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Re: Energy Efficiency Council – Energy Security Target and Safeguard 2020

24 June 2020

Dear Reetta

Thank you for the opportunity to comment on the *Energy Security Target and Safeguard Consultation Paper* (hereafter referred to as the 'Consultation Paper'). The Energy Efficiency Council (EEC) congratulates the Department of Planning, Industry and Environment (DPIE) for their ongoing efforts to enhance the effectiveness of the Energy Saving Scheme, which is being redeveloped as the Energy Security Safeguard (ESS).

The EEC's response to the questions in the Consultation Paper are set out in the attached submission. At a high level the EEC:

- Welcomes the NSW Energy Security Target formally considering supply-side and demand-side resources together to assess energy security. By formally considering both supply-side and demand-side measures, the Government of NSW and industry will be able to more clearly identify the range of low-cost measures that could be implemented to deliver energy security. The EEC urges the Government of NSW to advocate for a similar approach at a national level.
- Recommends that the Energy Security Target explicitly separate out supply- and demand-side measures in projecting future energy demand and capacity. Many of these elements are hidden within AEMO's demand and supply projections, and separating these out will help to understand the current and potential role of energy management in NSW.
- Strongly supports the ongoing operation of the ESS. There is a combination of market failures and distortions in the energy market that result in over-investment in energy supply and under-investment in demand-side solutions. The ESS addresses these market failures and distortions, and has already delivered substantial improvements in energy efficiency and lowered peak demand, reducing energy bills for homes and businesses.
- Strongly supports the introduction of a peak demand reduction scheme. A peak reduction scheme would significantly improve energy security while lowering energy bills. The 2012 Australian Energy White Paper states:

"In our main [energy] markets, between 10% and 25% of maximum demand occurs for only 1% of the time, which means we are all paying higher power bills because of this inefficient use of system capacity.... For example, it has been estimated that 25% of retail electricity costs in New South Wales are derived from peak events that occur over a period of less than 40 hours per year..."¹

¹ Department of Resources, Energy and Tourism 2012 Energy White Paper 2012, Commonwealth of Australia, Canberra.

A study in Europe estimated that properly insulating and renovating homes alone would reduce deliver an 11 per cent reduction in peak demand (69 GW) – 9 per cent from reduced electricity consumption and a further 2 per cent from well-insulated buildings being able to be more flexible with when they consume power.² Done correctly, reductions in peak demand will not just lower energy bills, but also improve the healthiness of our homes and productivity of businesses.

If you require any further information on the matters set out in this submission, please contact me at any time on 0414 065 556 or rob.murray-leach@eec.org.au

Yours sincerely



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Energy Efficiency Council

² ECOFYS 2015 *The role of efficient buildings in the EUs future power system*, ECOFYS, Cologne.



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Energy Efficiency Council submission to the Energy Security Target and Safeguard 2020

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Part 1: The NSW Energy Security Target

Question 1. Is the approach to assessing firm capacities from generators, interconnectors and demand response used to meet the EST reasonable and appropriate? Is there an alternative approach?

The EEC recommends that the mechanism should also formally consider the impact of a range of energy efficiency programs. While the impacts of some of these programs are implicit in AEMO's demand forecasts, at the very least the process for setting the target should include a statement on how energy efficiency is helping to meet the target, including assessing how AEMO has considered energy efficiency.

Question 2. Is the approach to applying the capacity factors for wind and solar generators reasonable and appropriate?

No comment at this time.

Question 3. Are AEMO's maximum demand forecasts appropriate for use in determining the EST? Should alternatives be considered (e.g. TransGrid's forecasts)?

The EEC does not have a comment on the use of maximum demand forecasts from AEMO versus TransGrid. However, we do think that the NSW Government should also formally separate out the impact of a range of current and proposed energy efficiency programs in developing maximum demand forecasts. There are a range of demand-side program assumptions that are already explicitly built into AEMO's projections, and pulling these out will assist in understanding what gaps might exist in either AEMO's projections or planned demand-side policies.

Question 4. How often should EST updates be published?

No comment

Question 5. Are the entities required to provide information to the EST register that are listed above suitable and adequate?

The NSW Government should minimise obligations onto businesses in gathering information for the EST, especially where that information is already reported to other sources

Question 6. Is there other information that should be provided for the register beyond that listed above?

See response to question 1.

Question 7. Are the types of projects that may contribute to meeting the EST described above suitable and adequate? How could prospective projects, beyond those identified as committed, be considered within the EST forecast for firm capacity?

See response to question 1.

Question 8. Many market participants already have requirements to report to AEMO or other market bodies. Where do you consider there may be overlap with these existing requirements that the NSW Government could leverage to ensure industry does not need to report twice? Are there other ways the NSW Government could obtain this information?

No comment

Part 2: Energy Security Safeguard

Question 9. What would be a reasonable commencement date for the new energy saving and peak demand reduction targets? Please provide an explanation for your response.

The new energy efficiency targets should start ramping up immediately (see answer to question 12). The target for peak demand reductions should commence as soon as possible while maintaining scheme integrity, as this will both help manage peak demand but also stimulate the economy. The speed that the peak demand reduction scheme can be introduced will be limited by the speed that the Government of NSW can design and introduce the peak reduction scheme, rather than the speed for industry to ramp up to deliver the scheme.

Question 10. Could elements of either scheme, such as the early accreditation of certificates ahead of surrendering requirements, be brought forward? Please provide an explanation for your response.

If elements of the scheme can be robustly introduced earlier than the commencement of the full scheme, they should be. The earlier that energy management companies can start to manage demand, the earlier that energy management can ramp to support economic recover.

Question 11. What support does industry need to prepare for the introduction of the scheme? Please provide an explanation for your response.

Industry will need to be consulted on the details of the scheme design and given the design of the scheme as soon as possible in order to prepare for it. In addition, DPIE should collaborate with EEC and other associations to develop and implement training programs. Finally, we strongly recommend that the Government of NSW allocate funds to trialling energy management upgrades as soon as possible, rather than waiting for scheme rules to be perfected before activities can commence (i.e. learning by doing).

Part 2.1: Energy Efficiency

Question 12. What issues should the NSW Government consider when setting targets to 2030? At what rate should the targets be increased to reach 13% by 2030?

The EEC recommends that the ESS target ramps up to 13 per cent per annum as quickly as possible. The EEC also recommends that the ramp up rate is designed to complement the national target to improve energy productivity by at least 40 per cent by 2030.

Question 13. What are the most promising opportunities once commercial lighting reaches market maturity? What is the likely size and cost of these opportunities?

There are many promising opportunities for energy savings, including but not limited to:

- Industrial and commercial energy efficiency projects under project-based methodologies. We note the IPART's current compliance-heavy approach is impeding the expansion of project-based methodologies, and resolving this administrative approach should greatly increase the uptake of project-based methodologies;
- Heat pumps for space conditioning and hot water;
- Building shell retrofits, including insulation and draught-proofing; and
- Data analysis and in-home displays.

Question 14. What would prevent the uptake of new opportunities? What support (including new standards and calculation methods) does industry need to transition to new opportunities?

As noted above, IPART's current compliance-heavy approach limits the uptake of new opportunities.

In addition, there are a range of complementary programs that will be critical to support the uptake of new opportunities, such as:

- Energy efficiency ratings for homes mandated at the point of sale;
- End-to-end energy advisory services that can provide households with detailed and trusted advice; and
- Government-led and funded upgrades to public and community housing.

The NSW Government should also consider both targeted and widespread home retrofit programs which incorporate several elements, including finance, that are integrated with the ESS. Demonstrating the potential for buildings to play a role in the grid will be critical to cost-effectively move towards renewable energy, and avoid costly over-investment in generation and storage. A balanced approach to energy would involve minimising demand for energy and then investing in the generation and storage that are required to meet that level of demand. There is currently a significant risk that households will over-invest in solar and batteries before they undertake building upgrade measures that will reduce the size of generation and storage that is required.

Question 15. What additional data sources are available that could inform assessment of the size and cost of the energy efficiency opportunity in New South Wales? Refer to Appendix B for technical assumptions.

No comment.

Question 16. What feedback can you provide to improve the other modelling assumptions set out in Appendix B?

No comment

Question 17. Is the current penalty rate set at an appropriate level to incentivise retailers to buy and surrender certificates?

The current penalty rate appears to be appropriate.

Question 18. Should small retailers be exempt? If so, up to what size?

There currently does not seem to be a need to exempt retailers from the ESS, and compliance with the ESS does not appear to be a barrier for new retailers to enter the NSW energy market. If the Government wants to reduce the costs for new retailers to participate in the ESS, they could be given the option of paying into a fund that supports government-led energy efficiency programs for their first year of operation only.

Question 19. Which cleaner fuel switching activities should the scheme provide incentives for?

The scheme should support heat pumps for air source heat pumps for hot water and potentially some alternative fuels (e.g. hydrogen and biofuels) but should not be used to support renewable electricity generation technologies (e.g. solar PV), which are highly subsidised by other schemes and commercially mature.

Question 20. Should the scheme cover technologies that are being wound down under the SRES? If so, what is the best way to do this?

The ESS should follow the Victorian Energy Upgrades program and provide support for energy using technologies such as domestic heat pumps which are being wound down under the SRES. The low emissions standards of electric resistive and gas-fired water heaters mean that they have a low upfront cost and very high running costs and emissions – incentives and education will be required to encourage consumers to move towards heat pumps that have much lower running costs.

Question 21. How should energy savings be counted for these cleaner fuel switching activities?

No comment at this time.

Question 22. What would be the likely scale of uptake of cleaner fuel switching activities? Please consider the number, size, and cost of projects.

No comment at this time.

Question 23. Under what circumstances should the NSW Government consider extending scheme liability beyond the electricity sector?

No comment at this time.

Part 2.2: Peak Demand Reduction

Question 24. How can the scheme's certificates best capture capacity, timing, duration and availability factor?

The EEC does not yet have a position on whether the 'peak' should be defined as the system or wholesale peak, nor the best way to capture this. The right measure would vary between the type of activity. For instance, installing a more efficient air conditioning unit is likely to deliver a benefit in certain periods of time of hot weather that tend to coincide with peaks, but may not necessarily align with the highest price period, which may be due to a generator or interconnector failing. Conversely, demand response can be well-tailored to respond to price peaks.

Question 25. Who is best placed to manage the financial risk that capacity is not made available when needed?

As noted above, this depends on the type of capacity. In demand response, an aggregator can manage the risk of capacity not being available by 'aggregating' multiple sites to deliver capacity. In activities that improving the energy efficiency of air conditioning it would be better for the administrator to consider the aggregated level of availability in setting the price of certificates.

Question 26. Are there other activities the NSW Government should consider for inclusion in the peak demand reduction scheme?

The NSW Government should consider a broad range of measures in the peak demand reduction scheme, including insulation and draught-proofing building upgrades. Thermal retrofits not only reduce peak demand, but are also essential to enable the pre-heating and pre-cooling of homes to shift peak demand. A study in Europe estimated that properly insulating and renovating homes would reduce deliver an 11 per cent reduction in peak demand (69 GW) – 9 per cent from reduced electricity consumption and a further 2 per cent from well-insulated buildings being more flexible with when they consume power.³

Question 27. What is the size and cost of the peak demand reduction opportunity available in New South Wales?

International experience suggests that demand response can provide 20 per cent or more capacity within an energy market, and energy efficiency and load shaping measures can provide additional capacity. This capacity is available at a much lower cost than supply-side capacity.

Question 28. Are there alternative ways in which the peak demand scheme could complement national schemes?

No comment at this time

³ ECOFYS 2015 *The role of efficient buildings in the EUs future power system*, ECOFYS, Cologne.

Question 29. What are the key issues, and potential mitigation measures, the NSW Government should consider on consumer protection?

No comment at this time

Question 30. Which calculation methods should be developed first?

No comment at this time

Question 31. Should location-based multipliers or activities that are specific to certain locations be considered?

Location-based multipliers or activities should be considered, but should not be the first elements considered in the development of the peak reduction scheme.

Question 32. What are your views on the proposed approach to scheme liability? Please align your response with the topics above.

The EEC supports the proposal that current liable parties for the ESS would also be the liable parties under the peak-demand reduction scheme (i.e. energy retailers) and their liability should be split according to their contribution to the liable activities (liability option number 2).

Question 33. What would be the implications for the available dependable peak demand reduction capacity in New South Wales if the scheme allows carry forward?

No comment at this time

Question 34. What qualifications should certificate providers be required to have?

No comment at this time

Question 35. Should certificates expire every compliance year or should they be transferable to future compliance years? What implications would your preferred approach have for ensuring dependable peak demand reduction capacity in New South Wales?

No comment at this time

Part 2.3: Scheme administration and regulation

Question 36. What is working well with the administration and regulation of the ESS? What features would you want to see continuing, and potentially replicated for the peak demand reduction scheme?

DPIE has played an active role in trying to improve the operation of the ESS, and this should continue.

Question 37. Should the annual Rule review and three-year major Rule review process for the ESS and new peak scheme be changed or is it working effectively? Please provide an explanation for your response.

The current annual Rule review and three-year major Rule review process are working well and provide industry with clarity about the timelines for reforms to the scheme.

Question 38. Would the above ideas help make the Safeguard more customer-centric? Do you have other suggestions?

No comment at this time.

Question 39. What improvements could be made to the administration and regulation of the ESS that would encourage the creation of effective energy saving activities? Please provide an explanation for your response, including an indication of your key priorities.

IPART has taken a compliance-focussed approach to the ESS, which has substantially held back the scheme. IPART's role in the ESS needs to be substantially overhauled.

Question 40. Who should be responsible for developing the capability of service providers to deliver effective activities, the Scheme Administrator or the Department?

DPIE and industry associations

Question 41. What is the best way to develop the capabilities of service providers?

Training, accreditation and funds for 'trial and development' of new approaches to delivering energy management.

Question 42. What are your views on the options to enhance the compliance and enforcement framework of the ESS?

No comment.

Question 43. Are the current provisions for the NCAT review of decisions by the Scheme Regulator and Administrator sufficient? Please provide an explanation for your response.

No comment.

Question 44. What key performance indicators and service standards should be considered for the Scheme Regulator and Administrator?

No comment.

Question 45. What else can the NSW Government do to ensure the continuous improvement of the ESS?

Complementary programs including stimulus programs and energy efficiency ratings for new and existing homes at the point of sale.