Ms Kristin Tilley
Assistant Secretary, Energy Savings Initiative Secretariat
Department of Climate Change and Energy Efficiency
Email: energyefficiency@climatechange.gov.au

Dear Ms Tilley

The Energy Efficiency Council (EEC) welcomes the release of the National Energy Savings Initiative (ESI) Issues Paper. This submission sets out the EEC's high-level positions on the design of the ESI. The attachment to the submission covers these issues in more detail.

The EEC is the peak body for energy efficiency, demand-management and cogeneration services and products in businesses and government, and brings together experts from across Australia to support the development of policy and programs. Incorporating expert advice into the design of energy efficiency policy and programs significantly improves their effectiveness and reduces the risk of unintended consequences.

The EEC strongly supports the development of an ESI and welcomes the Australian Government's commitment on 10 July 2011 that it would *"expedite the development of a national energy savings initiative and will examine further how such a scheme may assist households and businesses to adjust to rising energy costs".*

There is a clear case for establishing an ESI to help households and businesses adjust to rising energy costs. Most advanced economies have in place, or are considering, schemes similar to the ESI. Energy prices are rising rapidly in Australia, and globally, because of expenditure on the network (sometimes called 'poles and wires'), rising fuel costs and a shift to more expensive forms of generation. However, the structure of Australia's energy market and a number of barriers make it hard for households and businesses to respond to rising energy prices.

An ESI can be an effective tool to address the barriers to energy efficiency, as part of a suite of measures including reforms to the energy market to address peak demand. The EEC recommends that, as part of this suite:

> *"The primary objective of the ESI is to* ***help households and businesses manage rising energy costs by improving consumption efficiency*** *– specifically via the uptake of socially cost-effective energy efficiency, distributed generation and demand-side activities.*
>
> *The ESI will improve the economic efficiency of Australia's stationary energy markets, which will reduce the cost of achieving Australia's emissions targets.*
>
> *The ESI will focus on saving households and businesses money by improving the efficiency of energy consumption (GJ per unit of service), but will also help mitigate energy price rises by providing support for specified technologies that reduce consumption during periods of peak demand."*

A well-designed ESI would achieve this objective by:

- Providing a positive price signal for demand-side activities to correct distortions in energy costs that are practically difficult to reform, such as cross-subsidisation for installing and using air conditioners.
- Enabling third-parties to help consumers undertake coordinated demand-side activities at scale. This would address the structural imbalance in the energy market which encourages supply-side activities at scale but impedes delivery of demand-side activities at scale.
- Creating an incentive for businesses to find ways to overcome well-known market failures that prevent the take up of privately cost-effective energy efficiency, including information barriers, bounded rationality and split-incentives.
- Enabling market-transformation in the supply of energy efficiency goods and services, such as high-efficiency motors.

The ESI will address these barriers, making it easier for households and businesses to respond to rising energy prices. The ESI should stay in operation until other policies and energy market reforms are enacted that address these barriers. This is unlikely to occur before 2030, but reviews should be undertaken in 2020 and then every 5 years to determine if the ESI is still necessary.

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An ESI would reduce total energy costs across the economy by reducing:

- Fuel inputs per unit of service; and
- Carbon input per unit of service; and
- Peak energy demand, noting that this should not be the primary focus of the scheme

Modelling for the Prime Ministers Task Group suggested that an ESI could reduce household energy bills by $87 to $296 a year by 2020, including $3.5 to $12 billion in deferred generation and network costs[1]. The EEC welcomes the Australian Government undertaking more detailed analysis on the costs and benefits of an ESI.

The primary purpose of an ESI should be to reduce energy costs, not reduce emissions. Although an ESI will support actions that reduce emissions, under a capped emissions trading scheme these actions will displace other forms of abatement (e.g. the purchase of international permits) rather than directly increase total abatement. However, because the ESI will displace high-cost forms of abatement with negative-cost abatement, it will reduce the carbon price and the total cost of achieving Australia's bipartisan emissions reduction target. In turn, lower carbon prices may encourage the Independent Climate Commission to raise Australia's emissions target.

While the purpose of an ESI is to reduce energy bills, if a future Government removed Australia's emissions trading scheme an ESI would also deliver substantial greenhouse gas abatement. ClimateWorks Australia estimates that energy efficiency and cogeneration could deliver a third of Australia's bipartisan 2020 emissions reduction target (61 Megatonnes) at negative costs, in some sectors saving over $100 per tonne of CO_2^{e-} saved[2].

Peak electricity demand

Tackling peak electricity demand is critical to keep electricity affordable in Australia. Peak demand events that last less than 0.5 per cent of the year are responsible for between 10 to 25 per cent of electricity costs, because we are currently building infrastructure to meet the requirements over these very short periods of time. The peak demand problem is getting worse, as peak demand grows at 2.6 per cent per annum, whereas the rate of growth total electricity consumption has been declining, and consumption has not actually increased in the last two years.

If Australia successfully reduces total electricity consumption, but does not reduce peak electricity demand, total electricity costs will go down but the cost per unit of electricity will increase. However, if Australia reduces peak demand as well, it will reduce the expenditure on electricity infrastructure and hedging costs, which would reduce both electricity prices and electricity bills. Ernst & Young recently estimated that tackling peak demand could save up to $15 billion between 2011 and 2030[3].

An ESI that focuses on consumption efficiency can be used to address part of the peak demand problem. Improving consumption efficiency (typically measured in MWh) is not identical to reducing peak demand (typically measured in MW), but some measures that reduce MWh also reduce MW. For example, if the ESI improves the efficiency of domestic air conditioning, which is the primary driver of demand during critical peak periods, it should reduce peak demand, noting that the relationship between air conditioner efficiency and peak demand is complex and not linear.

However, Australia needs a number of measures working together to effectively tackle peak demand issues. Firstly, there are several measures that can cost-effectively reduce peak demand (e.g. load shedding by industry) that an ESI that focuses on consumption efficiency will not address. Furthermore, reductions in peak demand will not translate into reductions in infrastructure expenditure unless network distribution companies are regulated in a more effective way. Therefore, the ESI will deliver substantially more benefits if it is complemented by:

- A mechanism to allow demand-reduction to compete with supply during critical peaks; and
- Reforms to the way that distribution and transmission companies are regulated and compensated.

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[1] Department of Climate Change and Energy Efficiency 2010, *Report of the Prime Minister's Task Group on Energy Efficiency*, Department of Climate Change and Energy Efficiency, Canberra

[2] ClimateWorks Australia 2010 *A Low Carbon Growth Plan for Australia,* ClimateWorks Australia, Melbourne

[3] Ernst & Young 2011 *Final report - AEMC Power of Choice: Rationale and drivers for DSP in the electricity market – demand and supply of electricity*, Ernst & Young

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If the Australian Energy Market Commission (AEMC) cannot deliver these in a timely fashion, the Australian Government should consider establishing a mechanism alongside the ESI that purchases peak reductions (MW) during periods of peak demand. However, the EEC prefers that these mechanisms would be delivered through National Energy Market (NEM) reform.

Additionality

The goal of the ESI is to improve the economic efficiency of the energy market, which means that the ESI must drive 'additional' demand-side activities, in other words, activities that would not happen in the absence of the ESI. For example, providing incentives for products that are already mandated by standards does not deliver 'additional' efficiency. The energy efficiency and cogeneration sector does not benefit from incentives that do not drive additional projects.

However, while the ESI must overall drive additional demand-side measures, it is not critical to ensure that every single project it drives is additional. In fact, while the ESI is likely to support some projects that are non-additional ('free-riders'), it will change market conditions in ways that drive many additional projects without financial support ('free-drivers'). The scheme needs to be designed to ensure that, overall, it drives additional demand-side measures, while minimising transaction costs. In fact, if the transaction costs are too high it won't generate additional projects.

Finally, the EEC strongly urges the Government to take appropriate steps to eliminate rorting, which negatively affects the energy efficiency industry. An effective and aggressive monitoring, compliance and penalty regime will be able to address this issue

Design Features

The EEC believes that these high-level principles lead naturally to the key design features. The scheme should:

- Be a baseline-and-credit scheme, with retailers as the point of obligation
- Be tradable and certificate-based with limited borrowing.
- Operate in all sectors that use stationary energy (residential, commercial and industrial)
- Cover electricity and gas, and the government should consult further on coverage of coal and liquid fuels where they are used for remote generation or mining/industrial activities. The scheme should initially exclude transport fuels, although this could be considered later.
- Allow large energy-users to opt out if they agree to meet a target for improved efficiency
- Focus initially on the National Electricity Market (NEM) and South West Interconnected System (SWIS), with expansion later to other grids
- Measure savings in additional GJ saved, weighted to address fuel-switching. This could be communicated in several ways, such as 'GJ saved' or 'lightbulbs saved'
- Consider additional support for efficient air-conditioning to ameliorate peak demand.
- Have a target set as a percentage of liable sales (like NSW) equivalent to the size of the current NSW scheme, expanded to the population connected to the entire NEM
- Support full participation of low-income households. This goal may be best achieved by a fund that supports certificate generation in low-income households. The EEC does not object to a sub-target, but notes that this would decrease scheme efficiency.
- Establish an independent Measurement and Verification Authority to establish and approve certificate methodologies, similar to the Domestic Offsets Integrity Committee. The Authority should develop certificate-generation methodologies including deeming, project based-assessment, guaranteed energy saving projects and use of the International Performance Measurement and Verification Protocol (IPMVP). Private proponents should also be able to develop methodologies for consideration by the Authority.
- There should be no grandfathering of activities and a time-limit for claiming credits, although certificates generated from state schemes should be exchangable for the first two years of transition to prevent the market prices of existing schemes from crashing.

It is critical that the Australian Government also address peak demand issues to keep electricity affordable. The EEC recommends that the ESI support efficient air conditioning, but on its own this will not be sufficient to fully tackle peak demand issues. Therefore, the EEC reiterates its

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preference that that peak demand be largely addressed through NEM reform. However, if the AEMC is unable or unwilling to expedite a system for buying demand-reductions during critical peaks, the Australian Government must set up a parallel **'Peak Savings Initiative' (PSI)** that has certificates that are non-fungible with ESI certificates. The PSI should have the following features:

- Distributors as the point of obligation
- Cover electricity in all sectors connected to the NEM (residential, commercial & industrial)
- Measure savings in additional MW saved during critical peaks

A national scheme versus state-based schemes

A national ESI would have multiple benefits compared to several different state-based schemes, including:

- Improved efficiency through economies of scale and a deeper pool of potential savings
- Reduced red-tape for households and businesses
- Improved robustness and reduced administrative costs. An effective and robust ESI requires least 20 full-time staff to monitor and update the scheme. While there are collectively at least this number of staff working on the state energy efficiency schemes, each scheme is seriously understaffed which leads to implementation and design risks.

The EEC's preference is for a single national ESI to be established under national legislation, with the state schemes voluntarily incorporating into this scheme. This would result in the most effective and flexible scheme, as decisions could be made by a single minister. The ESI should be largely based on the NSW Energy Saving Scheme, with some key changes. Over the next year the Victorian and South Australian schemes should harmonise with the NSW scheme. The Australian Government should establish a national ESI office in Victoria or NSW, which includes a Measurement and Verification Authority. During the period of harmonisation this office could service the existing state schemes to take the burden off state governments and harmonise the schemes.

The EEC strongly prefers a single national ESI, but if this is not possible the EEC recommends that the Australian Government establish a common framework for ESIs to be established in every state, similar to the European Commission's recent directive on energy saving schemes. Under this option, as with a single national scheme, COAG should establish a national office in Victoria or NSW to service all schemes and provide common certificate-generation methodologies.

Summary

Australians deserve energy markets that serve their interests. Energy prices are rising rapidly, and governments must take action to limit these increases in energy prices. Governments cannot influence factors like rising fuel prices, but they can fix market failures and problems in energy markets that unnecessarily inflate energy bills. Energy efficiency, demand-management and cogeneration are amongst the very few options that governments have open to them to keep energy affordable

The EEC has developed a suite of policies to keep energy affordable and sustainable in Australia, which includes investing in education, effective standards for appliances and energy efficiency in government operations. A national ESI is a critical part of this platform, and must be complemented by energy market reforms to tackle peak demand.

All governments must work to establish a national ESI and keep energy affordable in Australia. Please contact me on 03 8327 8422 should you require further information on any of the issues raised in this submission.

Yours sincerely

Rob Murray-Leach

Chief Executive Officer

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Appendix A – Energy Efficiency Council comments on the ESI

Section 1 – Costs, benefits and governance

1. What are the costs and benefits associated with introducing a national Energy Savings Initiative, in the context of the introduction of the carbon price from mid 2012; and how are these costs and benefits likely to be distributed.

An ESI would reduce total energy costs across the economy by reducing:

- Fuel inputs per unit of service; and
- Carbon input per unit of service; and
- Peak energy demand, noting that this should not be the primary focus of the scheme

Modelling for the Prime Ministers Task Group suggested that an ESI could reduce household energy bills by $87 to $296 a year by 2020, including $3.5 to $12 billion in deferred generation and network costs[4]. The EEC welcomes the Australian Government undertaking more detailed analysis on the costs and benefits of an ESI.

The primary purpose of an ESI should be to reduce energy costs, not reduce emissions. Although an ESI will support actions that reduce emissions, under a capped emissions trading scheme these actions will displace other forms of abatement (e.g. the purchase of international permits) rather than directly increase total abatement. However, because the ESI will displace high-cost forms of abatement with negative-cost abatement, it will reduce the carbon price and the total cost of achieving Australia's bipartisan emissions reduction target. In turn, lower carbon prices may encourage the Independent Climate Commission to raise Australia's emissions target.

While the purpose of an ESI is to reduce energy bills, if a future Government removed Australia's emissions trading scheme an ESI would also deliver substantial greenhouse gas abatement. ClimateWorks Australia estimates that energy efficiency and cogeneration could deliver a third of Australia's bipartisan 2020 emissions reduction target (61 Megatonnes) at negative costs, in some sectors saving over $100 per tonne of CO_2^{e-} saved[5].

The ESI would also deliver some reductions in peak electricity demand, reducing energy prices by:

- Improving the utilisation rate of electricity generation, transmission and distribution infrastructure.
- Deferring and avoiding expenditure on generation, transmission and distribution infrastructure over the coming years. This could substantially reduce energy prices, particularly as the cost of low-emission generation technologies is declining. While Australia should invest in low-emission generation technologies today, deferring some investment until technologies are more mature could deliver substantial savings.
- Reducing hedging costs for retailers and consumers

Finally, the ESI will deliver major benefits by enabling market-transformation in the supply of energy efficiency goods and services, such as high-efficiency motors.

The benefits of the scheme would accrue to multiple parties. The scheme will have some distributional impacts, and in the short-term the individuals and companies that directly undertake energy efficiency measures will receive the largest benefits. However, over time the benefits will be distributed more equitably as:

- A larger proportion of energy users benefit from the scheme directly
- The markets for energy efficiency services and goods are transformed, bringing a range of new products and services to market and lowering the costs of others.
- Energy prices are reduced due to reduced peak energy demand.

[4] Department of Climate Change and Energy Efficiency 2010, *Report of the Prime Minister's Task Group on Energy Efficiency*, Department of Climate Change and Energy Efficiency, Canberra

[5] ClimateWorks Australia 2010 *A Low Carbon Growth Plan for Australia,* ClimateWorks Australia, Melbourne

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The costs of the scheme are the total costs of the energy efficiency upgrades (e.g. installation of more efficient air-conditioning), the administrative costs of the scheme and the shorter-term distributional impacts of the scheme.

2. What do you consider to be the potential costs and benefits of moving to a national scheme? Please provide specific examples where possible.

While the current state schemes deliver a number of the benefits discussed above, a single national ESI would have multiple benefits compared to the current three state schemes, including:

- A larger market allows for economies of scale and greater competition, improving scheme efficiency and reducing the cost of energy efficiency and cogeneration services
- Expansion of the benefits of the scheme to more energy users, specifically businesses in South Australia and all energy users in Queensland, WA, Tasmania, NT and ACT.
- Reduced red-tape for households and businesses
- Improved robustness and reduced administrative costs. An effective and robust ESI requires least 20 full-time staff to monitor and update the scheme. While there are collectively at least this number of staff working on the state energy efficiency schemes, each scheme is seriously understaffed which leads to implementation and design risks.

3. What do you consider to be the benefits and costs of harmonisation of existing state schemes? Are these greater or smaller than a single national scheme?

The EEC welcomes the commitment by the Premiers of Victoria and NSW to harmonise their energy efficiency schemes. Harmonisation of state schemes could deliver substantial benefits, including reduced red-tape for households and businesses and economies of scale from companies being able to roll out projects across the NEM. The benefits of harmonisation compared to a national scheme would depend on the nature of the harmonisation:

- Unless harmonisation ensures that certificates are fully fungible, harmonisation would deliver far less improvement in scheme efficiency than a shift to a national scheme. Currently, the Victorian and NSW energy efficiency schemes use the same method for generating certificates from commercial and industrial lighting upgrades, but differences in certificate prices mean that a lighting project in NSW will currently receive almost twice as much financial support as a project in Victoria.
- Unless harmonisation involves expansion of the schemes to Queensland and other states and territories, the benefits of the ESI would not be expanded to those regions.
- Unless harmonisation allowed the establishment of a national office, it would fail to achieve the reduced administrative costs and robustness possible through a single scheme.

4. What implementation issues are likely to arise in harmonising jurisdictional schemes or seeking to establish a national scheme?

5. What are the governance options and implications of different scheme models?

The EEC's preference is for a single national ESI to be established under national legislation, with the state schemes voluntarily incorporating into this scheme. This would result in the most effective and flexible scheme, as decisions could be made by a single Minister. The ESI should be largely based on the NSW Energy Saving Scheme, with some key changes. Over the next year the Victorian and South Australian schemes should harmonise with the NSW scheme. The Australian Government should establish a national ESI office in Victoria or NSW, which includes a Measurement and Verification Authority. During the period of harmonisation this office could service the existing state schemes to take the burden off state governments and harmonise the schemes.

The EEC strongly prefers a single national ESI, but if this is not possible the EEC recommends that the Australian Government establish a common framework for ESIs to be established in every state, similar to the European Commission's recent directive on energy saving schemes. Under this option, as with a single national scheme, COAG should establish a national office in Victoria or NSW to service all schemes and provide common certificate-generation methodologies.

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Chapter 2: Principles and objectives

11. What could/would be the impact on you and/or your organisation of the different objectives discussed below?

12. How should different (and potentially conflicting) objectives be refined, balanced and prioritised?

13. What are other possible objectives for a national Energy Savings Initiative?

14. It will be important to identify where multiple scheme objectives may compete with each other. For instance, a scheme targeting low income households may not also be a scheme with a 'least cost' objective as energy savings in high needs households, while worthwhile addressing, can be harder to reach, more intensive to unlock and therefore more expensive How could a national Energy Savings Initiative balance multiple objectives?

15. Do you think that putting downward pressure on increasing energy expenses should be a primary objective of a national Energy Savings Initiative? If so, for which groups of energy customers?

16. Should a national Energy Savings Initiative have as its priority reducing the amount of energy used by individuals, or reducing the price paid per unit of energy? Do you see a scheme targeting this objective being essentially transitional in nature, or long-lived?

17. Do you think that supporting vulnerable energy users to adapt to higher energy costs should be a primary objective of any national Energy Savings Initiative?

18. Do you consider that such an objective should support a scheme that is transitional in nature, or potentially long-lived?

19. Do you think that helping to reduce greenhouse gas emissions should be the primary objective of a national Energy Savings Initiative?

20. Given the complementarity principles outlined in Appendix D, how could an Energy Savings Initiative with a primary objective of helping to reduce greenhouse gas emissions be considered complementary to a carbon price?

21. Do you see such a scheme being transitional in nature, or long-term? Noting the discussion of timeframes for a national Energy Savings Initiative in Chapter 1, how might an assessment be made of whether a mature carbon price was sufficient to overcome market failures previously addressed by a national Energy Savings Initiative?

22. Are there other principles that should be included? What are these?

There is a clear case for establishing an ESI to help households and businesses adjust to rising energy costs. Most advanced economies have in place, or are considering, schemes similar to the ESI. Energy prices are rising rapidly in Australia, and globally, because of expenditure on the network (sometimes called 'poles and wires'), rising fuel costs and a shift to more expensive forms of generation. However, the structure of Australia's energy market and a number of barriers make it hard for households and businesses to respond to rising energy prices.

An ESI can be an effective tool to address the barriers to energy efficiency, as part of a suite of measures including reforms to the energy market to address peak demand. The EEC recommends that, as part of this suite:

> *"The primary objective of the ESI is to **help households and businesses manage rising energy costs by improving consumption efficiency** – specifically via the uptake of socially cost-effective energy efficiency, distributed generation and demand-side activities.*
>
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> *The ESI will focus on saving households and businesses money by improving the efficiency of energy consumption (GJ per unit of service), but will also help mitigate energy price rises by providing support for specified technologies that reduce consumption during periods of peak demand."*

A well-designed ESI would achieve this objective by:

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- Providing a positive price signal for demand-side activities to correct distortions in energy costs that are practically difficult to reform, such as cross-subsidisation for installing and using air conditioners.
- Enabling third-parties to help consumers undertake coordinated demand-side activities at scale. This would address the structural imbalance in the energy market which encourages supply-side activities at scale but impedes delivery of demand-side activities at scale.
- Creating an incentive for businesses to find ways to overcome well-known market failures that prevent the take up of privately cost-effective energy efficiency, including information barriers, bounded rationality and split-incentives.
- Enabling market-transformation in the supply of energy efficiency goods and services, such as high-efficiency motors.

The ESI will address these barriers, making it easier for households and businesses to respond to rising energy prices. The ESI should stay in operation until other policies and energy market reforms are enacted that address these barriers. This is unlikely to occur before 2030, but reviews should be undertaken in 2020 and then every 5 years to determine if the ESI is still necessary.

An ESI would reduce total energy costs across the economy by reducing:

- Fuel inputs per unit of service; and
- Carbon input per unit of service; and
- Peak energy demand, noting that this should not be the primary focus of the scheme

The primary purpose of an ESI should be to reduce energy costs, not reduce emissions. Although an ESI will support actions that reduce emissions, under a capped emissions trading scheme these actions will displace other forms of abatement (e.g. the purchase of international permits) rather than directly increase total abatement. However, because the ESI will displace high-cost forms of abatement with negative-cost abatement, it will reduce the carbon price and the total cost of achieving Australia's bipartisan emissions reduction target. In turn, lower carbon prices may encourage the Independent Climate Commission to raise Australia's emissions target.

While the purpose of an ESI is to reduce energy bills, if a future Government removed Australia's emissions trading scheme an ESI would also deliver substantial greenhouse gas abatement. ClimateWorks Australia estimates that energy efficiency and cogeneration could deliver a third of Australia's bipartisan 2020 emissions reduction target (61 Megatonnes) at negative costs, in some sectors saving over $100 per tonne of CO_2^{e-} saved[6].

[6] ClimateWorks Australia 2010 *A Low Carbon Growth Plan for Australia,* ClimateWorks Australia, Melbourne

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Design features

Baseline-and-credit

23. What framework would best suit a national Energy Savings Initiative and why?

The ESI should be a baseline-and-credit scheme, because the intent of the scheme is to improve efficiency rather than limit total energy use.

Trading and certificates

24. Should a national Energy Savings Initiative allow trading in eligible activities?

25. What evidence is there from existing schemes that trading improves benefits or imposes costs? For whom?

26. Should a national Energy Savings Initiative issue certificates? What evidence of advantages or disadvantages to a certificate system has emerged from existing state-based and international schemes?

The scheme should allow trading in eligible activities both between obligated parties (retailers) and any other party registered to create certificates. Basic principles dictate that trading is critical to:

- Improve the efficiency of the scheme, as trading will allow energy savings to occur where they are most cost effective
- Lower the cost of the scheme, as trading increases competition between certificate creators
- Enable any suitably skilled party to generate certificates without needing to first secure a contract with an obligated party (retailer). This will create more certainty for third-party certificate creators, enabling them to invest in capital and employees, developing a vibrant and skilled energy efficiency industry.

The multiple differences between the numerous local and international schemes makes it difficult to estimate the costs and benefits of specific design features. However, it is clear from the European schemes that certificate trading creates the most vibrant market for energy service companies (ESCOs).

Sectoral coverage

27. The Australian Government has committed to investigating a broad-based national Energy Savings Initiative, that is, one that allows activities to be undertaken in the residential, commercial and industrial sectors. Are there sectors, or sub-sectors, that should or shouldn't be excluded from undertaking activity in a national Energy Savings Initiative? Why? What costs would inclusion or exclusion of certain sectors impose?

28. What evidence is there from state-based and overseas schemes that including or excluding a sector from creating activity changes the costs and benefits of an energy efficiency obligation? In what way?

29. How might including or excluding a sector or sub-sector from undertaking activity help or prevent a national Energy Savings Initiative from achieving one or other of the objectives outlined in Chapter 2? Is including or excluding a sector or sub-sector consistent with the design principles outlined in Chapter 2?

The EEC strongly maintains that the ESI should cover all sectors that use stationary energy, including the industrial, commercial and residential sectors. The reasons for covering all sectors are clear:

- The scheme will be most efficient if it finds lowest cost savings, irrespective of the sector
- There are market failures that affect the uptake of energy efficiency in all sectors. For example, while information failures and bounded rationality are particularly evident in households and SMEs, many large businesses have skill gaps, proceedures and organisational structures that impede the uptake of cost-effective energy efficiency.

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While the ESI should support activities in all sectors, it is important to note that it should support the sectors in different ways. What is considered 'additional' in the household sector may not be 'additional' in the industrial sector.

For example, the EEC maintains that the ESI should only support projects in the industrial sector that have a payback period exceeding 18 months. There is significant evidence from the Energy Efficiency Opportunities (EEO) Program that even Australia's largest energy users are failing to deliver energy efficiency upgrades that have payback periods over two years.

The scheme should exclude large scale generation, as the incentives to improve the efficiency of generation are substantial and the market barriers are substantially lower. However, the barriers that impede end-use efficiency also prevent small-scale distributed generation.

Therefore, the scheme should cover small scale distributed generation where it is linked to the overall efficiency of fuel use. In particular, cogeneration and trigeneration schemes use waste heat to substantially improve the overall efficiency of generation. While large coal generators are less than 30 per cent efficient at turning the energy in coal into electricity, efficient cogeneration systems can convert over 80 per of the energy in the fuel into electricity and heat.

Fuel coverage

30. Given the factors above that affect the selection of a fuel base for deciding on an Energy Savings Initiative target, what fuels should be covered in a national scheme?

31. How would the choice of fuel coverage affect a national Energy Savings Initiative's ability to meet one or other of the objectives set out in Chapter 2? How would fuel coverage affect the cost of the scheme?

32. If a national Energy Savings Initiative covered more than one fuel, should it have one target covering all fuels or should it have a separate target for each fuel? How would this affect companies that sell more than one fuel (for example, an energy retailer that sells both electricity and gas)?

33. If a fuel can be used for multiple purposes, should a national Energy Savings Initiative treat these two uses differently when calculating a base for a target and achieving a target?

34. Given the objectives outlined in Chapter 2, how should a national Energy Savings Initiative treat energy use outside the main grids? Are different treatments required for different fuels?

35. What factors should be taken into account when considering energy use outside the main grids to ensure an appropriate balance of private and public benefits?

Given that the primary objective of the scheme should be to help energy users manage their energy costs, in principle the ESI should cover all stationary fuels and cover on-grid and off-grid areas. However, in practice the scheme should be developed in a way that minimises risk and ensures that the scheme is robust.

The scheme should clearly commence by covering both electricity and gas. The government should consult further on coverage of coal and liquid fuels where they are used in off-grid areas for generation and industrial/mining activities. At the very least, the scheme needs to be designed to avoid perverse incentives for switching between fuels, whether they are covered by the scheme or not.

The scheme should initially exclude transport fuels, although the government could consider expansion to this sector later. The structure of the transport sector is very different to the stationary energy sector and there is no global model for an ESI that covers the transport sector. As a result, considerable design and analysis work would need to be undertaken before the ESI could be extended to the transport sector.

Similarly, in principle the scheme should apply to areas that are off-grid, but there is far less global experience in delivering energy savings in off-grid areas. The Council recommends that the government commence with a scheme that covers the NEM and engage with the Western Australian Government about developing a scheme for the major grids in Western Australia. Further work may be required to apply the scheme to off-grid areas, and until the scheme applies to off-grid areas these consumers should be exempted from charges.

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Units of measurement

36. Referencing the objectives set out in Chapter 2, which unit of measurement would be most appropriate for a national Energy Savings Initiative

The intent of the scheme should be to improve the efficiency of energy consumption. In principle, the best measure would be the 'economy-wide dollars saved' by an action, but as proxy measures are used to determine the savings this measure could cause confusion. Therefore, the EEC recommends that the ESI use '**additional weighted GJ saved'**.

Given that the scheme should cover multiple fuels, including both electricity and gas, the scheme in principle should measure savings in Gigajoules (GJ) saved. However, the ESI should not measure savings in simple GJ for two reasons.

Firstly, the intent of the scheme is to drive additional units of energy savings, rather than energy savings that would have occurred in the absence of the scheme. As a result, the unit of the scheme should be 'additional GJ saved'. The estimate of how much 'additional' savings a measure delivers could vary by measure, sector and time. For example, while replacing an incandescent bulb with a Compact Fluorescent Light (CFL) would have been additional ten years ago, CFLs are now the standard technology. As discussed later, a 'Measurement and Savings Authority' should determine the additionality of different actions.

Secondly, the GJ of savings should be weighted for different fuels, to account for the price, carbon savings and efficiency of fuel use. For example, the upstream emissions and inefficiencies in electricity generation are far higher than for gas delivery. Appropriate weighting is also critical to avoid perverse incentives for switching between fuels. The EEC recommends that, in the short term, weighting is based on CO_2^{e-} emissions, as this is the simplest proxy for these multiple factors.

The council notes that, even though the scheme should be measured in additional weighted GJ saved, the Government would have the option of communicating the scheme in multiple ways to households, such as dollars saved.

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Setting targets

37. The Working Group intends to test the benefits and costs of a range of targets through economic modelling. In selecting targets to test, what factors should the Working Group take into account? How does the choice of objective set out in Chapter 2 affect the level of the target?

38. What factors should be taken into account when determining an appropriate penalty rate for any national ESI?

39. What evidence is there from existing schemes in Australia or overseas that banking and borrowing provisions make it easier or more difficult to meet a target in a given year?

40. Should a national Energy Savings Initiative use sub-targets or incentives to drive activity in a particular sector/s or region/s? Is so, where and to what degree?

41. How does the choice of objective relate to decisions around whether a sub-target is included in a scheme design?

42. Is using a sub-target consistent with the design principles in Chapter 2?

43. What evidence is there that sub-targets increase costs? Who bears this cost? Is this additional cost balanced by increased benefits elsewhere?

44. In what circumstances should a national Energy Savings Initiative consider allowing exclusions from the target base? What evidence is there that such exclusions increase overall costs? Who bears these costs? Are these additional costs balanced by increased benefits elsewhere?

45. Would excluding consumption of eligible fuels from a sector or sectors from the target base help or hinder a national Energy Savings Initiative to meet the objectives set out in Chapter 2? Would excluding a sector be consistent with the design principles in Chapter 2? Why?

46. Which form of target should be preferred for a national Energy Savings Initiative and why?

47. What evidence is there for the effects of different forms of target on business development and planning?

The ESI target should be set as a percentage of liable sales, similar to the NSW scheme, as this is the simplest unit to use.

The target should initially be equivalent to the size of the current NSW scheme, expanded to the population, fuels and sectors that the scheme covers. However, as the goal of the scheme is to help households and businesses take up the optimum level of energy efficiency, the scheme target should be set and adjusted by a regulator, so that:

- If the scheme price exceeds penalty levels for long periods, this indicates that the scheme is attempting to deliver more efficiency than is cost-effectively available, and the target should be reduced
- If the scheme price drops below a floor level, this indicates that there is substantially more cost-effective energy efficiency available, and the regulator should increase the target. This would provide a form of price-floor for the scheme.

The ESI should allow some limited borrowing, to provide limited ‘safety valves’ but reduce the risk of non-compliance. The issue of banking requires further investigation, as it can improve the function of the market but it also means that any problems that result in over-supply of certificates in a particular year (e.g. overly generous deeming for a particular measure) could affect the scheme for long periods.

As a general principle, the ESI should have as few sub-targets as possible, in order to improve the overall efficiency of the scheme.

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Obligation points and thresholds for obligations

48. Should a national Energy Savings Initiative use energy retailers as an obligation point? What would be the relative costs and benefits of choosing this obligation point? Should another point be chosen, either alongside or instead of energy retailers?

49. What would be an appropriate threshold for the obligation, and why? Are there alternative approaches to assist small retailers?

50. Given the complexity of finding a practical obligation point in the liquid fuels supply chain, and the incentives provided by changes to fuel tax arrangements, should the Australian Government consider including all liquid fuels or particular liquid fuels in the target base and therefore place an obligation in the supply chain?

51. Would the costs of excluding large users as an obligation point from a national Energy Savings Initiative outweigh benefits? Would specific treatment of large users be consistent with the design principles in Chapter 2?

The ESI should place an obligation on all electricity and gas retailers. Although smaller retailers may not have the capacity to generate savings directly, they would easily be able to purchase certificates on the open market.

As noted on pages 11 and 12, the Government should consider covering other non-transport fuels (e.g. diesel and coal in remote sites), and this work should consider who would be the obligated party. The ESI should not initially cover transport fuels.

The ESI should allow large energy-users to opt out if they agree to meet a target for improved efficiency. In effect, the large energy user would become the liable entity.

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Eligable activities and Crediting and verifying savings

52. What would be the implications of using the above criteria to ensure that an Energy Savings Initiative credited only additional energy efficiency improvements beyond business as usual? Are there other criteria that could be applied? How would using these criteria assist or hinder meeting the objectives outlined in Chapter 2?

53. What evidence is there that existing schemes, both in Australia and overseas, are too stringent or too lenient with respect to crediting business as usual? What has been the impact of this?

54. How could a national Energy Savings Initiative create a pathway for new activities to enter the scheme?

55. What evidence is there from international and state-based schemes that different approaches for new activities are helpful or act as a barrier to entry?

56. What criteria should a national Energy Savings Initiative use to exclude an activity or adjust the credit available for an activity?

57. Which technologies, processes or changes to the way energy is used should be considered candidates for deeming in a national Energy Savings Initiative?

58. What are the advantages and disadvantages of introducing more complexity into deeming methodology (for example, location or time of use) versus using a simple deemed value that may be an underestimate or overestimate of the actual performance of the equipment?

59. Which technologies, processes or changes to the way energy is used are best suited to a calculation approach or to a combination of calculation and deeming?

60. What are some ways to reduce transaction costs associated with calculating and verifying savings?

61. What factors should be taken into account in establishing an appropriate audit and compliance regime?

62. What evidence has emerged from existing schemes that different compliance models have created higher or lower costs for scheme participants? Who bears these costs?

Additionality

The EEC recommends that the goal of the ESI is to improve the economic efficiency of the energy market, which means that the ESI must drive 'additional' demand-side measures, in other words, measures that would not happen in the absence of the ESI. For example, providing incentives for products that are already mandated by standards does not deliver 'additional' efficiency. The energy efficiency and cogeneration sector does not benefit from incentives that do not drive additional projects.

However, while the ESI must overall drive additional demand-side measures, it is not critical to ensure that every single project it drives is additional. In fact, while the ESI is likely to support some projects that are non-additional ('free-riders'), it will change market conditions in ways that drive many additional projects without financial support ('free-drivers'). Depending on the design of the scheme, the proportion of additional projects, free-riders and free-drivers will vary. The precise ratios of these groups is not critical - what is essential is that the benefits arising from additional projects and free-drivers exceed the costs of the scheme.

For example, the evaluation of the UK Energy Efficiency Commitment (now called the Carbon Emissions Reduction Target) assumes a very high proportion of free riders, but even with this very high proportion of free riders the scheme delivers substantial benefits to the community.

Therefore, the scheme needs to be designed to balances simplicity and effectiveness with a goal to overall drive additional demand-side measures. The scheme must be designed to reduce free-riders, but the transaction costs of completely eliminating free-riders would be prohibitive and counter-productive. This means that the scheme should have:

- Clear rules and methodologies for determining both energy savings and additionality
- A clear process for updating rules and methodologies over time, as 'additionality' will change over time

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- Avoid grandfathering and should set a time-limit for claiming credits, while allowing for transition from state schemes. It is self-evident that projects that have already occurred would not be additional.

Finally, the EEC strongly urges the Government to take appropriate steps to eliminate rorting, which negatively affects the energy efficiency industry. An effective and aggressive monitoring, compliance and penalty regime will be able to address this issue.

Certificate generation

A range of technologies should be eligible to generate certificates. Cogeneration is particularly critical, as it can deliver substantial efficiency improvements by using the energy that is normally wasted in generation for services like heating and cooling. Appropriately designed cogeneration systems can reduce the total energy use (including upstream energy use) and greenhouse emissions of some sites by up to 50 per cent or more. The barriers that apply to general energy efficiency technologies apply to cogeneration, and there are also a range of additional barriers, including regulations and pricing in the National Electricity Market, which mean that the private costs and benefits of cogeneration do not reflect the public benefits.

The EEC recommends that the Government should commence work immediately to reduce the barriers to cogeneration in the most direct manner possible (e.g. streamlining and regulating the process for connecting cogeneration to the grid). However, it will take many years to address these multiple barriers. Therefore, the EEC recommends that large cogeneration systems should be eligible for a feed-in tariff, and smaller systems should be eligible to generate ESI certificates. In the absence of a feed-in tariff, large cogeneration systems should also be eligible to generate ESI certificates.

The EEC recommends that the Australian Government work with NSW and Victoria to establish a Measurement and Verification Authority that can develop and review new methodologies for generating certificates. This Authority should be comprised of government officials, academics and industry representatives.

Certificates would need to be generated through the following methods:

- Deemed methodologies should be used for relatively small and/or standard energy efficiency and cogeneration projects like vending machines and high-efficiency motors.
- A ‘guaranteed energy savings’ methodology
- Measurement and verification of actual energy savings using protocols based on the International Performance Measurement and Verification Protocol (IPMVP)
- Methods proposed by energy efficiency providers and approved by the Measurement and Verification Authority. This would be similar to, but expand on the ‘Project Based assessment’ methodology used in NSW.

The type of methodology that is appropriate varies between technology and project types. The actual energy savings that arise from the installation of a product will vary on a case-to-case basis. For some technologies, such as lighting, this variation is limited and deeming is appropriate. For other technologies, like commercial Heating, Ventilation and Air Conditioning (HVAC), the variation between projects could actually exceed the average savings. For these types of project, other methodologies will be required.

Guaranteed Energy Savings

The Victorian Government is currently considering a methodology to generate Victorian Energy Efficiency Certificates (VEECs) through Energy Performance Contracting (EPC). Effectively, a company that provides energy efficiency services guarantees an energy user a certain level of energy savings (e.g. reducing the energy use in a building by 32 per cent) and commits to pay the energy user if that savings target is not received. This means that the energy efficiency provider has both the expertise and a strong incentive to achieve this level of energy savings.

The EEC strongly supports this proposal, as this provides the scheme administrator with surety about the levels of energy savings, and notes that this methodology could apply more broadly to any project using guarantees about levels of energy savings, not just EPCs. The EEC will work over the coming months to assist the Victorian Government develop a suitable methodology for a ‘guaranteed energy savings’ route to generate VEECs.

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The energy performance contracting methodology is preferable for the estimation of savings for complex projects, but it will not always be economically feasible for performance contracts to be used, particular for saving projects that are less than $250,000.

The Council notes that where cogeneration systems are part of an Energy Performance Contract or similar contractual guarantee to deliver energy savings, the simplest way to generate certificates would be through the 'guaranteed energy savings' methodology. However, a methodology will need to be developed to support cogeneration systems where they are not part of guaranteed energy savings projects.

Measurement and Verification

The EEC strongly recommends that the ESI adopt the IPMVP as one option for estimating actual savings from projects. While the IPMVP does not explicitly detail how to measure and verify energy savings in every situation, it does provide a common foundation and a framework upon which more explicit methodologies can be prescribed. Although not explicitly stated in the NSW ESS Guidelines, the 'metered baseline' methodology in the NSW ESS is an example of a more exact prescription and refinement of the IPMVP adapted to suit the Australian market. This methodology allows companies to generate certificates by measuring the impact of energy efficiency improvements.

This methodology will substantially open up the range of technologies that can be considered and encourage companies to invest in cost-effective, integrated energy efficiency projects that deliver the deepest energy savings and the best returns on investment at that site. The Council recommends the adoption of the metered baseline methodology, as an extension of the IPMVP foundation. This methodology will provide greater flexible to the ESI as an alternative to a guaranteed energy savings energy methodology.

Project-based and provider-development methodologies

The Government should also allow companies to develop methodologies to estimate additional energy savings. This mechanism is used extensively in the US and the Carbon Farming Initiative and NSW Project Impact Assessment methodology effectively use this mechanism.

Effectively, a government agency, NGO or private sector proponent develops a proposal for how certificates can be credited and verified. The independent Measurement and Verification Authority would assess this proposal and approve, reject or amend the methodology. This would lessen the burden on Government to develop methodologies which may never be used and instead allows industry to develop methodologies for those technologies it considers will achieve savings.

An innovative technology stream

The Council recommends that the ESI provide a limited number of certificates for new technologies that are assessed to provide genuine energy savings, prior to the development of a methodology for those technologies. This would ensure that there are limited barriers to new technologies, whilst ensuring that technologies that have not been field tested do not undermine the scheme.

Weighting for air-conditioning

The efficiency of domestic air-conditioning systems can impact on peak demand, and therefore energy costs. While the EEC does not believe that the ESI would be well-suited to addressing many of the issues that are causing peak-demand to increase so rapidly, it is well suited to encouraging households to shift from inefficient to efficient air-conditioning systems.

Accordingly, the EEC believes that additional weighting could be given to the installation of efficient air conditioning, noting that more work needs to be done to clarify the impact of more efficient air-conditioning on critical peak demand.

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Ensuring a smooth transition from state-based schemes

63. Generally, what are the advantages or disadvantages to different approaches to managing transition issues?

64. Design features or methodologies differ from state to state. For businesses that participate in more than one state scheme (including obligated parties and certificate creating businesses), which of these would require resolution to enable a smooth transition, and what options are available? What other factors should be taken into account?

65. What evidence is there that starting a new scheme would cause activity flight from one location or jurisdiction to another?

66. What evidence is there to suggest that activity might be evenly or unevenly spread across Australia? What would be the impacts of this?

As noted on page four, the EEC's preference is for a single national ESI to be established under national legislation, with the state schemes voluntarily incorporating into this scheme. If this is not possible the EEC recommends that the Australian Government establish a common framework for ESIs to be established in every state, similar to the European Commission's recent directive on energy saving schemes.

The transition to either program will require a process of harmonisation between existing schemes that starts immediately. The ESI should be largely based on the NSW Energy Saving Scheme, with some significant exceptions. Over the next year the Victorian and South Australian schemes should harmonise with the NSW scheme.

The Australian Government and the various states should establish a national ESI office in Victoria or NSW, which includes a Measurement and Verification Authority. During the period of harmonisation this office could service the existing state schemes to take the burden off state governments and help harmonise the schemes.

The transition program needs to be managed carefully, to avoid collapse in the price of existing certificates and, more importantly, damage to existing effective models for rolling out energy efficiency upgrades.

The shift to a national scheme could result in some short-term shifts in where activity occurs, although there a number of trends that will counter each other to minimise the total shift in energy efficiency activity. Initially, the roll out models of low-cost energy efficiency technologies (e.g. efficient lightbulbs and low-flow showerheads) will flow to those states that haven't seen any roll outs. Conversely, more advanced roll out models will focus on those areas where energy efficiency providers have existing resources. However, these will be short-term trends and in the long-term energy efficiency activities will be spread out across the economy.

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Low income households

88. Are there particular barriers to energy efficiency that confront low income households? To what extent could a national Energy Savings Initiative address these barriers? Are there other policy options better able to address these barriers?

89. Are there particular low income households, dwellings or regions which require specific assistance? Would a national Energy Savings Initiative be an effective policy tool to provide this assistance?

90. Households may experience periods of financial difficulty not directly related to their weekly income, with financial difficulty also linked to periods of mortgage strain, unexpected changes in employment status or health related matters. Could a national Energy Savings Initiative that supports low income households also be designed to support other households experiencing financial hardship? How could such households be defined for coverage under any national Energy Savings Initiative?

91. What costs or benefits could a potential national Energy Savings Initiative impose on low income households?

92. How successful have existing programs been at improving low-income households' energy efficiency and assisting them to manage energy costs? What potential exists/remains to improve energy efficiency across low income households? Does this vary across Australia?

93. Is there evidence to suggest particular kinds of energy efficiency improvements have occurred disproportionately in certain areas? For example, have particular upgrades been biased towards regional or metropolitan areas?

In 2011 the EEC joined with a number of organisations to call for a national ESI. This group recommended a specific focus to ensure that low-income households benefitted from a national ESI, and the EEC maintains this position.

A number of factors will drive activities in low-income households, including:

- Low-income households are the most sensitive to energy price rises
- Low-income households tend to have the best take-up rates for roll outs of products like lightbulbs and low-flow showerheads
- Retailers have strong incentives to assist low-income households so that they are able to pay their energy bills

However, certificate-driven activities that require substantial capital contribution from households (eg. the purchase of more efficient appliances) are harder to achieve in low-income households.

The EEC believes that it is appropriate to, at the very least, monitor take-up rates in low-income households to ensure that they are receiving a fair share of the benefits of the scheme. Additionally, the EEC believes that the most effective way to ensure that certificates drive activities in the low-income sector may be to establish a specific fund to address the specific barriers to low-income households, like capital availability.

A sub-target for low income households will reduce the efficiency of the scheme, but the EEC does not object to the Government considering a sub-target for low-income households as one of the options for ensuring that low-income households secure an appropriate portion of the benefits of the ESI.

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Peak demand

98. Do you see risks in implementing incentives designed to reduce peak demand outside of energy market frameworks?

99. Do you have evidence or examples to forward the case that certain activities should or should not be incorporated in a potential Energy Savings Initiative peaking component? In particular:

a. active demand response mechanism (such as load control)

b. passive mechanisms that change the load profile overtime (such as high efficiency air conditioning)

c. load shifting (where there may be no energy saved and greenhouse gas emissions may increase)

d. distributed generation or fuel switching (and which fuels), or

e. network management activities?

100. Can you provide evidence, in terms of benefits or risks, that a national Energy Savings Initiative which targeted peak demand should focus upon reducing local network peaks to defer augmentations; or on reducing wholesale market peaks and defer peaking generation?

101. Should such a scheme target peak demand reductions that will maximise downward pressure on electricity prices in the near- to mid-term, or focus more broadly on peak demand reductions wherever they are available?

102. In the case of a scheme focused on network deferral, how should networks be involved to ensure local near-term augmentations are effectively targeted? How should peak demand reductions be valued and integrated with planning and regulatory determinations to ensure that downwards pressure on network prices are captured in the near- to mid-term?

103. Where a scheme has some impact on both network and market peaks, should both be rewarded, and if so, how should these benefits be calculated?

104. Of the above examples of scheme designs, which, if any, are likely to drive greater benefits and uptake of demand response activities? Which options have higher risks and complexity? Please provide supporting evidence.

105. Could a peak demand Energy Savings Initiative be integrated into a wider Energy Savings Initiative (such as a national energy efficiency obligation scheme), or could it be one or more sub-schemes, with separately targeted obligations or incentives? What implications will this have for complexity, eligible activities and metrics?

106. Could a peak demand-focused Energy Savings Initiative be a mandated obligation with penalties, an obligation with penalties and incentives, an opt-in initiative with targets and incentives, a voluntary code, or something else? Who could be the obligated party in a peak demand focused scheme?

107. Should there be any restrictions on the types of entities that could act as a provider of peak demand reduction services? What certainty over peak energy reduction outcomes is desired as compared to certainty of the costs imposed by the scheme? How might this relate to reducing energy costs?

Tackling peak electricity demand is critical to keep electricity affordable in Australia. Peak demand events that last less than 0.5 per cent of the year are responsible for between 10 to 25 per cent of electricity costs, because we are currently building infrastructure to meet the requirements over these very short periods of time. The peak demand problem is getting worse, as peak demand grows at 2.6 per cent per annum, whereas the rate of growth total electricity consumption has been declining, and consumption has not actually increased in the last two years.

If Australia successfully reduces total electricity consumption, but does not reduce peak electricity demand, total electricity costs will go down but the cost per unit of electricity will increase. However, if Australia reduces peak demand as well, it will reduce the expenditure on electricity infrastructure and hedging costs, which would reduce both electricity prices and electricity bills. Ernst & Young recently estimated that measures to tackle peak demand could save up to $15 billion between 2011 and 2030[7].

[7] Ernst & Young 2011 *Final report - AEMC Power of Choice: Rationale and drivers for DSP in the electricity market – demand and supply of electricity*, Ernst & Young

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An ESI that focuses on consumption efficiency can be used to address part of the peak demand problem. Improving consumption efficiency (typically measured in MWh) is not identical to reducing peak demand (typically measured in MW), but some measures that reduce MWh also reduce MW.

For example, if the ESI improves the consumption efficiency of domestic air conditioning, which is the primary driver of demand during critical peak periods, it would reduce peak demand, noting that the relationship between air conditioner efficiency and its demand during peak periods is not linear.

However, Australia needs a number of measures working together to effectively tackle peak demand issues. Firstly, there are several measures that can cost-effectively reduce peak demand (e.g. load shedding by industry) that an ESI that focuses on consumption efficiency will not address. Incentives for MW reductions at specific times during the year when critical peaks occur cannot be fungible with incentives for MWh.

Secondly, reductions in peak demand through any mechanism, even simply consumer response to rising energy prices, will not translate into reductions in infrastructure expenditure unless network distribution companies are regulated and compensated in a more effective way.

Therefore, the ESI will deliver substantially more benefits if it is complemented by:

- A mechanism to allow demand-reduction to compete with supply during critical peaks purchase peak-reduction during; and
- Reforms to the way that distribution and transmission companies are regulated and compensated; and
- Reforms to ensure that energy prices are more reflective of the time and location of delivery.

If the Australian Energy Market Commission (AEMC) cannot deliver these measures in a timely fashion, the Australian Government should consider establishing a mechanism alongside the ESI that purchases peak reductions (MW) during periods of peak demand.

The EEC reiterates its preference that that peak demand be largely addressed through NEM reform. However, if the AEMC is unable or unwilling to expedite a system for buying demand-reductions during critical peaks, the Australian Government must set up a parallel **'Peak Savings Initiative' (PSI)** that has certificates that are non-fungible with ESI certificates.

The PSI should have the following features:

- Distributors as the point of obligation
- Cover electricity in all sectors connected to the NEM (residential, commercial & industrial)
- Measure savings in additional MW saved during critical peaks

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