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Ms. Kath Rowley
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Climate Change Authority
GPO Box 1944, Melbourne VIC 3001

Via email: submissions@climatechangeauthority.gov.au

Australia's Climate Policy Options

Technology neutral policies will deliver lower bills

Dear Ms. Rowley

The Energy Networks Association (ENA) welcomes the opportunity to make a submission to the Climate Change Authority (CCA) in response to its *Special Review Second Draft Report on Australia's Climate Policy Options* published in November 2015.

The ENA is the national industry association representing the businesses operating Australia's electricity transmission and distribution and gas distribution networks. Member businesses provide energy to almost every household and business in Australia.

ENA supports the development of effective policy initiatives that achieve the effective monitoring and abatement of greenhouse gas emissions to meet Australia's current and future international obligations. The ENA supports climate policy options that focus on outcomes - achieving Australia's abatement targets at least cost and in a technology neutral manner. Frameworks for abatement should facilitate national abatement outcomes in an economically efficient manner across all relevant sectors of the economy. They should seek to minimize economic distortions and, in the case of the stationary energy sector, emissions abatement policy must consider, and be appropriately integrated with, energy policy objectives and market frameworks.

Analysis of Climate Policy Options

The ENA has recently commissioned Jacobs to analyse the potential outcomes for Australian energy consumers from a number of different policy approaches to market intervention to achieve carbon abatement.

This analysis has evaluated the achievement of abatement objectives under three policy scenarios:

1. *'Business as usual'* – This scenario assumes the continuation of the diverse range of various State and Federal abatement initiatives for specific technologies (e.g. renewables) or scale (e.g. SRES, Feed in Tariffs); and extends the use of a binding Safeguards Mechanism which limits sectoral emissions without trading.

2. *'Level playing field'* – This scenario assumes that current abatement initiatives are made technology neutral via a low emissions target scheme (indifferent to scale) and that the Safeguards Mechanism evolves to a Baseline & Credit mechanism permitting trading among energy sector participants.
3. *'Explicit Carbon Price'* – This scenario assumes that an explicit carbon price is established for the energy sector through an emissions trading scheme mechanism. This scenario is technology neutral.

While the detailed Jacobs analysis will be available in the near future, its preliminary high-level results are instructive and are provided to the Authority for consideration. The integrated economic analysis of policy measures, energy markets and customer appliance choices highlights the potential for 'technology neutral' measures to reduce the cost to Australia of achieving emissions abatement targets in the stationary energy sector.

For instance, the preliminary analysis by Jacobs demonstrates:

1. **The achievement of Australia's abatement targets does not require technology-specific abatement programs.** In the stationary energy sector, the relevant Government abatement targets of 26 to 28% below 2005 emissions by 2030 or the indicative Labor target of 45% below 2005 emissions by 2030 can be met through any of the policy options outlined above.

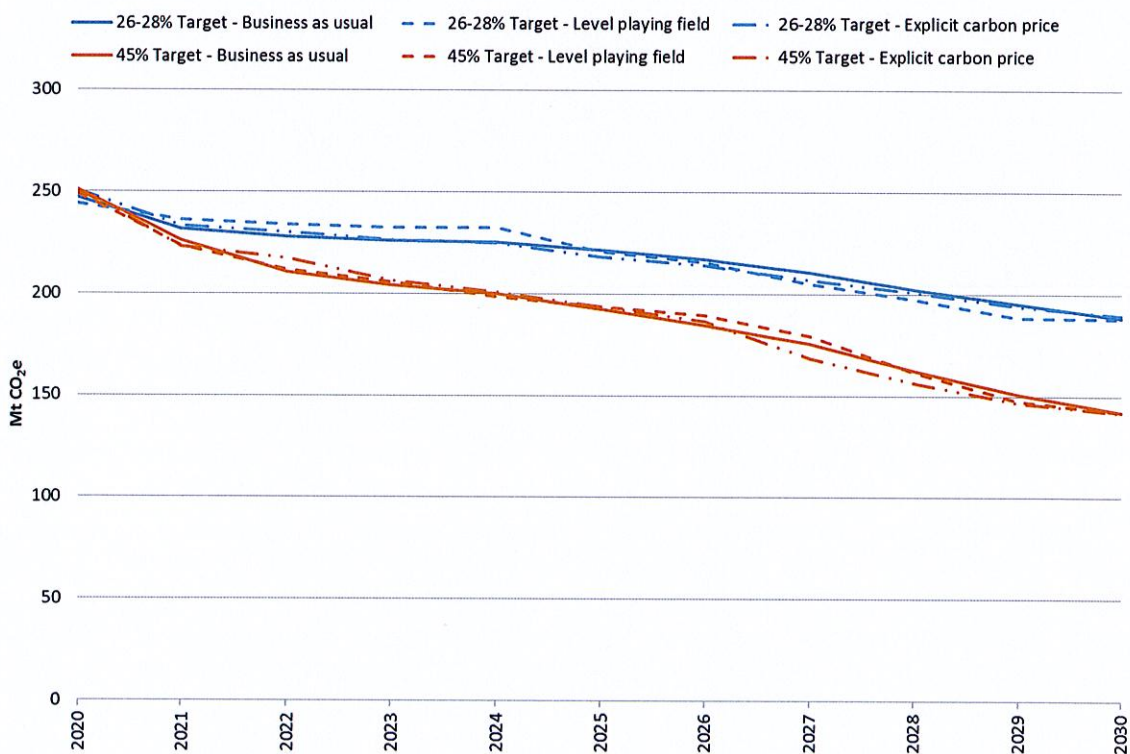


Figure 1: Abatement trajectories to 2030.

2. **A technology neutral framework would achieve Australia’s current carbon abatement objectives in the stationary energy sector at substantially lower cost than current policy settings.** For instance, a saving in Net Present Value of \$600 to \$ 700 million is estimated over the period to 2035 while still meeting the 26 to 28% abatement target. A much larger saving of between \$1.5 and \$8.2 billion could be achieved under the more challenging 45% abatement target.

	Abatement Target			
	26 to 28%		45%	
Policy Settings	Total Cost	Savings	Total Cost	Savings
Business as usual	\$129.2 bn	-	\$152.5 bn	-
Level playing field	\$128.6 bn	\$600 m	\$150.9 bn	\$1.5 bn
Explicit carbon price	\$ 128.5 bn	\$700 m	\$144.3 bn	\$8.2 bn

Table 1: Potential System Cost Savings from Switching to a 'Technology Neutral' framework.

3. **The technology neutral framework provides the lowest residential tariffs over the ten-year outlook to 2030, providing bill savings to customers.**
- In the case of a 26-28% abatement target, Jacobs estimates that during this period a typical customer bill could be an average of \$234 per year lower under a 'level playing field' approach to carbon abatement compared to continuing with the current policy settings. The cumulative savings to typical consumers could be up to \$2,570 over the period between 2020 and 2030.
 - Jacobs estimates that a technology neutral framework would deliver a 45% abatement target at a lower cost than "business as usual" settings. By 2030 a typical customer bill could be an average of \$94 per annum lower than the "Business as usual" policy settings for the 45% target. The cumulative savings to typical customers could be up to \$1,033 over the decade between 2020 and 2030.
 - In fact Jacobs’s analysis shows the efficiency benefits of technology neutral policy settings could be sufficient to offset the impact of increasing Australia’s abatement target from 26-28% to 45%. In the Jacob’s analysis, customer bills by 2030 are actually lower under a "level playing field" achieving a 45% abatement target than under the "business as usual" policies achieving a 26-28% target.

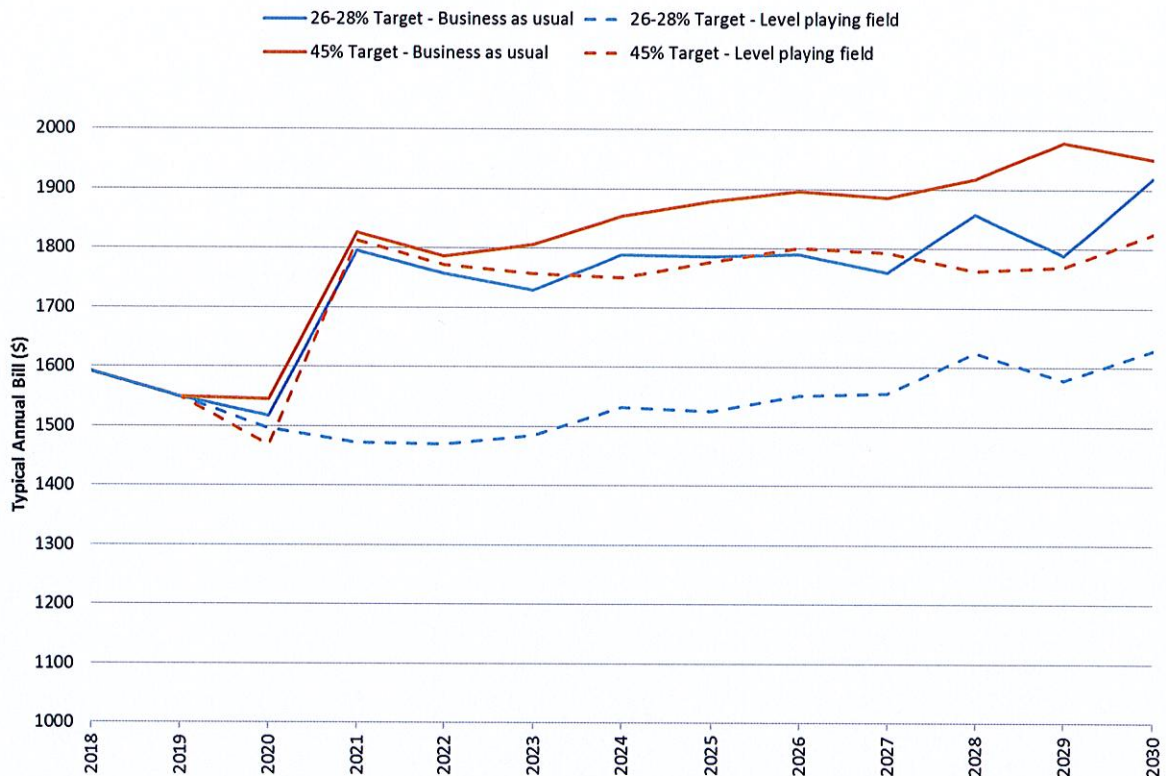


Figure 2: Typical residential consumer bills under different policy options showing least cost under the 'level playing field' option.

As noted above, the Jacobs analysis suggests a “technology neutral” framework provides Australia with new flexibility to achieve abatement goals in the energy sector. The current targets (of 26-28%) could be achieved while avoiding unnecessary customer bill impacts of over \$234 per year. Alternatively, a higher abatement target of 45% could be accommodated, while maintaining typical customer bills in 2030 below the current outlook with a 26-28% target achieved with “business as usual” policies.

The modelling indicates that an economically efficient transition could see significantly greater abatement achieved from some sectors by removing technology-specific impacts. For example, greater abatement is possible in the residential sector when Small-scale Renewable Energy Scheme subsidies on solar water heaters are extended to efficient gas water heaters replacing electric water heaters. This indicates the need to remove distortionary effects of technology-specific renewable energy subsidies.

The ENA supports the careful evaluation by the Climate Change Authority of the potential for Australia to meet its abatement targets in the stationary energy sector with greater economic efficiency and better customer bill outcomes, if carbon policy frameworks are technology neutral.

CCA’s Three Principles for Evaluation

The ENA supports the proposed principles of cost effectiveness, environmental effectiveness and equity for assessing climate change mitigation policies. As noted below, the ENA would also recommend that the CCA consider a fourth principle in any assessment – the achievement of energy reliability and security. Energy security is commonly considered around the world as one of the three legs of energy/ climate policy, alongside cost and environmental impact.

The Jacobs analysis cited above indicates more cost-effective abatement outcomes could be achieved through technology neutral approaches to market intervention. Some current renewable energy

policies and programs do not align with the CCA's principles as they are not cost effective in reducing emissions to the extent required by 2030 and lack equity as they focus on specific technologies at the expense of other technologies. Climate change mitigation policies should support emissions abatement through different technologies competing on a level playing field in the market.

However, it is recognized that many current policy measures which contribute to carbon abatement were initiated with an industry development objective. For instance, the Renewable Energy Target, funding from the Australian Renewable Energy Agency and State Government mandated Feed-In Tariffs were introduced to support sectors of the emerging renewable energy sector.

The Australian Government has provided financial support to R&D programs for low emission technologies, including funding agencies such as the Australian Renewable Energy Agency and the Clean Energy Finance Corporation. ENA supports ongoing innovation and commercialisation support for emerging low emission technologies. Where such government intervention occurs to support specific technologies or sectors, it is important that:

1. The support is in response to a clear market failure and public policy justification;
2. Distortions to competitive markets are minimized; and
3. The commercial viability of individual technologies is regularly reviewed to determine whether ongoing financial support through grants and/or subsidies is warranted.

There is strong evidence that some existing government schemes, such as the Small-scale Renewable Energy Scheme are no longer required as solar photo-voltaic panels are now a mature technology. For instance, the Productivity Commission has noted that the "subsidies for solar photo-voltaic systems were found to be a relatively very costly way of achieving abatement and generally little abatement resulted"¹. ACIL Tasman found that "...PV technology offers an expensive means of achieving abatement at costs of around \$300 to \$500 per tonne CO₂-e in real 2011 dollars"². A more recent analysis³ by the Grattan Institute found that the economic cost of the emissions reductions to 2030 due to solar PV is more than \$175 a tonne.

In this dynamic technological and market environment, maintaining the currency of policy intervention by Government will be critical to efficient outcomes for taxpayers and consumers. It is recommended the Climate Change Authority address the need for new policy mechanisms and initiatives to remain current. Specifically, a metric should be developed such that subsidies are only considered for immature technologies and that these subsidies are removed and/or reduced over time once a technology reaches commercial maturity. This will ensure that support is provided at the critical stage where technologies are being commercialised but allows these technologies to compete on their own merits in the market place once they have been demonstrated as being commercially mature.

An Additional Principle for Evaluation – Energy Reliability and Security

The ENA recommends that energy reliability and security is a principle that needs to be considered in assessing the interaction between energy and climate change mitigation policy options. The COAG Energy Council recently renewed its commitment to improve the integration of carbon and energy policy. It would be appropriate for the CCA and Government to consider the comparative outcomes for energy system operational impacts, including reliability and security, from alternative carbon abatement measures. The world leading level of renewable generation integration in the wholesale electricity

¹ Productivity Commission 2011. Carbon Emission Policies in Key Economies, Research Report, p. 142.

² ACIL Tasman (2011) *Analysis of the Impact of the Small Scale Renewable Energy Scheme*, p. xvi

³ Wood, T., Blowers, D., and Chisholm, C., 2015, Sundown, sunrise: how Australia can finally get solar power right, Grattan Institute (pg 16)

market of South Australia is highlighting potential implications in balancing intermittent generation and the loss of inertia caused by reduced synchronous generation. Similarly, high levels of distributed generation provide operational challenges, as well as some opportunities, in low voltage networks. Responsive gas-fired generation can play an important role in addressing these challenges in the future, and the Jacobs modelling indicates that there will be high levels of fuel switching to gas in all scenarios. It is important to consider the integration issues across the different energy systems and to develop a stable domestic gas policy to ensure that gas can fill this pivotal role in reaching the 2030 abatement targets.

The ENA is confident that, with the appropriate policy and regulatory context, these operational issues can be managed in an efficient manner to enable abatement outcomes, customer choice and a more resilient energy system. The ENA therefore recommends that the Climate Change Authority evaluate how carbon policy frameworks may complement, or undermine, energy system reliability and security outcomes.

A technology neutral framework need not require an explicit carbon price

Jacobs' work demonstrates that implementing technology neutral policies can deliver significant savings to customers compared to 'business as usual' without an explicit carbon price mechanism. The 'level playing field' scenario analysis adjusts existing policies to be technology neutral and delivers the required abatement result by 2030 at a lower system cost. This scenario offers an average bill saving to the typical residential customer of up to \$234 per annum during the 2020 to 2030 period, compared to "business as usual" policy settings .

Yours sincerely,



John Bradley
Chief Executive Officer