

Australian Energy Market Commission  
Power of Choice  
– giving consumers options in the way they use electricity  
Issues Paper

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## [Submission for the Review of Demand-Side Participation Stage 3 review In response to the Issues Paper](#)

### **Introduction**

Smart Grid Australia (SGA) welcomes the Review “Power of choice – giving consumers options in the way they use electricity issues paper” (the Issues Paper), Review of Demand-Side Participation Stage 3 review. We are pleased to have the opportunity to provide our independent industry points of view for your consideration.

This review is one that SGA has been supportive of and has sought the Australian Government to progress quickly as we view the review of demand-side measures important for better management of energy for the benefit of consumers and the energy industry.

SGA believes to effectively implement demand-side management to provide customers with greater control over their energy use and costs, new technologies will be necessary from the home right through the energy value chain back to energy generation to more effectively balance demand and energy supply. This way, energy providers can leverage the whole network to better align network prices with costs and provide customers with more effective pricing signals. Smart grids using new information and communications technologies are the tool for ensuring network operations are optimised while balancing changing energy supply and demand.

SGA's submission will cover key issues raised in the Issues Paper, namely:

- 1 Smart Grid Australia and an explanation of smart grids and their importance for our energy future
- 2 Consumer participation and DSP opportunities
- 3 Market conditions required for efficient DSP outcomes
- 4 Energy efficiency measures and policies

### **1. Smart Grid Australia and the importance of smart grids**

#### **Smart Grid Australia**

SGA is an independent industry body that supports the industry transformation towards an intelligent and efficient energy grid from generation to the home through the rollout of smart grid technologies. We are represented by a multi-disciplinary range of industry expertise reflecting our diverse membership – including utilities, power engineering suppliers, communications and networking and data management specialists, network construction and research organisations,

In addition, SGA links with other smart grid organisations, including through the Global Smart Grid Forum from around the world, including Korea, the United States, Ireland, Japan, India and Canada to share best practices, identify barriers and solutions, foster innovation, and address key technical

and policy issues and global experiences of smart grid investments in energy systems. We bring these experiences and insights into smart grid practice in Australia.

### Importance of smart grids

To assist the Review's understanding of Smart Grids, they are defined as follows:

"A Smart Grid is an electricity network that can intelligently integrate the actions of all users connected to it – generators, consumers [and all stakeholders] and those that do both – in order to efficiently deliver sustainable, economic and secure electricity supplies."<sup>1</sup>

Based on this definition, smart grid employs innovative products and services together with intelligent monitoring, control, communication, and self-healing technologies to:

- better facilitate and manage the connection and operation of generators of all sizes and technologies;
- give consumers more choice so they can help to optimise energy use;
- provide consumers with greater information and choice of supply;
- significantly reduce the environmental impact of the whole electricity supply system;
- deliver enhanced levels of reliability and security of supply.

Smart Grid deployment requires combining information and communications technologies, market and commercial considerations, environmental impacts, regulatory framework, standardising usage, working through migration strategies and also managing social and government requirements to optimise energy usage.

To paint a picture of what a smart grid will look like, here is some information from our United States counterpart, GridWise Alliance:

"The Smart Grid envisions an entirely transformed electrical infrastructure. It will embody a network of devices as vast, interconnected, automated, and interactive as the Internet.

A Smart Grid will:

- **Integrate** the utility electrical system with telecommunications systems and innovative technologies. Consumers will be able to reduce the cost of electricity they use; utility companies will reduce their cost to deliver it<sup>2</sup>.
- **Deploy new systems** to integrate clean sources of energy such as wind power, solar power, fuel cells, and batteries to store the vast amounts of excess electricity that can be produced when sun and wind conditions are optimal.
- **Employ new tools** and techniques to more efficiently and securely balance power between rising and falling demand.
- Be managed with **rapid response digital controls**, automated problem analysis, and automated devices, much like the Internet is managed today.
- Deliver new and **essential business intelligence**, be self-correcting, and allow networks of connected "assets" to communicate with each other.

<sup>1</sup> <http://www.smartgrids.eu/?q=node/163> (By the European Energy Technology Platform)

<sup>2</sup> While this view may be consistent for the US in Australia consumers are more likely to minimize cost increases and dependent upon the growing complexity of the network (ie additional solar) the cost of delivery may not reduce for utilities.  
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- Allow utilities and consumers together, to use information-rich dashboards and decision tools to **manage the grid in real time.**
- **Flexible and adaptable system** that will transmit and distribute the power required for economic growth for the next 20 years and beyond. Transforming today's grid to a Smart grid is possible, prudent, and necessary.<sup>3</sup>

To quantify the benefits of smart grids, SGA has drawn together international research into the following table that demonstrates where the benefits of smart grids are derived from. It is worth noting, that studies such as that of Pacific Northwest National Laboratories demonstrates that the benefits of smart grids are not from a particular technology, but from bringing together those technologies. This view is consistent with SGA's view of the importance of DSP. Benefits from DSP will be greater when DSP technologies are brought together with other smart grid technologies to best manage and control and ultimately optimise network operations.

**Table 1: Benefits of smart grids and smart metering:**

Organisation	Nature of benefit	Benefit
1 <b>Texas</b>	500 participant smart meter In-Home Display pilot programme in Texas	<b>7.1% of customers</b> reported that they have changed their electricity consumption behaviour as a result of having access to their energy use data. <sup>4</sup>
2 <b>Baltimore Gas and Electric</b>	Energy efficiency and smart grid investments avoided costs from building a natural gas peaking plant	The \$165/kW invested <b>saved \$1000/kW</b> in new investment. <sup>5</sup>
3 <b>GE</b>	Based on Energy Power and Research Institute research	<b>25%</b> reduction in carbon emissions if smart grid are deployed <sup>6</sup>
4	Distribution demand response – reducing electrical loss through sensors – if installed in 10% of feeders	Reduces electricity consumption by 9.3 billion kW per year or a CO2 equivalent of taking <b>1.1 million cars off the road</b> <sup>7</sup>
5 <b>The Economist</b>	Studies <sup>8</sup>	When people are made aware of how much power they are using, they <b>reduce their use by about 7%</b> . With added incentives, people curtail their electricity use during peaks in demand by <b>15%</b> or more.
6 <b>Enel</b>	Smart meters	Enel spent around €2.1 billion (\$3 billion) installing its 30m smart meters in Italy, but now saves around €500m a year as a result, so its <b>investment paid for itself within five years.</b> <sup>9</sup>
7 <b>Brattle Group (US)</b>	In home smart grid technologies	Studies have shown that the best in-home smart-grid technologies can achieve <b>reductions in peak demand of up to 25%</b> , which would result in savings of more than US\$325 billion. <sup>10</sup>
8 <b>Pacific</b>	Multiple smart grid technologies	Smart Grid provides the potential for direct <b>reductions</b> in

<sup>3</sup> GridWise Alliance, "And then there was..."

<sup>4</sup> [http://www.gridwise.org/documents/SG%20Efficiency\\_5\\_5\\_10\\_final.pdf](http://www.gridwise.org/documents/SG%20Efficiency_5_5_10_final.pdf)

<sup>5</sup> [http://www.gridwise.org/documents/SG%20Efficiency\\_5\\_5\\_10\\_final.pdf](http://www.gridwise.org/documents/SG%20Efficiency_5_5_10_final.pdf)

<sup>6</sup> [http://www.itsyoursmartgrid.com/energy\\_issues/environment.html](http://www.itsyoursmartgrid.com/energy_issues/environment.html), Electricity Technology Roadmap: 2003 Summary and Synthesis - Power Delivery and Market. EPRI document number 1009321, November 2003

<sup>7</sup> [http://www.gridwise.org/documents/SG%20Efficiency\\_5\\_5\\_10\\_final.pdf](http://www.gridwise.org/documents/SG%20Efficiency_5_5_10_final.pdf)

<sup>8</sup> C:\Documents and Settings\Administrator\My Documents\IUN\Policy Analysis\AEMC\DSP review\SGA response material\Energy Building the smart grid The Economist.mht

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<b>Northwest National Laboratories</b>	
9	<b>The Impact of Smart Grid on Climate Change</b>

Energy, Power Research institute

US electricity sector consumption and emission reductions of **12 per cent in 2030**, with further **indirect reductions of 6 per cent**.<sup>11</sup>

Reduced 1.3 to 4.3 per cent of energy retail sales<sup>12</sup>  
 Detecting malfunctions in premises and identifying improvements, such as in thermostats etc by sending data to third parties can **reduce energy consumption by about 9 per cent**.<sup>13</sup>  
**Reduced CO2 emissions by between 10 and 20 per cent**.<sup>14</sup>

SGA has been actively engaged in defining what is needed to facilitate the adoption of Smart Grids. This includes important tools for consumers to manage their energy use through smart metering technologies. SGA believes that to optimise energy network operations and control, including enabling customers' participation, the whole suite of smart grid technologies are necessary. It is our view that energy companies and governments need to look beyond the meter to maximise the synergies of all these technologies, to fully evaluate the interactions of all participants, including customers.

It is our view that Smart Grids with their intricate role to assist network operators maximise the benefits of their investments through using information and communications technologies to optimise network operations – from right across the network to the consumer will positively contribute to the main market features outlined in the Issues Paper:

- DSP options for consumers and intermediaries
- Market conditions including information systems, pricing structures and technology
- Market and regulatory arrangements including regulatory mechanisms that incentivise DSP by influencing behaviour and informing consumers of their choices.

## 2. Customer participation and DSP opportunities

Recognising the importance of customer engagement, and the trends in public debate around Smart Metering and Smart Grids, SGA recently released a Consumer Report entitled 'Maximising Consumer Benefits'<sup>15</sup>. This report, which was developed through a unique cross industry collaboration with energy retailers, distribution companies, academia, technology vendors and consultants, explores some of the issues, and offers pragmatic solutions on how to effectively manage consumer engagement in programs of this nature.

The issues surrounding smart metering below draws heavily on the SGA Consumer Report

As context to our submission, it is worth noting the following known and emerging consumer behaviours. They have informed our view and helped SGA develop recommendations as we see consumer trends shifting significantly and with further rapid change expected over the next 3-5 years.

1. **Modern energy consumers are contradictory, price sensitive and yet are demanding choice, convenience and a greater degree of knowledge of their household energy usage.** Consumers are unsympathetic to the challenges of an ageing energy infrastructure

<sup>11</sup> Pratt, et al, The Smart Grid: An Estimation of the Energy and CO2 Benefits, prepared for the US Department of Energy by the Pacific Northwest National Laboratory, Richland, Washington, January 2010, p.V

<sup>12</sup> <http://www.generatinginsights.com/whitepaper/the-impact-of-smart-grid-on-climate-change.html>, page 14

<sup>13</sup> <http://www.generatinginsights.com/whitepaper/the-impact-of-smart-grid-on-climate-change.html>, page 16

<sup>14</sup> <http://www.generatinginsights.com/whitepaper/the-impact-of-smart-grid-on-climate-change.html>, page 17.

<sup>15</sup>

[http://www.smartgridaustralia.com.au/SGA/Working\\_Groups/SGA/5\\_Working\\_Groups/Working\\_Groups.aspx?hkey=71a48278-bdd9-4f68-ab74-0a0a4de5dc8a](http://www.smartgridaustralia.com.au/SGA/Working_Groups/SGA/5_Working_Groups/Working_Groups.aspx?hkey=71a48278-bdd9-4f68-ab74-0a0a4de5dc8a)

and the continuing need for replacement and upgrading of distribution network equipment and generation. They are understandably concerned with rising energy prices and the impact on their household expenditure. Whilst behaviour and attitudes vary by segment the modern energy consumer is largely price sensitive and at best unconcerned, and at worst sceptical, to efforts to modernise the grid. However, primary research now suggests that the modern energy consumer is demanding greater choice, better convenience and a greater degree of control and awareness of energy usage in the home. There are now distinct consumer segments that are demanding more energy efficient services and are expecting that the industry and government respond convincingly to their needs.

- 2. All segments of society are impacted by the advent of Smart Grids and safety nets and payment assistance support is on the increase here in Australia.** Our research suggests that approximately 18% of any geographic base are considered to be 'at risk' or suffering 'hardship'. Feedback from consumer advocacy groups suggests that there is a lack of support for the growing number of those households who are low income, or have communication complexities or specialist medical needs. Low income households in particular have shown an interest in engaging more effectively in energy efficient practices to help them manage the impact of energy prices.<sup>16</sup>

Our response to the questions raised in the Issues Paper for Consultation are addressed in each Section below. For ease of reference we have also included the pages within our Consumer Report where additional detail is provided.

### Specific Issues – Sharing Benefits

Australia, like the rest of the world, is now at the point of transition to a new era where the adoption of clean energy will increase dramatically, networks will need to significantly change to incorporate new low-carbon technologies and customers will demand greater insight and control over their own consumption. There is no doubt that Smart Grids are a critical enabler of that transition with Smart Meters being the point of consumer connection to the grid.

Consumers need to be educated, engaged and motivated to change their behaviour to be more energy efficient. There is a need for a well focussed education program on the overall benefits of 'smarter technologies', to allow a diverse range of customers and other stakeholders to understand the benefits.

For example Smart Grids benefit customers as they:

- Provide the capacity to integrate more renewable energy into existing networks;
- Provide the ability to manage increasing numbers of electric vehicles;
- Enable customers to have greater control of their energy through devices such as Smart Meters and in home displays of energy usage;
- Facilitate considerable capacity to reduce global carbon emissions; and
- Stimulate an array of new business models in the energy sector offering consumers more choice and convenience.

Experience has shown that consumer education efforts have failed where they have over-promised results, specifically in reducing costs to consumers. It is our belief that in fact price reductions are not the guaranteed outcome of the enablement of Smart Meters, particularly in the short term. The initial benefits are more likely to be derived from better control of in-home energy usage enabling a change in behaviour on the cost of when and how energy is used. This can lead to minimising long term price increases but a sustainable change in consumer behaviour is required.

The timing and scale of realising benefits are dependent on consumers and the industry working collaboratively to enable:

<sup>16</sup> Source: Accenture New Energy Consumer Research

- Consumers to identify and take appropriate action, change their behaviour, potentially to reduce their bills, based on more granular and timely information about their energy usage and the costs of that usage.
- Utilities to pass on demonstrated savings to consumers based on operational efficiencies and deferred infrastructure spend, taking into account the growing complexity of the network in response to customer requirements, such as small solar generation, may incur higher costs.
- Communities to achieve a lower carbon energy profile through the enablement of more renewable generation connected to the grid in ways that minimise adverse impacts on the network.
- Consumers across all segments of society to realise lifestyle improvements through flexibility and control of in home generation and storage, new consumer applications such as Home Area Networks that provide choice and convenience.

### 3. Market conditions required for efficient DSP outcomes

The SGA Report recommends a number of fundamental approaches to improving consumer engagement and specifically in improving the adoption of this new household technology. SGA believes that these are important conditions that are necessary in developing DSP and ensuring efficient outcomes are delivered. The recommendations include:

[Recommendation 1: Understand consumer impacts and then adopt more effective consumer engagement techniques, fund the industry eco-system to facilitate collaboration and build grass roots support in our communities.](#)

Our research has helped define an industry standard for consumer segmentation and defined the likely consumer impacts (pages 21-27 in our Report). We have developed a 'formula' for effective consumer engagement which includes:

- A broad community based dialogue where minimising long term price increases are not the only outcome, benefits are explained in simple easy to understand terms and safety nets are in place for those that need them.
- An aligned and co-ordinated approach to engaging consumer advocacy groups to facilitate better understanding in the community as impartial consumer advisors. These trusted relationships already exist but are under-utilised as a positive influence.
- Publicised examples of cost efficient high-quality solutions to maintain public confidence and achieve consumer benefits. These need to be easy to understand examples that focus on consumer outcomes but also demonstrate the robustness of potential solutions.
- Diverse trials and pilots to gain public support, instil energy literacy and to understand incentives across the electricity value chain. There are many trials underway both here and overseas but few that are publically available for information sharing. This can be easily facilitated with additional funding and an established program of communication.

[Recommendation 2: Proactively develop and fund a specific approach for supporting consumers in 'hardship' and engage communities in society based activities to fully understand the impact and potential of Smart Metering.](#)

International experience affirms that Smart Grids and specifically Smart Meters actually offer low income and vulnerable groups benefits which could be made more explicit such as pre-payments, lower connection charges and pricing options to suit their particular needs. This has been seen specifically in the UK, Canada and across Europe.

Here in Australia, we recognise that consumer advocacy groups are concerned that vulnerable or “at risk” groups may suffer hardship or be stranded with high bills or limited choice in paying for their energy usage. We understand the concern that cost reflective pricing may potentially disadvantage some consumer segments and this could lead to “energy poverty”. Consumers of particular concern include low income groups (pensioners, stay at home single mothers, unemployed, sick or disabled people) who may be at home during the day and at other peak times and cannot simply switch off their appliances or change their behaviour to use less energy during peak times.

Our recommendation from our Report (Pages 28-32) is to:

- Establish ‘safety nets’, tailored communications and education of those segments considered vulnerable or ‘at risk’. There are many successful examples from overseas including BC Hydro in Canada.
- Build greater community trust by engaging with the Community and reinforcing the position of Consumer Advocacy groups as trusted advisors.
- Explicitly state the benefits to low income or vulnerable groups from initiatives such as prepayments, shadow bills and lower disconnection / connection charges.

Many industry players already have established ‘safety nets’ for those considered at risk of ‘hardship’. Similar mechanisms have been used extensively overseas and could be extended here in Australia to include a combination of:

- Peak tariff discounts
- “Energy Literacy” programs
- In-language and visual tools
- Appliance efficiency programs
- Managed payment schemes
- Government rebates and subsidies

We recognise that ‘hardship’ consumers are not simply one category or segment. There are several different sub-segments with their own needs. Any approach needs to effectively address those that are financially challenged, don’t own their own homes, have limited mobility or health issues or communication complexity. Issues for these consumer segments and an example of appropriate treatment of each issue is documented on Page 32 of our Report.

[Recommendation 3: Focus on addressing immediate education and engagement to dispel the myths, address negative media coverage and build ‘energy literacy’ across all elements of society.](#)

Misinformation in the media relating to Smart Meters has led to greater levels of distrust in consumers. Our recommendation to start to re-build trust is to focus on building energy literacy.

Few consumers understand their supply arrangements and are confused with off peak, peak and time of use pricing. A broad based education campaign is required to explain:

- How does energy get to my home and how is it used?
- How much does it cost? Why and when?
- What happens when the lights go off? And who does what?
- What is a Smart Meter and what does it help me do?
- Why do I have to pay now for a Smart Meter?

However, education alone is not sufficient. Building energy literacy will require the provision of simple tools with which consumers can engage.

There are many examples of in home energy management tool sets and energy audits that can effectively teach consumers how to be more energy efficient and enable them to realize the benefits for themselves. Several practical examples are provided on Pages 33-42 in our Report.

#### Example of Customer Engagement in Australia

To demonstrate how a customer engagement strategy may be conducted, one of Smart Grid Australia's members is currently undertaking a smart grid and metering trial, where consideration of the stages of customer adoption has been a key driver. The broad stages are vision, visibility, control, and incentive. Grid-side initiatives lead the way, followed by the engagement of customers via various means including direct consultation with community members, the hosting of community information days, regular newsletters and updates, and the building of a smart grid demonstration unit in the local area to educate customers about what the new technology will look like and mean for them, and to help build the vision of what the smart grid offers.

While a broad-based meter upgrade is occurring in the trial area, customers who have expressed an interest will be provided with access to immediate and detailed feedback on their electricity consumption by way of in-home displays and a web portal within a relatively short period of time after their meter is installed. There is recognition that existing electricity pricing would likely motivate customers to change behaviour if they had the means to do so, and that a degree of reduction in demand could be achieved simply through the provision of more detailed information as promised by smart meters. Consumption information will be supplemented with energy efficiency/literacy education, energy audits and further tools to facilitate behaviour change. Finally, after customers have visibility of their consumption, and understanding, confidence and trust have been built, they will be offered incentives by way of alternative tariff structures and rebates to further motivate behaviour change, although they'll be under no obligation to take them up.

In conclusion, our view is that DSP is a key enabler for Australia to develop a more effective and efficient electricity sector, and to operate as a lower carbon economy. It is imperative that customers have greater control over their own usage and therefore their own costs. Without this technology in place in every household the rising energy prices will cause concern for consumers and potentially grave hardship for those considered 'at risk'.

A great deal of momentum has been gained and many households both in Australia and around the world through DSP measures, as demonstrated in Table 1. Many energy providers are waiting for the next stage of enablement with TOU pricing that gives consumers greater influence on managing their own costs. Many industry players have already deployed such measures as Smart Metering and have re-structured their organisations to operate in the new metering enabled 'world'. There is already momentum established that should see the program deliver important benefits. However we consider that the program needs to have a much stronger focus on effective customer engagement.

SGA recommends that consideration be given to:

- A state wide education program that covers Metro, Regional and Rural areas and uses society based marketing techniques to facilitate better engagement.

- Alignment and co-ordinated funding of consumer advocacy groups in the Smart Meter deployment with a specific focus on those 'at risk' (estimated to be 18% of all consumers).
- Additional funding for the Distribution and Retail businesses to provide engagement tools and facilitate additional education programs (this has been up to 20% of total program costs overseas).
- A new governance mechanism that facilitates open and consistent communication on progress, successes and benefits realisation to share across the industry eco-system and through to consumers.
- An agreed framework on security and privacy aspects to enable consumers to have access to and ownership of their smart metering data. This should be made explicit to consumers and information provided to help them understand how they can access and utilise the data.

#### Example Texas: Smart meter displays change consumer behaviour in Texas

Survey results from a 500 participant smart meter In-Home Display pilot programme in Texas show that 71% of customers reported that they have changed their electricity consumption behaviour as a result of having access to their energy use data.

The survey was carried out on the back of the implementation of smart meters and intelligent grid technology partly funded with a \$200m Smart Grid Investment Grant from the US Department of Energy.

The survey responses showed that:

83% of respondents reported turning off lights at night or when not in the room,

51% adjusted the temperature on their thermostat,

93% reported they are satisfied with their in-home display, and 97% reported they will continue using it.

To date, CenterPoint Energy has installed nearly 1.5 million smart meters in its 2.2 million meter system, with complete deployment due next year. Consumers who have already received their smart meter can get detailed information on their electric usage by visiting SmartMeterTexas.com. In the future they will have the option of purchasing an in-home display, providing them with up-to-the-minute usage information.

There's a lot of scepticism about the use of smart meters, particularly if all they provide is information about energy use, as in this case. It's interesting to see how and when energy is used and the impact minor changes in use can have, but you can't help wondering whether the novelty will wear off. This survey confirms that this type of real-time data can have an impact, but they need to carry out a follow-up survey in a year or two to see if people are still taking any notice.

Smart meters may have some impact on their own, but my view is that they will only really come into their own when they're combined with smart grids that offer differential pricing, so you can actively manage energy use to save money. Without that, the best bet to reduce usage is to provide online analysis that shows the customer's electricity use compared with figures for neighbours. Wanting to do better than others (and save more money than they do) is a powerful incentive.<sup>17</sup>

## 4. Market and regulatory arrangements

It is clear from SGA's Consumer Report that consumers are price sensitive and would like greater choice, understanding and convenience around energy use. However, DSP is slow to respond to these consumer demands. While there are some trials and pilots being carried out by energy

<sup>17</sup> <http://www.thegreenitreview.com/2011/08/smart-meter-displays-change-consumer.html>

providers (retailers and distributors), these activities have not become what we would call 'mainstream' or business as usual.

The reasons for this are not clear and are possibly because of a combination of factors. For example the fact that energy supply is rewarded for increasing energy use, not for managing demand. The lack of available data for consumers means they are generally unaware of the potential to better manage their demand and how much energy they are using.

To address these issues, SGA would suggest that the Australian Government clearly maps a roadmap or transition plan that includes:

- Government, in partnership with energy providers, develop programs for consumers to become well informed and educated about energy, cost drivers, pricing and how to effectively saving energy and roll these programs out in advance of real time energy use information and moves away from average pricing.
- Develop timeframes for consumers to have access to information about their energy use. This can be done by encouraging energy providers to start accelerating trials of smart meters and smart grid technologies and to quickly move beyond trials when results are known by providing timeframes for consumers to be able to have access to real time energy information.
- Develop timelines and key milestones for energy providers to start to migrate consumers away from average pricing and they can start offer pricing that reflects costs, using peak and off peak charging as a starting point.
- From 2012 energy providers start reporting and the Government starts to publicise results of DSP pilots and trials to share with the industry what can be achieved and this be done while awaiting the results of the Smart grid, Smart City demonstration project.
- Learn from the experience of Victoria and move away from regulated retail pricing towards price monitoring under a structured timeframe with key milestones.

## 5. Energy efficiency measures and policies

SGA has made representations to the Australian Government to consider the following options, as part of the Prime Minister's Task group on Energy Efficiency. These recommendations could comprise transitional or complementary measures within a comprehensive approach:

- **National Energy Efficiency Target Scheme:** A national white certificate or retailer obligation scheme, with a range of Smart Grid technologies and applications included as prescribed activities.
- **National energy education/information campaign:** Promoting energy conservation, consumer empowerment and the potential benefits of a transformed energy future.
- **Independent hub for the collection and sharing of consumer and smart grid data:** Ensuring that data is made available to help develop a competitive market in new service offerings.
- **National 'Smart Precincts' Program:** Competitive grants to fund precincts demonstrating high levels of distributed and renewable generation.

- **Skills development:** examine the skills needed and how they can be developed across the industry.

SGA recognises that many of these measures have been adopted in some form as part of the Australian Government's 'Clean Energy Future' policies for pricing carbon. This is a good starting point. SGA welcomes greater coordination of energy efficiency arrangements and we supported the key recommendations from the Prime Minister's Task Group on Energy Efficiency. Importantly however we recommend energy education and other technologies and activities such as In Home Displays and energy consumption portals should be investigated for inclusion as prescribed activities in a national energy saver scheme.

In addition we believe that smart grids will increasingly become an important tool for measuring, monitoring and delivering greater network energy efficiency. The transparency of network operations and the ways smart grids can capture data will help energy providers and the Australian Government achieve these key objectives.

Accordingly we would like to see smart grid technologies that help network operators improve energy efficiency (which is estimated to be as high as 20-25 percent from the studies in Table 1 above) be incentivised. This will enable them to receive the benefits of their investments that improve energy efficiency and deliver real benefits, like other technologies.

## Conclusion

SGA welcomes the DSP Review and the opportunity to contribute. We believe there are tangible benefits from new information and communications technologies to assist DSP in the use and management of energy. Through leveraging these technologies across the energy network, operators (including network distributors) can best manage DSP, by effectively and seamlessly linking the demand with the supply-side of electricity.

To encourage DSP, SGA would encourage the Government to develop ways to learn from what distributors and retailers are doing in the market to encourage greater customer control and management of their energy. From here timeframes and milestones for distributors and retailers to develop DSP measures can be built.

To deliver DSP, engagement with the consumer is important, particularly engagement that links in with consumer groups that can assist development of suitable pricing and engagement strategies that work for those that are more vulnerable.