NATIONAL GENERATORS FORUM

Level 1, The Realm
18 National Cct
Barton ACT 2600
ABN: 83 113 331 623

Tel: 02 6198 3490
Fax: 02 6198 3333
www.ngf.com.au

Secretary to the Task Group on Energy Efficiency
C/- Department of Climate Change and Energy Efficiency
GPO Box 854
Canberra ACT 2600
energyefficiency@climatechange.gov.au

Dear Sir/Madam

**National Generators Forum submission on the Issues Paper – Prime Minister's Task Group on Energy Efficiency**

The National Generators' Forum (NGF) welcomes the opportunity to provide a submission to the Prime Minister's Task Group on Energy Efficiency. The NGF represents electricity generators in the National Electricity Market (NEM) and the Western Australian Electricity Market. Our members account for 95 per cent of the electricity generated in Australia.

Generators regard efficient energy production as their key contribution to Australia's prosperity.

Efficiency in energy production is central to the competitiveness of all generator businesses. Operating in an 'energy only' national market, generators must continually improve the efficiency of their operations to remain competitive. This strong commercial incentive for efficient use of energy will only intensify as energy costs rise.

For this reason, amongst others, the NGF is concerned that the Issues Paper raises the prospect of changing the NEM rules to supposedly provide an incentive for energy efficiency.

Generators recognise the potential energy efficiency has for reducing greenhouse gas emissions. In many cases, energy efficiency measures which are cost-effective for households and businesses will also have an environmental dividend in the form of lower emissions. However, it is important to note that energy efficiency will not always deliver abatement (in some cases, it can lead to increased emissions). It is a mistake to equate energy efficiency with abatement.

The NGF shares the Government's view that energy efficiency initiatives should support – not substitute for – an eventual carbon price. The NGF agrees that energy efficiency measures should not be used as an indirect form of carbon price.

These key points are well captured in the terms of reference for the Task Group. The terms of reference require the Task Group to recommend measures which:

- Complement the Carbon Pollution Reduction Scheme (CPRS) and the Renewable Energy Target (RET), consistent with the Council of Australian Governments' Complementarity Principles; and

- Target market failures such as information asymmetries and split incentives.

The NGF believes it is appropriate that the Task Group concentrate on identifying the market failures preventing businesses or households from making cost-effective decisions on energy use. The NGF would note that considerable work has already been done in this area, especially by the Productivity Commission.

The NGF would caution the Task Group from making a preconceived judgment that a "step change" in energy efficiency is desirable or feasible in Australia.

### *The energy efficiency challenge*

At the outset, the NGF believes that there should be clarity about the nature of the energy efficiency challenge.

Energy efficiency should not be confused with energy conservation or emissions reduction.

As the issue paper notes, improved energy efficiency involves either "using less energy to achieve the same level of outcomes or improving the level of outcomes from the same amount of energy". Energy efficiency refers to the productive or cost-effective use of energy.

Energy efficiency is not a proxy for greenhouse gas abatement. The issues paper claims that "achieving a step change in energy efficiency will require energy efficiency improvements that deliver substantial cost effective emissions reductions". This statement equates energy efficiency with reducing emissions. The NGF would point out that the Government intends to capture the negative externality of emissions through a carbon price. With a carbon price in place, it would be possible to make energy efficient decisions which do not reduce or may even increase emissions (i.e. there is still a positive return taking into account environmental impacts).

The NGF agrees with the Wilkins review that "energy efficiency's contribution to national emissions reductions should be left to the carbon market to determine. Measures which seek to 'accelerate' the take up of energy efficiency, through various means, are inconsistent with a commitment to least cost abatement".[1] The same review warned

1. Department of Finance and Deregulation. *Strategic Review of Australian Government Climate Change Programs* (2009), p.98.

against measures which go beyond addressing market failures to "government trying to tell businesses how to conduct their operations … (and) force consumers to behave in certain ways (which) risks violating the principle of consumer sovereignty".[2]

Reducing energy use will not always reduce emissions. Measures which defer investment in new generation or shift consumption from peak demand periods (both possibilities cited in the Issues Paper) could have the effect of *increasing* emissions from the generation sector.

In Australia, the emissions intensity of electricity generation is falling as older plant is replaced with new, lower emission plant. Curbing market growth in order to delay investment could extend the life of existing, more emissions intensive assets. A similar perverse outcome is occurring in the United States: tighter environmental regulations on new plant have prompted utilities to extend the life of older plant with the proportion of energy generated from older coal-fired assets actually rising over the last two decades.[3]

In the Issues Paper, it is suggested that reducing consumer demand in peak periods will reduce the immediate need to invest in new peak capacity. This is obviously true. However, changing the timing of demand does not reduce aggregate demand. Moreover, the displaced demand would probably be met from base load coal generation rather than gas-fired generation, *increasing* emissions.

These examples illustrate the point that energy efficiency is not identical to abatement. As a general rule, it will be more effective for climate change policies to directly target emissions than use indirect measures such as energy efficiency.

### *The National Electricity Market*

The NGF notes that the Issues Paper implies that the structure of the National Electricity Market (NEM) may discourage energy efficiency. It is difficult to comment given that the concern is not explained and no evidence is offered.

Nevertheless, some comments about the NEM can be made.

The creation of an integrated national market has ensured that demand is being served by a more efficient use of existing plant. Replacing separate State markets with a single national market linking Queensland, New South Wales, Victoria, South Australia and Tasmania has eliminated the historical problem of individual States overbuilding capacity. The NEM ensures that shortfalls in generation in some regions (e.g. New South Wales and South Australia) can be met efficiently from adjoining States with spare capacity. This has contributed to lower production costs.

The efficiency of the NEM rests on the central dispatch process which is highly transparent and efficiently matches supply and demand at the lowest available prices. Plant thermal efficiency (heat rate) is incorporated in the setting of generator bids as part of this dispatch model.

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2. *Strategic Review of Australian Government Climate Change Programs*, p.99.
3. William Blyth *The Economics of Transition in the Power Sector* (2010).

Changing this successful market would be a high risk venture which could jeopardise energy security in Australia. As already noted, unprecedented investment is required over the next decade to deliver new generation to meet demand and to support the shift to a less carbon intensive generation sector. This investment is already under pressure because of climate change policy uncertainty. Changes to the operating rules of the NEM could further chill investment, leaving the market more dependent on older plant.

The onus of proof rests entirely on proponents for change to demonstrate that any proposals would be consistent with the national electricity objective endorsed by governments since 1998 and would deliver superior results to the status quo.

Invoking the (real or perceived) successes of different market models in other countries is not sufficient evidence that similar changes to the Australian market are bound to be successful. The market conditions applying in other developed countries are usually very different to Australian conditions. California is often mentioned as a potential model. Less frequently mentioned is that California is more dependent on imported energy than any other US state; that California has residential electricity prices almost 60 per cent higher than the US average; and that natural gas, hydroelectricity and nuclear power account for more than 85 per cent of generation in the state. By contrast, Australia has to be self-sufficient in generation and lacks the low emission sources of energy possessed by California.[4]

It is also worth noting that the main driver for energy efficiency programs in the US, Europe and Japan is energy security; these countries lack Australia's abundance of secure and cost efficient energy.

The NGF considers that the Task Group will miss significant energy efficiency opportunities by concentrating on the supply-side of the market. The NGF maintains that the Task Group should not neglect the opportunities on the demand-side of the market.

Recommendation: In the absence of any evidence of NEM market failure affecting energy efficiency, the Task Group should concentrate on other issues.

### *The Productivity Commission*

The Issues Paper is remiss in ignoring the findings of the Productivity Commission inquiry into energy efficiency. The Government's own efficiency watchdog completed an exhaustive public inquiry in 2006, producing some important observations and recommendations – all of which are relevant today. The key points are:

- Firms and households do not deliberately waste energy;

4. US Energy Information Administration. State Energy Profiles: California (January 2010) at http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=CA

- Comparison between countries of energy efficiency and measures to deal with energy efficiency improvements can be misleading given the geography, economic base and different social needs of different countries;
- The most important barriers to the adoption of private cost-effective energy efficiency improvements are the information failure and the different incentives facing those making the investment decisions and those that benefit from them (i.e. split incentives);
- Light-handed government intervention (e.g. mandatory efficiency standards for appliances and building standards) is appropriate but a sufficient case has not been made for the imposition of a national energy efficiency target and tradeable obligations;
- There is a conflict between comparatively (non time-of-use reflective) low price energy and meaningful encouragement for the uptake of greater energy efficiency. Time-of-use pricing will assist in more pro-active decisions about private cost actions; and
- Some measures may not be privately cost effective but have overall public benefits because of their environmental outcomes. These measures may seem to offer sound public policy but they should be considered against other means of achieving the environmental outcomes.

The NGF would suggest that, given the compressed time frame for the Task Group's report, it should pay close attention to this substantial public inquiry.

### *Enhancing energy efficiency in Australia*

The NGF believes that the key stimulus to energy efficiency is accurate price signals in a competitive market. Improving price signals will drive better decisions about resource use. Once the full cost of decisions – economic and environmental – are reflected in the market price of the resource, businesses and households will have clear, strong incentives to optimise their energy use.

It is often suggested that Australia's energy prices are, by international standards, too low to oblige end users to make efficient use of energy. This situation is changing quickly. The next decade will witness a permanent increase – a genuine 'step change' - in energy prices in Australia. The NGF believes that this change will be the main driver of greater energy efficiency in Australia.

Ironically, despite governments promoting energy efficiency, the most significant distortion in energy markets stems from government regulations.

With one exception, States and Territories continue to regulate retail electricity prices. Governments acknowledge that these regulated prices do not reflect actual industry costs and have effectively undermined investment and innovation in the sector. More importantly, in the context of energy efficiency, households and businesses are not obliged to make decisions on energy use taking into account the full cost of the resource.

Governments have accepted the need for electricity prices to rise to reflect the cost of carbon. In July 2009, COAG agreed to the full pass through of the carbon price, under the

CPRS, to retail energy prices. Governments should show the same willingness, for the same policy reasons, to allow retail prices to be set by the market.

Retail price caps have blunted rather than suppressed price signals. Despite the continuing use of retail price caps, electricity prices are rising sharply. In April 2010, the Independent Pricing and Regulatory Tribunal in New South Wales announced electricity price increases between 20 to 42 per cent for the period 2010/11 to 2012/13 (excluding any price effect from the CPRS). Approved price increases in Queensland and Western Australia amount to 11.8 per cent and 15 per cent respectively.[5]

Much of the future increase in prices will be due to the costs of integrating intermittent renewable generation into the market. Adding this renewable capacity requires considerable investment in reserve capacity to maintain supply when renewable generation is not available. Connecting remote renewable generation to the electricity grid also requires huge infrastructure investments. These costs amount to a permanent, ongoing increase in the cost of supplying electricity in Australia. The esaa estimates that capital expenditure on generation and networks over the next five years will amount to $49 billion.[6] These costs will inevitably have to be passed through via higher tariffs to end-users.

Steadily rising retail electricity prices transform the incentives in the market for energy efficiency. Demand for electricity is price elastic to some extent, especially in the industrial sector where energy costs can be a critical input cost. Analysis for the Victorian government estimates that a 1 per cent change in the market price for electricity would result in 0.25 per cent and 0.38 per cent changes in demand from the residential and industrial sectors respectively. [7] Research in South Australia suggests a higher range of between 0.363 to 0.428 per cent.[8]

Recommendation: The Task Group should recommend that COAG agree to the removal of retail price caps in the NEM no later than March 2012. The Australian Energy Market Commission would be directed to undertake all outstanding competition reviews by November 2011. Price caps should only continue beyond March 2012 on the recommendation of the AEMC.

Generators' experience with the Generator Efficiency Standards (GES) program, as well as their ongoing performance reviews, confirm that there are no significant cost-neutral opportunities for efficiency upgrades of existing plant in the sector. Marginal improvements in operational efficiency are possible but only at a significant cost. Under the GES, generators were obliged to implement any energy efficiency measures which could reduce greenhouse gas emissions at a cost of $10 a tonne of $CO_2$ equivalent abatement. Across the generation sector, the GES program identified less than 3 million tonnes of abatement (i.e. less than 1.5 per cent of total sectoral emissions).

5 . IPART *Review of Regulated Retail Tariffs and Charges for Electricity 2010-2013* (2010), p.5; Australian Energy Regulator. *State of the Energy Market 2009* (2009), p.208.

6 . esaa *Global Financial Crisis and the Energy Supply Sector* (media release 14 April 2009)

7 . Vencorp. *Vision 2030: 25 Year Vision for Victoria's Energy Transmission Networks* (2009), p.86.

8 . Shu Fan and Rob Hyndman *The Price Elasticity of Electricity Demand in South Australia and Victoria* (2008), p.37.

The NGF is ready to work with the Task Group to assess the results achieved under the GES and any potential for further efficiency gains.

The NGF notes the suggestion that generators should participate in the Energy Efficiency Opportunities (EEO) Program. Electricity generators and transmission businesses have always been exempt from the program. This exemption was reviewed, and reaffirmed, by the Commonwealth in 2009. The exemption is scheduled to continue to at least 30 June 2013.

The reasons for the Commonwealth's decision to retain the exemption are still valid. Experience with the GES program show that there are no significant efficiency opportunities available. Generators are already subject to a plethora of reporting and energy efficiency obligations under the National Greenhouse and Energy Reporting scheme and State-based schemes. The NGF agrees with the Government decision that the exemption should be assessed after the first five-year cycle review of the EEO program.

Recommendation: Generators' exemption from the Energy Efficiency Opportunities Act should continue, pending the outcomes of the scheduled five year cycle review of the Act.

### *Innovation*

The Task Group has rightly identified access to capital and technology risks as barriers to business investment in energy efficiency. The absence of a carbon price affects the business case for energy efficiency improvements.

For many generators, modest improvements in efficiency may be possible (e.g. repowering coal-fired plants, boiler upgrades, turbine blade replacement), albeit at a net cost to the business. These improvements fall well short of satisfying the Task Group's ambition of a 'step change'.

To achieve more significant improvements in energy efficiency, generators would need to adopt major new technologies, such as supercritical and ultrasupercritical combustion and integrated gasification combined cycle generation. One US study estimates that supercritical plants could cut coal use, and emissions, by 35 per cent compared to the average US coal-fired plant.[9] The efficiency gain in Australia is likely to be considerably less, given the comparatively younger age of the Australian generation fleet compared to the United States.

New technology options are inherently risky. The disadvantages are particularly intimidating for 'first-movers' seeking to test a major new technology. The Commonwealth has recognised these problems and has offered assistance, through programs such as the Low Emissions Technology Development Fund, to support demonstration projects. Further support of this kind could help accelerate the shift to new technologies.

A practical step which the Task Group should contemplate is to supplement the grants-based support offered to a small number of high profile (and high risk) demonstration

9. Janos M Beer *Higher Efficiency Power Generation Reduces Emissions: US National Coal Council Issues Paper* 2009, p.2.

projects with a broader suite of support for energy efficiency initiatives by large energy users. Tax concessions, such as accelerated depreciation for investments in new plant and equipment, are more predictable and more closely tied to actual (rather than forecast) project costs. Governments could offer grants to help make the business case for upgrades or provide a guarantee for power generation project finance.

Tax concessions could be made available only for the period before the introduction of a carbon price.

Recommendation: The Task Group should recommend that the Commonwealth provide a real incentive for businesses to invest in energy efficiency through changes to the tax treatment of appropriate investments in plant and equipment. Such concessions should be 'frontloaded' to lower the hurdle rate for projects. The Commonwealth should also consider offering grants assistance to large-scale energy users, including generators, to undertake efficiency upgrades which would otherwise not occur.

The National Generators Forum trusts that this submission will provide the Task Group with constructive advice on some of the issues identified in the issues paper. A document providing a short NGF response to each of the questions posed in the issues paper is attached. The NGF would be pleased to provide further and more detailed information on any points of interest to the Task Group. In particular, the NGF is ready to arrange a briefing for the Task Group from industry experts on the operation of the Generator Efficiency Standards program.

Thank you for the opportunity to comment on this important issue. The NGF looks forward to a continuing dialogue with the Task Group.

Yours faithfully

Executive Director

## Attachment

# National Generators Forum – Submission on Prime Minister's Task Group on Energy Efficiency – Issues Paper

| Issues Paper Questions | NGF Response |
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| • What do you see as the key goal(s) of energy efficiency? What is the simplest way of measuring progress against these key goal(s)?<br>• How could these key goal(s) be better communicated to all sectors of Australian society? | The NGF is not convinced that setting specific goals for energy efficiency is useful. Energy efficiency should be a natural outcome of dynamic, competitive markets. Governments would be better placed to direct their support to improving the efficiency of markets so that the best use is made of energy and other resources to produce the greatest wealth over time.<br>Maintaining and further improving the highly competitive National Electricity Market and enhanced retail competition would deliver efficient and effective energy production and end-use outcomes. |
| • What do you consider a step change in energy efficiency to be?<br>• Where do you see the greatest potential for a step change improvement in energy efficiency in Australia over the next decade? What can be done to unlock this step change potential?<br>• What needs to be done to ensure step change keeps us at the forefront of OECD energy efficiency improvements?<br>• What non-greenhouse co-benefits could be delivered through a step change in energy | The NGF is not convinced that the concept of a 'step change' should be an explicit policy aim.<br>There is no evidence of energy efficiency programs delivering 'step changes' as distinct from gradual improvements.<br>Tinkering with competitive energy markets to force such 'step changes' will risk unforeseen consequences.<br>It is unclear what is meant by 'being at the forefront of OECD energy efficiency improvements'. The rate of energy efficiency improvements will inevitably differ from country to country, depending on the structure of national economies. Australia should focus on improving its energy efficiency for its own reasons, namely to maximise its overall economic and social well-being.<br>As pointed out in the NGF submission, there are not necessarily direct greenhouse reduction benefits by |

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| efficiency in Australia?<br><br>• Which existing measures could be part of delivering step change? What role would they play? Consider Commonwealth, State and Territory, and local measures. Please comment on the relative efficiency of implementation options where applicable. | being more energy efficient and even a 'step change' cannot assure such improvements. However, there are important and worthwhile co-benefits of being more energy efficient, including better environmental quality and amenity of growing cities, better lifestyles and comfort at lower overall economic cost, and a greater awareness of the role and value of energy in Australia leading to improved individual action.<br><br>Sound and expedient implementation of the National Strategy for Energy Efficiency and the component National Framework for Energy Efficiency provide the best coordinated scope for delivering energy efficiency improvements. Greater attention to the two key identified barriers to the uptake of higher levels of energy efficiency – better and timelier information to consumers and improved incentives for overcoming the private cost hurdles – would assist significantly in advancing improvements. |
| • What do you believe are the key barriers to uptake of energy efficiency improvements?<br><br>• What would be the most efficient and effective way(s) of overcoming these barriers?<br><br>• What groups in society might find energy efficiency actions difficult to undertake or access? How can energy efficiency policies target these groups?<br><br>• How can energy efficiency measures be implemented in a way that takes into account the different energy needs of urban/regional and remote Australia? | As suggested above, the key barriers to the improved uptake of energy efficiency measures are timely and relevant information and lack of government support in covering the financial gap between acceptable private costs and overall societal benefits.<br><br>More and better focussed information, available at the time of decision-making and purchase, would assist in removing the information barrier.<br><br>Tax incentives and/or direct government financial assistance is needed to reduce or eliminate the financial gap between acceptable private costs and societal benefits. |

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| • How do time-of-day and time-of-year changes in demand influence energy efficiency in Australia? | Great care is needed to assess temporal impacts on energy efficiency as such impacts may lead to both positive and negative energy efficiency outcomes.<br><br>For instance, peak power needs will make baseload generation more efficient but this is countered by the need for less-efficient stand-by open cycle turbines.<br><br>The impact on networks can also vary with fuller loading being more cost-effective and efficient on the one hand but overloading and greater investment in peaking assets being less cost-effective and less efficient.<br><br>Exposing all consumer classes to time-of-use pricing will assist in empowering energy retailers and consumers in making more informed decisions about energy use, with the potential for improvements in overall energy efficiency. |
| • What activities (Commonwealth and State) are currently working to improve energy production efficiency in Australia?<br><br>• Is there any way to make these activities work better?<br><br>• What changes could be made within the R&D and energy production sectors to improve the development of new options?<br><br>• How could Government better engage on energy production efficiency? | The key mechanism has been the reform of energy markets. The Government can better engage by continuing to push this reform process. This applies particularly to cost pass-through via time-of-using pricing mechanisms that can benefit both consumers and suppliers.<br><br>Investment in energy R&D is a true 'market failure' because the benefits cannot be fully captured by those making the investment. Therefore, well-targeted government support for energy R&D to improve energy efficiency is a key requirement.<br><br>Production efficiency would be improved on the removal of competitive market impediments generally imposed through regulation aimed at achieving other objectives. Such market distortions reduce energy market competition and reduce the need to be at the forefront of more efficient and effective technology deployment.<br><br>Reducing the energy production investment gap in the greater uptake of energy efficiency through tax rebates or direct financial assistance would realise the |

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| | overall societal objectives if action cannot be justified in terms of private costs.<br><br>EEO or GES implementation measures will be limited due to this investment constraint. |
| • What activities (Commonwealth and State) are currently working to encourage energy efficient energy markets (including electricity and gas) and subsequent efficient end-use of energy?<br><br>• What practical and cost-effective things could make these activities work better?<br><br>• Noting current arrangements for energy market participants (generators, networks, retailers and consumers) what improvements could be made to support a step change in energy efficiency?<br><br>• What improvements could be made to national electricity market operations and network incentives?<br><br>– Are the current governance mechanisms adequate to allow for such a step change?<br><br>– Are there any significant structural or other barriers to improved energy efficiency within Australian energy markets (including but not limited to current features of design, regulation or operation)? | Many current government actions work against energy efficient energy markets by interfering in the supply and demand side of energy supply that reduce the scope for innovation and the more rapid penetration of the most cost-effective advanced technologies.<br><br>The issues were well canvassed in the Wilkins Review that led to the COAG Complementarity Principles. The principles are being comprehensively ignored by all governments to the detriment of more efficient and effective energy markets with greater levels of energy efficiency.<br><br>All levels of government should implement the Complementarity Principles by abolishing programs and other actions that do not address true 'market failures'.<br><br>As noted above, the NGF believes that reforms to enhance the efficiency of the market will deliver the most significant and durable improvements in energy efficiency.<br><br>With respect to NEM, economic efficiency would be improved by removing the non-market impediments and allowing consumers to face the time-of-use costs of electricity supply. Additional end-use efficiency measures would also benefit from such cost-reflective pricing as consumers are given more and better choices. |

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| – Are there barriers to the deployment of distributed generation where it is cost effective, and would greater deployment of distributed generation improve energy efficiency outcomes? | There is no evidence that distributed generation will necessarily improve electricity supply efficiency and a good case exists for the opposite due to the use of less efficient generation plant in many forms of distributed generation.<br><br>There are no market impediments to the greater use of distributed generation, just cost impediments, and these should not be addressed by yet more changes to the energy-only NEM. |
| • How could information access and flow within Australian energy markets be improved? | Access to energy market information in Australia is world-class. The ability to use energy information in a timely manner might be impeded at times for certain market participants due to the complexity of energy market information.<br><br>More focussed information programs about energy market data and related information may help in better assisting would-be market participants. |
| • What energy use efficiency measures (Commonwealth, State and local) are currently working in your sector?<br><br>• What practical changes could make these measures work better? | There are no direct energy efficiency measures working within the generation sector and the sector would question the need for such measures.<br><br>Optimum energy efficiency would be better facilitated through the only-energy NEM if non-market impediments are minimised or removed and all consumer classes face time-of-use price signals to enable better energy use decision-making. |
| • What further cost-effective measures could be used to deliver a step change improvement in energy efficiency in your sector? | There are no cost-effective measures that could deliver a step change in economic or energy efficiency in the electricity generation sector that have not already been realised in the competitive 'energy-only' market. Imposing additional non-market measures would only impose costs on suppliers and consumers without commensurate benefits. |
| • What metrics might usefully be applied in assessing measures for improving energy | Improved market-based competition without the |

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| efficiency in your sector? How might competing proposals be assessed?<br><br>• Where do you see the greatest potential for a step change improvement in transport energy efficiency in Australia over the next decade and over the longer term? | non-market regulatory constraints that inhibit overall economic efficiency in the sector would provide the best metric in assessing the sector's energy efficiency performance.<br><br>Improved access to funding and/or tax relief to facilitate technology change using more energy efficient plant and equipment.<br><br>Improved vehicle efficiency standards and the advent of more efficient alternative vehicle technologies, such as hybrids and electric cars; with the key additional benefit of addressing energy security and balance of payment issues. |
| • What can be done in Australia to develop a culture around energy efficiency improvement?<br><br>• What barriers exist to behaviour change at home, in transport, and at work? What could trigger or motivate change?<br><br>• What more can be done to make energy efficiency opportunities simple and accessible across all areas of people's lives?<br><br>• Is current information about improving energy efficiency relevant, personalised and available? How could this be improved? | Information about energy use and the benefits of energy efficiency as part of economic efficiency would assist in further developing the energy efficiency culture. Assistance in reducing the financial gap between average and more energy efficient appliances, plant and equipment would provide an immediate and practical approach to the delivery of outcomes.<br><br>The key barrier to behaviour change is the fact that the cost of energy is a relatively small component of total business or household spending. This limits the appeal of direct cost-savings (which do undoubtedly exist). |
| • What workforce shortages and skills gaps (current and emerging) do you see in Australia in relation to energy efficiency?<br><br>• What measures would most effectively address these shortages and gaps? | Essentially on the demand side, in terms of providing energy efficient products and services through enabled market intermediaries who do not generally exist in Australia today. These include tradespersons, installers, service providers (for heating, cooling, lighting, etc.) rather that just sellers of energy. |
| • What do you see as the critical governance | From a producer perspective, the critical governance |

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| challenges and opportunities for improving energy efficiency in Australia?<br><br>• Which institutions should play a role in governance arrangements for energy efficiency? Are there international examples of good institutional arrangements that Australia could adopt?<br><br>• What information should be used to provide a stronger evidence base for future policy, monitoring and evaluation? What is the most effective way to collect and distribute this information? | issue is greater regulatory interference in competitive energy markets.<br><br>The COAG National Strategy for Energy Efficiency provides the proper institutional framework. Implementation has not been particularly timely or successful to date, leading to the creation of new uncoordinated and duplicative policies that infringe the Complementarity Principles.<br><br>NGF members urge the Task Group to recommend that potential mechanisms identified be subjected to independent and public evaluation by the Productivity Commission under auspices of the COAG National Strategy on Energy Efficiency before decisions are made on implementation. |
| • What are the cost-effective ways in which governments can facilitate new investment in energy efficiency?<br><br>• What can governments do to leverage greater understanding, viability and uptake of more innovative approaches to financing and implementing energy efficiency?<br><br>• What are some new or different business models that improve energy efficiency? How could governments foster these? | The NGF agrees with the broader industry assessment that the primary mechanism for achieving internationally competitive industry, and thereby creating the conditions for more rapid improvements in energy efficiency, is competitive markets across the whole economy. Governments would create significant value in encouraging private investment in energy efficiency by carefully assessing existing barriers to competition created by government regulation and removing them as necessary. |