

SUBMISSION TO THE

Energy Security Board National Energy Guarantee Consultation Paper

MARCH 2018

SUBMISSION TO THE ENERGY SECURITY BOARD NATIONAL ENERGY GUARANTEE DRAFT DESIGN CONSULTATION PAPER

The Australian Academy of Technology and Engineering (ATSE)¹ welcomes the opportunity to provide input into the National Energy Guarantee (NEG) draft design consultation.

It is abundantly clear that Australia's electricity markets require a mechanism to drive emissions reduction in the sector, while ensuring their ongoing reliability. The electricity sector is currently responsible for about 35 per cent of Australia's greenhouse gas emissions² and significant reductions will be required to meet Australia's emissions reduction targets. However, with increasing volatility of demand and the increasing proportion of intermittent generation in the market, there is a risk of a shortfall in flexible dispatchable resources in some regions of the NEM at some periods.

Although ATSE considered implementing the recommendations of the Finkel Review to be sufficient to ensure the NEM's reliability, the NEG's reliability requirement appears to be a functional (although complex) alternative to the generator reliability obligation proposed in the Review. The proposed emissions requirement is not the Academy's preferred policy to achieve emissions reduction. A carbon price, an emissions trading scheme, or a clean energy target (as recommended by the Finkel Review) would be better mechanisms to drive decarbonisation. However, in the current environment, the NEG may be Australia's best opportunity to remove the policy uncertainty that is hampering energy sector investment. It therefore has the Academy's qualified support.

There will be numerous design challenges to ensure that the NEG is effective in reducing emissions and ensuring reliability without increasing costs. For it to be effective, the emissions requirement of the NEG must be part of a long-term emissions reduction strategy for the whole of the Australian economy. For the NEG to be efficient, it is essential to minimise the complexity of its mechanisms and their associated compliance costs. ATSE is also concerned that the NEG has a high risk of increasing the power of the incumbent vertically integrated generator-retailers. It is important to ensure that with rapidly developing technology, emerging technology-based solutions, such as demand response and energy storage, will be able to contribute to reducing prices through effective competition.

The resources of ATSE's Policy Team and Fellowship are available to assist the Energy Security Board in their efforts. If you have any questions or require further information, please contact ATSE's Executive Director, Policy, Dr Matt Wenham at matt.wenham@atse.org.au or (03) 9864 0926.

¹ ATSE is an independent think tank that comprises the leaders in the fields of technology and engineering, who gain Fellowship to the Academy in a highly competitive process. ATSE is one of Australia's four national Learned Academies but uniquely its 800-strong Fellowship come from industry, government and research organisations, as well as academia. Our Fellowship develops trusted, informed and visionary views to persuade decision-makers to implement the most progressive policies on the development of technology for the betterment of Australia and its people. www.atse.org.au

² CSIRO (2017) *Low Emissions Technology Roadmap*, available at <https://www.csiro.au/en/Do-business/Futures/Reports/Low-Emissions-Technology-Roadmap>

Emissions requirement

ATSE is concerned that the proposed approach for the emissions requirement is complex and that the proposed target is inadequate to achieve Australia's emissions reduction target.

4.2 Setting the electricity emissions target and review process

Australia urgently needs a long-term emissions reduction target and strategy, including a decarbonisation trajectory based on evidence from the Climate Change Authority and a cross-sectoral analysis of efficient and cost-effective decarbonisation pathways to achieve this trajectory. The electricity sector is one of the easiest and cost-effective areas in which to achieve emissions reductions³. The proposed 26 per cent (relative to 2005) reduction in average emissions per megawatt-hour is insufficient to support Australia meeting its 26-28 per cent emissions reduction target for the whole economy, which is already considerably lower than the 45-65 per cent target recommended by the Climate Change Authority in 2014⁴ to achieve the Paris Agreement.

Emissions reduction targets for the electricity sector and the Australian economy should be based on the evidence-based advice of an independent body such as the Climate Change Authority. This would reduce the scope for political issues influencing the target; provide the government with the opportunity to argue that it is an arm's length decision based on scientific evidence; and remove the incentive for special interest lobbying by those seeking to maximise their position compared with those of others.

4.2.3 Forecasts and adjustments to the target

Regular reviews of progress against the targets as part of the strategy outlined above are an appropriate time to consider opportunities for changes to the emissions reduction target. These should align with Australia's commitments to the Paris agreement.

4.2.5 Geographic neutrality

ATSE is concerned that the emissions requirement only applies to the NEM. Emissions reduction is a national challenge that will require decarbonisation efforts in the WA and NT electricity systems. Again, this highlights the need for a truly national emissions reduction strategy.

4.3 Treatments of (EITE) activities

ATSE does not support the exemption of energy-intensive trade-exposed (EITE) activities from the NEG. If the NEG does not increase costs then the rationale for exempting EITE activities is not clear. If it imposes additional costs, such an exemption will place a larger burden on other electricity users. ATSE does not believe that more efficient industries and sectors should carry those that are less efficient.

The rationale for EITE exemption is not as strong as when the renewable energy target (RET) was established, as many of the competitors to Australia's EITE industries are now in countries that have some form of carbon pricing. If the NEG does increase costs for EITE industries, this may affect their competitiveness against competitors in economies that are not yet pricing carbon emissions appropriately. For this reason, it is essential for the Australian government to advocate for a global

³ IRENA (2017) *Accelerating the Energy Transition through Innovation*, available at <http://www.irena.org/publications/2017/Jun/Accelerating-the-Energy-Transition-through-Innovation>

⁴ Climate Change Authority (2014) *Reducing Australia's Greenhouse Gas Emissions: Targets and Progress Review—Final Report*, available at <http://climatechangeauthority.gov.au/reviews/targets-and-progress-review-3>

greenhouse gas-pricing system. This would level the playing field and help to drive global efforts to solve this global challenge.

Before the Government decides whether to exempt EITE industries from the NEG, it should quantify the extent to which the NEG, under their intended parameters, would put Australian EITE businesses at a competitive disadvantage. The government should also model the effect of an exemption on electricity prices for EITE businesses and other energy users. It is also not clear how retailers would differentially price contracts with their exempt customers and with their non-exempt customers under the NEG.

4.4 External offsets

ATSE does not support the use of external offsets. It does not make sense to allow the use of offsets in a scheme that is confined to the electricity industry. If offsets were to be allowed, it would have to be in the context of a whole-of-economy emissions reduction policy. The purpose of the emissions requirement in the NEG is to drive decarbonisation of electricity at a pace that is manageable in terms of its impact on costs and reliability. The trajectory should be set with this in mind.

Reliability requirement

The reliability obligation is an alternative to the generator reliability obligation proposed by the Finkel Review but has its roots in the same process - a regional assessment by AEMO. However, it is a far more elaborate instrument than the generator reliability obligation proposed and requires a complex compliance regime. Regardless, it addresses the increased risk of a shortfall in flexible dispatchable resources that was identified in the Finkel Review and in AEMO's advice to the Minister in September last year.

5.2 Designing a reliability requirement

The reliability standard will need to be carefully calibrated to avoid excess cost and to reflect properly informed community expectations. It is important that the requirement allow different resources and technologies, including generation, storage, and demand management to contribute on an equivalent footing.

ATSE supports the proposal that the reliability requirement only be triggered when there is a reliability gap, to avoid imposing unnecessary obligations on retailers and driving up costs. It is possible that planned government interventions⁵ and other investments in energy storage will pre-empt the trigger. ATSE recognises that even if the requirement is triggered it is possible that the market will not respond adequately, and it will fall to AEMO to procure sufficient resources to meet operational standards. A challenge will be to create sufficient space between the already announced government procurements and the fall-back procurement by AEMO for private investor confidence.

⁵ E.g. the Victorian and South Australian battery tenders, Snowy 2.0 and the Tasmanian Battery of the Nation.