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Mr James White

Assistant Secretary

Department of the Environment and Energy

Australian Government

Submitted by email: **NationalEnergyGuarantee@environment.gov.au**

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Dear Mr White

National Energy Guarantee Draft Detailed Design Commonwealth Elements

AGL Energy (**AGL**) welcomes the opportunity to make a submission in response to the Commonwealth Government's National Energy Guarantee Draft Detailed Design for Consultation.

AGL is one of Australia's largest integrated energy companies and the largest ASX listed owner, operator and developer of renewable generation. Our diverse power generation portfolio includes base, peaking and intermediate generation plants, spread across traditional thermal generation as well as renewable sources. AGL is also a significant retailer of energy, providing energy solutions to around 3.5 million customers throughout Australia.

In addition, AGL is continually innovating our suite of distributed energy services and solutions for customers of all sizes. These behind-the-meter energy solutions involve new and emerging technologies such as energy storage, electric vehicles, solar PV systems, digital meters, and home energy management services delivered through digital applications.

AGL's view on the Guarantee

AGL welcomes the ESB's proposed approach to integrate emissions reductions policy with energy policy through the draft design of the National Energy Guarantee (**Guarantee**). The Guarantee has the potential to establish a clear long-term policy framework to reduce Australia's greenhouse gas emissions in the energy sector consistent with Australia's long-term climate change commitments. Most importantly, by providing policy certainty, further investments can occur in generation infrastructure which will place downward pressure on electricity prices.

The piecemeal introduction of carbon reduction and renewables policies has produced unintended consequences for wholesale energy markets, as incentives for development and price signals have shifted over time. The lack of a long-term mechanism to address emissions reductions that has bipartisan political support has been a significant contributor to increased risks and costs for energy market participants and has had material impacts on the Australian energy sector overall.

With careful consideration to the detailed design and a focus on key policy principles, we believe the Guarantee can contribute to a more sustainable energy market for the long-term benefit of customers.

However, care needs to be taken not to attempt to resolve all of Australia's energy market concerns through the proposed policy architecture. We note that the Guarantee is primarily a mechanism to provide certainty on investment during a period of transition to lower emissions generation sources, with an associated safeguard to ensure system reliability, and that its design should therefore focus on these two imperatives.

The electricity sector has already experienced significant disruption over the last decade, most notably as a result of declining demand that was poorly forecast, and the disorderly exit of thermal plant replaced by subsidised large-scale renewables. In our view, further change and a continuing transition is inevitable, and the Guarantee must support this transition by providing clear signals to market participants regarding expectations on the future state of the sector.

The Guarantee should not further disrupt the transition by imposing very onerous conditions on energy market participants and investors or introducing heavy constraints on market participation. The objectives of security, affordability, and sustainability in a carbon-constrained future should be met at least cost, which will occur with minimal disruption on the operation of markets.

Guiding policy principles

The energy sector is principally concerned with delivering an essential service to consumers, which is the primary consideration in developing effective policy and setting strategic objectives over the long-term. Within this context, however, the integration of energy and emissions reduction policies is also a fundamental imperative, and the mechanisms to achieve emissions reductions in the electricity sector should be aligned and integrated with the design and operation of the energy market.

To meet customers' energy delivery requirements, system reliability must also be maintained at a reasonable price. Within the parameters of prospering in a carbon constrained future and promoting the centricity of customer's requirements, keeping system security and reliability to an acceptable standard while also addressing the cost of energy to end users are constraints within which energy markets must be operated and managed.

We therefore consider that the design of any mechanism must principally address:

1. **Cost** - The Guarantee should be designed with the greatest regulatory efficiency possible, which consists of minimal disruption to existing markets and at the lowest net cost to customers.
2. **Emissions** - The Guarantee should ensure that the electricity sector can contribute to ensure Australia can meet its international commitments on emissions reductions with a view to ramping up to a potential of net zero emissions by 2050 (consistent with the Paris Agreement).
3. **Reliability** - The Guarantee should provide direction on the appropriate mechanisms by which reliability can be maintained as a result of increasing amounts of intermittent generation.
4. **Certainty** - Objectives of the Guarantee must enhance the existing operation of the market and also consider other market reforms and reviews.
5. **Competition** - Competitive, transparent, efficient, and liquid markets for energy and other products must be encouraged and enhanced to drive lowest cost outcomes.

The development of the detailed design by the ESB needs to balance these objectives. A focus on reliability may see adverse outcomes for affordability and meeting the principal aim of reducing emissions. The Guarantee must provide certainty, not impose further risk and costs.

Commonwealth elements of the National Energy Guarantee

AGL has given careful consideration to the proposed Commonwealth elements of Guarantee, which we elaborate in the Attachment to this submission.

In terms of setting the electricity emissions targets, AGL supports the Commonwealth's commitment to the Paris Agreement and notes the proposal to set the emissions reduction targets in Commonwealth legislation as a table of annual emissions per megawatt hour (MWh) for the financial years ending 2021 to 2030. In order to ensure investor confidence in the long-term trajectory, we would also encourage the Commonwealth to legislate a ratchet obligation with respect to the electricity emissions targets.

In terms of forecasts and adjustments to the targets, we support the proposal to set a requirement for the level of emissions per MWh (tCO_2-e/MWh) for retailers in the NEM each year, but also ensuring that actual emissions reduction targets correlate with changes to total electricity consumption.

Nevertheless, we consider that the Commonwealth's proposal to require a five-year notice period to revise the electricity emissions targets may impose too rigid a framework on the scheme. In our view, a three-year notice period for ratcheting up the electricity emissions targets may be more appropriate.

We would also continue to encourage the Commonwealth to develop a long term, national carbon budget for Australia that extends to 2050 to support the development of an appropriately nuanced emissions trajectory for the electricity sector.

On the proposed exemption for Emissions-Intensive Trade-Exposed (**EITE**) activities, we consider that the costs of decarbonisation should be shared equitably across the Australian economy. We would urge the Commonwealth to carefully consider implementation of an EITE exemption. We note that the greater the level of exemptions, the higher the costs imposed on non-exempted businesses and households.

On the issue of offsets, we would urge the Commonwealth to take a cautious approach as their use may dilute the policy intent of the Guarantee and risk deferring the necessary structural adjustment of Australia's energy sector. Should the Commonwealth take the view that offsets will have a role, it is imperative that public policy effectively manage the risks associated with their use by providing confidence to investors for allowable quality and quantity.

Should you have any questions in relation to this submission, please contact Kurt Winter, Manager, Policy and Research on 03 8633 7204 or myself on 02 9921 2516.

Yours sincerely,

Associate Professor Tim Nelson

Chief Economist

ATTACHMENT

1. The National Energy Guarantee policy design

Emissions requirement

The transition to a sustainable electricity market that utilises substantial amounts of renewable energy must be orderly. Australia is in need of a long-term carbon policy that drives investment in low-emissions sources and can steer the electricity sector smoothly through the process of replacing aging thermal plant with less emissions-intensive generation, while also meeting other electricity sector objectives.

The energy sector has an important role to play in meeting Australia's international commitment to reduce greenhouse gas emissions. The generation of electricity accounts for a third of Australia's total greenhouse gas inventory, and the decarbonisation of other sectors, such as transport and manufacturing, is heavily upon clean energy sources becoming available.

If indeed an effective Guarantee can be designed that adequately maintains system reliability, AGL therefore considers that there is a strong argument for imposing stronger targets on the electricity generation sector than those currently proposed by the federal Government. Meeting more ambitious targets through an efficient mechanism that does not disrupt wholesale electricity markets, however, is reliant on bipartisan support and long-term policy stability that has been lacking in Australian climate policy thus far.

While incentives under the current Renewable Energy Target (**RET**) and other State-based targets have delivered notable investment in new renewable generation, the absence of long-term policy certainty has created ongoing risks that Australia will not deliver on its long-term emissions reduction ambitions, and magnifies uncertainties for investors looking to make long-term financial commitments in the NEM.

We are supportive of the ESB's proposal to limit emissions in the electricity sector in accordance with targets that align with Australia's international obligations. We consider that a mechanism to drive emissions reductions in alignment with a long-term investment trajectory is critical to Australia's energy future. While there are many ways in which an emissions reduction target could be structured, we support the ESB's recommendation to set a limit on the electricity sector's emissions by imposing a limit on the overall emissions of retailers and large customers.

Although the obligation to reduce emissions would seem to more naturally sit on generators, as parties who are in direct control of their assets and in the best position to reduce the production of emissions at their facilities, there is a nexus between retailers and generators through the underlying contract market that operates in the electricity sector, which can be utilised to drive emissions reductions through retailer obligations.

This connection between electricity market participants, in the form of underlying financial instruments and ownership structures that support the production and supply of electricity, is a key design element of the NEM. Ultimately, retailers are the entities that purchase energy from the wholesale market and have the capacity (either directly or through financial intermediaries) to enter into agreements for the volume and type of energy that is produced.

The interaction of the Guarantee with the existing financial markets is a key component of the ESB's proposed design. The maintenance of a liquid and transparent market for energy is critical to the Guarantee's success, both in terms of the proposed emissions requirement and the reliability guarantee, as efficient financial markets drive lowest-cost outcomes for consumers.

The obligations imposed by the Guarantee should build on the existing design strengths of the NEM and continue to improve on current levels of contract liquidity in respect of energy market products and derivatives, while also seeking to drive down retailer risks or compliance overheads that may lead to

unnecessary cost increases. Promoting multiple options for compliance through direct retailer investment in generation, innovative financial instruments and arrangements will lead to the objectives of reducing emissions and maintaining reliability being met at lowest cost.

Reliability guarantee

We are generally supportive of the ESB's consideration towards maintaining system reliability through a mechanism that ensures enough dispatchable firm generation remains in the market to meet overall system adequacy settings, although we note that under AEMO's forecasts, there are no projected system reliability issues in any NEM area for at least the next 5 years.

We also consider that there may be alternates to the proposed reliability guarantee which may allow reliability targets to be met at lower cost to customers and at lower risk of disruptive market intervention. Similarly, policy mechanisms that are aimed at driving liquidity and transparency in wholesale markets may be more appropriate to consider separately to the Guarantee.

In developing a reliability guarantee, due regard should therefore be given to the role of existing market settings that already drive investment for greater capacity in the market. Numerous market mechanisms, price signals, and operating paradigms already contribute towards the objective of increased reliability in the NEM, and the Guarantee will need to both enhance and efficiently interact with each of them.

While ongoing scrutiny and appropriate reform of these existing market settings (which is occurring through existing market reviews, rule and procedure changes) will provide better long-term outcomes for customers, in our view there may not be a compelling need to make significant structural changes to the existing operation of the NEM to drive better reliability outcomes as a part of the policy architecture of the Guarantee, particularly when forecast capacity shortfalls seem to be less of a problem than the risk of outages due to other reasons.

Keeping these principles as a focus will ensure that the primary focus of the Guarantee is met and subsequent market reform in the NEM is also addressed in an efficient manner.

2. Setting and Reviewing the Electricity Emissions Target

Setting the electricity emissions targets

AGL supports the Commonwealth's commitment to the Paris Agreement. AGL accepts the Intergovernmental Panel on Climate Change conclusion that the risks associated with climate change are reduced substantially if warming is limited to less than 2 degrees Celsius above pre-industrial levels.

In ratifying the Paris Agreement, Australia committed to a nationally determined contribution (**NDC**) to reduce domestic emissions to 26-28 % on 2005 levels by 2030. Australia's obligations under the Paris Agreement also include a requirement to ratchet up ambition. Accordingly, as implied by this commitment, Australia's public policy settings need to establish a durable pathway, not only to meet its current NDC, but also to ratchet up ambition over time.

AGL notes the Commonwealth's proposal to set the emissions reduction targets in Commonwealth legislation as a table of annual emissions per megawatt hour (MWh) targets (known as electricity emissions targets) for the financial years ending 2021 to 2030. We note that the Commonwealth proposes to set the annual electricity emissions targets as a pro rata share of Australia's overall emissions reduction commitment, that is achieving a 26 per cent reduction on 2005 levels by 2030.

In seeking to meet Australia's emissions reduction targets, we consider that the energy sector is in a unique position to act first and to unlock substantial emissions reductions in other sectors of the economy. Whilst electricity generation currently accounts for approximately one third of Australia's greenhouse gas emissions inventory and represents the single largest source of domestic emissions, technological substitutes to fossil

fuels are available and increasingly cost effective. Significant emissions are generated by a small number of individual assets. Moreover, electricity generation also has the potential to facilitate emission reduction in other sectors, notably transport with electrification powered by renewable energy and manufacturing.

AGL is committed to playing a leading role in developing a pathway to a modern, decarbonised generation sector. As our Greenhouse Gas Policy[1] elaborates, we have made a commitment to a range of measures that will drive the decarbonisation of the energy sector, including the closure of all of our existing coal-fired power stations by 2050 and continued investment in new renewable and near-zero emissions technologies.

In order to ensure investor confidence in the long-term trajectory, we would also encourage the Commonwealth to legislate a ratchet obligation with respect to the electricity emissions targets. Such a mechanism may assist in ensuring that the trajectory remains consistent with the Paris Agreement architecture. We note that similar provisions have been legislated in Victoria's *Climate Change Act 2017.* In our view, this would increase investor confidence.

Forecasts and adjustments to the target

The process for adjusting any emissions targets should be transparent, independent of Government, and based on predictable principles and commitments, such as energy market demand and Australia's international emissions reduction commitments. Primarily, the target setting process must take into account the objective of ensuring long-term investment stability insofar as it reduces risk for market participants and improves efficient market outcomes.

In this regard, we support the proposal to set a requirement for the level of emissions per MWh (tCO_2-e/MWh) for retailers in the NEM each year, but also ensuring that actual emissions reduction targets correlate with changes to total electricity consumption. We agree that that the trajectory of the electricity emissions targets should not generally be adjusted to account for variations in electricity demand, but rather that an established methodology to calculate emissions obligations should be set that allows retailers to forecast based on predicable inputs what their obligation may be in any given compliance year.

Timing and process for setting electricity emissions targets under the Guarantee

In our view, there is merit to limiting the time period within which changes to the emissions trajectory can be made, as settings that are in place over a long time period drive smoother investment outcomes. Generation investments are highly capital-intensive projects that require certainty on long-term returns, and often rely on stability for long-term inputs such as offtake agreements and fuel contracts that may cover a number of years.

Revisions of targets should have due regard to the potential impact on wholesale markets. Changing targets may substantially affect utilisation of assets, system capacity, exit of thermal plant, fuel contracts, and overall system reliability. Care should therefore be taken in setting initial targets and revising those targets to make sure they are realistic, durable, and meet Australia's long-term obligations.

Nevertheless, we consider that the Commonwealth's proposal to require a five-year notice period to revise the electricity emissions targets may impose too rigid a framework on the scheme.

Should the Commonwealth look to revise its level of ambition into the future, a five-year notice requirement would mean that emissions in the second half of the decade would need to decline sharply, magnifying the abatement challenge for the energy industry and potentially resulting in significantly disorderly transition. In our view, a three-year notice period for ratcheting up the electricity emissions targets may enable a smoother and more orderly transition.

[1] See https://content.agl.com.au/wp-content/uploads/2017/04/AGL_Greenhouse_Gas_Policy.pdf.

More broadly, the trajectory of the electricity emissions targets should be clearly aligned to an economy-wide view of Australia's emissions trajectory. As we have consistently advocated[2], well telegraphed and consistent policy that provides insight into the investment environment over the long term is a pre-requisite to minimise the impact of emission reductions on Australia's economy and consumers into the future.

In particular, a long term, national carbon budget for Australia that extends to 2050 would allow businesses some insight into the suitability of investments with long lifespans. In preparing AGL's own economic analysis of our operations within a carbon constrained future[3], we utilised the carbon budget expert advice provided by the Climate Change Authority (**CCA**) in 2013, which projected a national budget of 10.1 Gt CO2-e for the period 2013 to 2050. We would encourage the Commonwealth to also draw upon the CCA's analysis to develop an appropriately nuanced emissions trajectory for the electricity sector.

Geographical coverage

Long-term nationally consistent policy is the most desirable policy outcome for the energy sector, given the long-term investment horizons and large upfront costs involved. We consider that the market for emissions abatement should be defined as geographically wide as possible. The emissions obligation should be set across the NEM and where possible extended to non-NEM regions, including Western Australia and the Northern Territory. As a commitment that reflects a national obligation, significant efficiencies will be obtained by applying the operation of the requirement as broadly as possible. Nationally coordinated targets would also ameliorate some of the economic risks associated with setting emissions reductions targets at the State level.

Nevertheless, we appreciate that States will continue to set their own emissions reductions targets in an effort to propel ambition beyond the Commonwealth's current goal. While we strongly favour a nationally consistent emissions reduction mechanism, the dynamics of Australian jurisdictional energy policy means that emissions targets need to be compatible with State-based emissions targets, noting that State-based targets operate under other models.

The operation of the Guarantee should not impact on the existing RET legislation, including registration of RET-eligible projects, creation and surrendering of certificates, and other compliance obligations relating to RET certificates. The RET obligation should continue to 2030 unchanged. We do not consider that the proposed design of the emissions requirement will interfere with the RET scheme or affect the ability of that scheme to continue through to 2030.

3. Exemptions for Emissions-Intensive Trade-Exposed Activities

In AGL's view, the costs of decarbonisation should be shared equitably across the Australian economy in the long-term.

While it is important that our emissions-intensive trade-exposed (**EITE**) activities are not internationally disadvantaged, we also observe that continuing to exempt these industries from climate policies results in higher costs for non-exempt businesses and households.

Accordingly, we would urge the Commonwealth to carefully consider the nature and extent of an EITE exemption. We acknowledge that there may be costs associated with this transition in the short-term to certain businesses, and we understand that the Commonwealth policy may reduce any transitional expenses on qualifying businesses.

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[2] See AGL, Submission to the 2017 Climate Policy Review, Available at http://aglblog.com.au/2017/05/agl-submission-to-the-2017-climate-policy-review/.

[3] See AGL, *Carbon Constrained Future: AGL's approach to climate change mitigation: a scenario analysis* (2016), Available at http://agl2016.sustainability-report.com.au/files/carbon_constrained_future.pdf.

Should the Commonwealth proceed with some form of EITE exemption, we support the proposed approach to sharing any EITE load across non-EITE load and the mechanics associated with scaling retailer load to account for exempt load.

4. The role of offsets

We note that the Commonwealth is considering whether market customers should be able to use external offsets as a flexible compliance option to meet the emissions requirements of the Guarantee, in the interests of ensuring affordability, facilitating efficient investment and promoting competition.

The core policy intent of the Guarantee is to drive investment in low-emissions sources and steer the electricity sector smoothly through the process of replacing aging thermal plant with less emissions-intensive generation. It is therefore essential that the design of the Guarantee facilitates the electricity sector's structural transition with minimal disruption to existing markets and at lowest net cost to customers.

While we acknowledge that the use of offsets may present a lower cost option to meet compliance obligations under the emissions requirement of the Guarantee, we also consider that the ability to utilise offsets may dilute the policy intent of the Guarantee and risks deferring the necessary structural adjustment of Australia's energy sector.

Accordingly, AGL would urge the Commonwealth to take a cautious approach to the use of offsets. Should the Commonwealth take the view that offsets will have a role in the Guarantee, it is imperative that public policy effectively manage the risks associated with their use by providing certainty around allowable quality and quantity. The quality of allowable offsets should be limited to those which are created from genuine sources and held to a high standard of accreditation.