to provide support to a range of energy consumers by specifically targeting programs for small-medium businesses, large businesses, government, schools, as well as specific sectors including tourism, seafood, plastics, aggregate and quarry, and primary production. The EECA programs are well supported with ongoing measurement of benefits delivered.

The second market condition is to have regulatory stability. Over the long term, if DSP is implemented using a variety of regulated interventions rather than market innovation, this adds a significant risk of regulatory change to businesses operating in this area. The difficult outcomes resulting from such a scenario has recently been witnessed in the household solar installation business in NSW.

10. Are there any specific market conditions which may need to be in place to enable third parties to facilitate consumer decision making and capture the value of flexible demand? Please provide examples and evidence as appropriate.

TRUenergy has no specific concerns in this area other than for the AEMC to be fully aware of who is receiving benefits and who is paying costs for each option, and if there is potential for free-riding.

We are aware that a number of third parties would like to access information from participants. We request that AEMC consider privacy requirements and the costs (and opportunity costs) associated with these requests. Seemingly simple data requests can have large (and costly) system impacts. Furthermore some information requested from retailers (such as load control intentions by large industrial sites), does not reside with the retailer, but instead with the consumer.

11. What market conditions (technologies, processes, tariff structures, information etc) are needed, that are not currently employed in the electricity market, to make other DSP options available to consumers?

Market conditions that TRUenergy feel that would support DSP options include de-regulation of pricing and product terms, information provision to and from AEMO to ensure system security (in aggregated form) by demand side providers, and the development of universal standards to measure demand reduction. Consumer knowledge and understanding of options available is also required.

12. Do you consider retail tariffs currently reflect the costs to a retailer of supplying consumers with electricity?

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<sup>1</sup> <http://www.eecabusiness.govt.nz/how-to-be-energy-efficient>

The costs of supplying electricity can vary dramatically, particularly the wholesale energy cost. However metering and regulatory arrangements mean that for most customers their retail price includes a significant degree of averaging and cost smoothing, with the retailer playing an important risk management role.

13. Are any changes needed to retail price regulation to facilitate and promote take up of DSP?

Retail price regulation tends to stifle innovation. From a retail perspective, DSP products require significant innovation and regulated price caps and product terms can significantly limit these developments. Replacing regulated price caps with monitoring and consumer education will lead to more customer engagement and more product innovation, both of which will facilitate and promote the take up of DSP. Removal of unnecessary regulation of terms and conditions will also help innovation.

14. Do the charges to retailers for use of transmission networks reflect the value of that use?

The value of the transmission network for consumers is probably best assessed by the AER.

15. Do the charges to retailers for use of distribution networks reflect the value of that use?

The value of the distribution network for consumers is probably best assessed by the AER.

16. Do all consumer groups, including vulnerable consumers benefit from having cost reflective prices in place? If not, are any special provisions required to protect certain classes of consumers?

Allowing the market to freely target segments that will benefit from more innovative cost reflective pricing will in the long term drive efficient resource allocation.

In the long term if some consumers are able to self select themselves onto a price responsive tariff, they will be able to save energy costs. Consumers on non-price responsive tariffs would eventually end up paying higher than average costs, as a greater proportion of high demand periods would need to be covered by the non-price responsive tariff. This effect is diluted with the continual presence of regulated prices.

The key issue here is the mixing of economic efficiency and energy affordability, the greater the extent of the mixing of these two issues, the greater the cross subsidy between different consumers.

Under the current scenario consumers who could benefit from price responsive tariffs are effectively cross subsidising those who would not respond to price.

17. To what extent do consumers understand the how they can reduce their electricity bill? What information do consumers need in order to increase their understanding of how they can reduce and manage their electricity consumption and hence bills?

TRUenergy recognises that information asymmetry is an important issue in improving the uptake of energy efficiency. TRUenergy believes this could be addressed through greater coordination of information prepared by the various agencies which promote energy efficiency and that they provide case studies about effective energy efficiency strategies.

TRUenergy does not believe that initiatives such as Energy Bill Benchmarking under the National Framework for Energy Efficiency are effective or efficient. This policy which will come into force in July 2012 with the National Energy Customer Framework will compel retailers to benchmark their customers' consumption against the average for the local area. The problem with this mandated initiative is that the cost to build the necessary systems to provide the benchmark far outweighs the long term impact of customers reading their bill and then changing their behaviour.

In summary TRUenergy believes that other channels to provide information about the uptake of energy efficiency are more effective than a customer's bill. The issue for TRUenergy is that despite proprietary market research identifying more effective options for us to improve

information provision, we need to dedicate time and resources to develop the less effective but mandated solutions. This is another example of well meaning regulation limiting innovation

18. What issues are associated with provision of existing information in the market? Are there arrangements that could improve delivery of such information? If so, how and by whom?

For smaller customers we are not aware of specific issues associated with information provision, but recognise that information provision is constantly evolving, as the underlying technology that supports information provision is improved.

Consider the process of obtaining a bank balance over the years, many years ago one had to go into a branch (during working hours) or wait for a monthly statement. Then ATM machines emerged and balances were obtainable at more locations at any time. Internet banking enhanced this information to being able to receive the information at your own home at any time. Mobile phone banking has further enhanced this to being able to receive your balance via mobile phone at any location and any time. As technology evolved so did the ways and means of receiving information.

It is important to recognise that it is customers who control their demand response in most cases. If further information is required, it will need to come direct from the customer. We are aware of some suggestions that retailers have access to demand information which is not being made available. TRUenergy regularly participates in AEMO demand management surveys and is careful to advise any demand side services we have under management. However we do not have information about the operational intention of the many customers who may respond to price signals in the market and choose to opt for pool pass-through tariffs. Seeing retailers as the easy fix to source information on possible demand response availability would be a mistake. It is the customers themselves who have this information as would be expected in an evolving energy marketplace.

One long term concern has been the lack of competitive neutrality in information provision between large demand side and supply side participants in the NEM. While all generators greater than 30MW are required to provide detailed live information to AEMO on their operating intentions, several smelters appear to be actively responding to market prices without providing demand forecast information to AEMO. This impacts on the quality of market price formation and leaves other demand and supply side providers subject to unexpected market outcomes. Implementation of a competitively neutral approach to data provision between demand and supply participants in this area would improve market efficiency.

19. Could better information be provided to consumers regarding the actual consumption of individual appliances and pieces of equipment? If so, what information could be provided and in what form?

Labelling of new energy consuming appliances is prevalent. There are a number of initiatives that seek to provide information to the consumer on the cost of running appliances. TRUenergy is exploring a number of options on how best to provide that information to a consumer based on that consumers actual consumption (and not a generalised estimate of all consumers).

However this is a two-way conversation as consumers will need to want to get this information. The reality is that consumers who wish to conserve energy will self-select. These customers will fall into two main groups: the income constrained, who need to conserve to save money; and the tech-savvy who are comfortable with online engagement and exchange of information on their consumption habits, and who are inclined to conserve energy because they believe it is the right thing to do.

We expect this area of the market to develop as technology becomes more sophisticated without the need for regulatory intervention.

20. Are retailer and distributor business models supportive of DSP?

Yes the model can support DSP development, but it needs to be recognised that the benefits for each of these businesses will differ, and will not be additive in all instances.

The main channel for the distributor to communicate and signal where benefits can be accrued is via cost reflective pricing of distribution tariffs.

Retail business are incentivised to attract good quality customers, and to do this they must meet all customer energy needs including energy efficiency options where applicable. Any retailer who does not offer commensurate products to their consumers is at risk of losing significant market share to the competitors who do meet their customers energy needs.

21. What incentives are likely to encourage research and development of other parties to promote efficient DSP?

Consistency of regulatory environment is the largest hurdle for any research and development regardless of size of organisation doing the development.

Regulators will need to demonstrate they are willing to allow the benefits of innovative products to be enjoyed by their developers in the market. Any tendency of regulators to take a good idea, and mandate it across the market would destroy incentives to innovate in future.

22. Are there any regulatory, cultural or organisational barriers that affect take up of DSP opportunities?

Regulatory uncertainty or a frequently changing regulatory environment will hinder any commercial development of DSP opportunities. Smaller sized organisations will be more adversely impacted under this barrier relative to larger firms (as larger firms have diversified revenue sources).

It is unclear if organisational arrangements across the sector in relation to metering developments will prove flexible enough to support ongoing demand side innovation. This area warrants a watching brief.

23. What form of commercial contracts/clauses are required for facilitating and promoting efficient DSP?

The form of commercial contracts and clauses are a matter for parties developing the relationship. For a number of large scale measures the contract arrangements will need to be bespoke (for example network support contracts). However the AEMC should also take into account any monopoly bargaining power that can arise when a distribution or transmission company is one of the counter parties.

The other concern that would need to be addressed is when consumers either deliberately or inadvertently sell rights to interuptibility or load control to multiple parties.

24. Are there specific issues associated with investment in infrastructure needed for consumers to take up DSP opportunities?

One issue is the scale and size of investment. If the costs of an investment are so high that economies of scale must be employed to reduce costs and therefore require a mandated wide scale roll out, and assumptions have to be made so that all of recipients of the technology will produce net benefits then this is problematic. This is a case of trying to make the "numbers fit" in order to justify a project. Interval meters are being rolled out to all consumers in Victoria, but in retrospect the deployment could have been better targeted to reduce high costs of serve of certain segments (eg remote locations, inaccessible sites, sites with high turnover of tenancy), or segments that want enhanced offerings (eg online capability, including online billing, varying payment frequencies, etc).

25. Do you consider that the issue of split or misaligned incentives has prevented efficient investment in DSP from taking place?

The classic cited example is the landlord/tenant situation. However TRUenergy notes that in recent times, and in particular for commercial buildings, energy efficient buildings are able to command a higher rental rate than similar structures without energy efficiency enhancements. Where this is an issue, it relates to low quality household rental accommodation where demand

and supply constraints produce a seller's market with no real incentives on landlords to provide any attractive features for a property. This is a more generic issue relating to housing policy and housing standards.

26. What are potential measures for addressing any issues associated with split or misaligned incentives?

The only support would be some form of artificial mechanism to rectify the different assessments of the value of a DSP option. TRUenergy would be sceptical about the long term benefit of any artificial subsidy mechanism.

27. Are there specific issues concerning ease of access to capital for consumers and other parties?

A number of businesses could potentially invest in DSP options, but capital needs to be allocated to its most productive purpose within a business. The same capital that could be used to implement DSP could also be used to upgrade IT systems, improve sales and marketing efforts, etc. It is likely that these other investments would do more to increase the value of the business if the contribution of energy costs is low relative to other costs.

Education and innovative partnering arrangements could support the flow of capital to businesses to invest in DSP, for example distributed or cogeneration joint ventures. TRUenergy has actively explored co-investment in co-generation opportunities over the last 12 months. However market conditions such as the long term gas and carbon price outlooks, have been found not to support such investments at present.

28. What are the significant energy market challenges in optimising the value of technology and system capability to facilitate an efficient level of DSP?

The development of common information standards, to allow for different types of technology but able to communicate across different systems would be advantageous.

29. Do current technology, metering and control devices support DSP? If not, why not, and what are considered some of the issues?

There are a number of technology, metering and control solutions that support DSP and many of these have been around for many years. Ripple control systems, meters with registers to meter different time periods, and embedded generation are all well established technologies.

In many cases it is not an issue of technology but more about the processes used to enable technology solutions such as the ability for a retailer to independently load control household appliances. Commercial barriers remain the main hurdle to DSP adoption.

31. How can pricing signals/tariff arrangements be made complementary with smart grid technologies to facilitate efficient DSP in the NEM?

The reality is that the majority of consumers are not going to be active participants in the market. This means that if you are going to send a signal to elicit a response then a passive automated response mechanism is required. Sending an SMS and expecting consumers to respond would be unrealistic, whereas triggering a relay to start and stop equipment would be workable and could deliver more certain benefits that could be commercially valuable. Market based solutions will develop these options where they make sense as opposed to mandated solutions.

32. In maximising the value of technologies, such as smart grids for DSP, what are the issues relating to consumer protection and privacy?

Privacy of information is a key requirement, but information is also critical to work out what is happening in the system. Ultimately end use consumers should be able to access info (at reasonable cost to cover costs of retrieval and storage). Information in aggregate and not identifiable should be freely provided to parties involved in the system (including the retailer, distributor, AEMO, and regulators). Where information is "identifiable" eg for a specific

consumer household consumption some form of consumer release and compliance with privacy law is needed.

### **Market and Regulatory arrangements required to facilitate an efficient demand-supply balance**

33. To what extent do parties have appropriate incentives to put in place the systems, technologies, information flows etc that facilitate efficient DSP?

Modern systems are in their infancy. Many current systems for market participants are legacy systems and do not support some modern applications (such as greater internet information exchange). However this is rapidly changing with significant IT investment occurring in the sector over the past decade.

It is anticipated that over time that competitive market conditions will support greater levels of information flow to facilitate efficient DSP.

34. Are there aspects of the NEL or the Rules which prevent parties taking actions that would otherwise allow for more efficient levels of DSP?

The AEMC demand side participation review 2 found that on the whole the Rules were neutral to supply and demand side issues.

The reality is that to date it has been cheaper to develop supply side options. Therefore is it not surprising that the depth of knowledge and sector is geared to that supply side approaches. But given increasing supply side costs and the relative costs between supply side and different DSP options relative focus between supply and demand sides may rebalance.

One common issue raised by demand side proponents is the perceived onerous compliance burden required of participants. TRUenergy would suggest that the compliance requirements fall more or less equally on all participants.

35. Are there market failures which mean regulation is needed in some areas to ensure appropriate market conditions are in place?

TRUenergy does not believe that there are any material market failures. Consumers are receiving energy at the required reliability levels and this is foreseeable for the future as well. The NEO is being achieved.

TRUenergy also feels that regulated solutions tend to be a barrier and not a solution and therefore increase the risk of market failure as intended consequences distort supply-demand outcomes. Examples of this would include artificial price caps and floors.

### **Energy efficiency measures and policies**

36. What energy efficiency policies and schemes should be considered as part of this Review, i.e. as impacting on, or seeking to integrate with the NEM?

The AEMC should consider all energy efficiency policies and schemes that either seek to decrease greenhouse gas emissions, decrease energy or reduce peak demand.

TRUenergy would expect to see that policies that promote reduction of greenhouse gases by decreasing energy consumption to be wound back over time when a carbon pricing mechanism is implemented, as the intent of the carbon pricing mechanism is to reduce greenhouse gas emissions, and that the higher energy prices as a result of carbon pricing should provide incentive to reduce energy consumption.

All policies and schemes should also be reviewed as against the NEO to assess if there is indeed a long term benefit to consumers (as a whole) arising from these policies.

TRUenergy is concerned that the numerous and differing requirements of different policies and schemes at the State level present a barrier to entry to new retailers and providers of demand side solutions. These smaller organisations can be thwarted from expanding into different States if they are not able to achieve economies of scale such as utilising existing systems and supply chains and be able to roll-out new products across the entire NEM if they are required to comply with differing conditions in each State.

Finally we also ask the AEMC to give regard to the time scale of differing policies. TRUenergy is very concerned about the "boom-bust" cycle that can originate when policies are implemented for short term duration or when the terms and conditions change frequently. TRUenergy recognises that small business can provide high levels of innovation to the sector, and it is important that these businesses are sustainable over time.

37. To what extent can energy efficiency policies and schemes be adopted as options for enhancing the efficiency of DSP in the NEM? What are the strengths and limitations of energy efficiency policies as a DSP option compared to other options?

There has been a role for the energy efficiency policies and schemes. They are useful when the benefits of particular initiatives are small for each consumer, but significant across large groups of consumers. When benefits are low per consumer it is unlikely that they will do the research and development to implement energy efficiency policies.

TRUenergy does note that when implementing energy policies that full consideration of all costs, benefits and wealth transfers are assessed.

In the long term though TRUenergy has doubts about the ongoing viability of government mandated efficiency measures, especially when they are very specific. Over time as energy efficiency measures are implemented a degree of saturation will occur and the policy will then produce diminishing marginal returns. At that point in time more targeted measures will be required for specific consumer groups. We see a role for innovative commercial players to service specific consumer groups.

One risk in that continuing to mandate energy efficient policies is the risk of "regulating intellectual property". If a business was to develop and successfully implement an energy efficiency measure that was subsequently regulated, mandated or required to be provide by other parties, incentives for others to develop innovative solutions will be undermined.

38. To what extent do existing retailer obligation schemes facilitate efficient choices by consumers in their electricity use? Are there aspects of those schemes that facilitate efficient consumption choices more than others? If so, please explain.

Any scheme that requires a subsidy is not economically efficient. Once carbon pricing is in place it would be difficult to justify the existence of a number of existing schemes which were established to compensate for lack of a carbon price in the past.

### **Works Cited**

EPRI. (2011). *Estimating the Costs and Benefits of the Smart Grid: Preliminary Estimate of the Investment Requirements and Resultant benefits of a Fully Functioning Smart Grid*. Palo Alto, CA: EPRI, 1022519.