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**Mr James White**

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Submitted via: [NationalEnergyGuarantee@environment.gov.au](mailto:NationalEnergyGuarantee@environment.gov.au)

Sydney, 6 July 2018

Dear Mr White,

**RE: National Energy Guarantee Draft Detailed Design – Commonwealth Elements – June 2018**

I thank you for the opportunity to comment and provide our insights on the Commonwealth-controlled elements of the proposed National Energy Guarantee (NEG).

**Enel** is a multinational power company and a leading integrated player in the global, power, gas and renewables markets. It is the largest integrated utility in Europe in terms of market capitalisation and rates among Europe's leading power companies in terms of installed capacity and reported EBITDA. Enel works in 37 countries across 5 continents, generating energy with a net installed capacity of almost 84 GW, selling gas and distributing electricity across a network spanning approximately 2.1 million km. In 2016, Enel generated a total of about 262 TWh of electricity, distributing 426 TWh over its own grids and selling 263 TWh. The customer base amounts to around 64 million end users worldwide. Company revenue totalled 70.6 billion euros, with an ordinary EBITDA of 15.3 billion euros.

Founded in 2008, **Enel Green Power (EGP)** is the Enel Group company dedicated to the development and operation of renewable energy generation activities across the world.

With a presence in Europe, the Americas, Asia, Africa and Oceania, EGP is a global leader in the sector, generating around 86 TWh of energy each year, enough to meet the energy needs of almost 200 million households while avoiding more than 54 million tons of CO<sub>2</sub> emissions every year.

Enel Green Power has an installed capacity of about 38 GW, with more than 1,200 plants in 30 countries and a generation mix that includes all the main sources of renewable energy: wind, solar, hydroelectric, geothermal and biomass.

EGP also invests in new businesses and technologies, such as off-grid solutions and storage systems to improve its plants flexibility and performance. Thanks to the research, technological innovation, operational excellence and the hard work of over 7,400 people, EGP can look ahead with full confidence in the huge potential for further growth in scale and performance improvements.

Enel supports its important ambitions in Australia through its subsidiary **EGP Australia**, set up in 2017. EGP Australia operates the 137.7 MW Bungala Solar One photovoltaic (PV) plant, which is located near Port Augusta in South Australia. The plant constitutes the first part of the Bungala Solar PV Project, whose capacity will total more than 275 MW.

In 2017 Enel Group completed the acquisition of **EnerNOC**, the leading provider of demand response and energy services for utility, commercial, institutional and industrial customers. EnerNOC operate in liberalised markets across the Americas, Europe and Asia Pacific. In Australia, EnerNOC is a market participant in the Wholesale Electricity Market (WEM) and the National Electricity Market (NEM).

### **Enel Green Power response to the NEG's proposed Commonwealth Elements**

EGP supports the Australian Government's efforts to build a reliable energy system that minimises energy costs and emissions. We commend the Government's efforts to work towards a lasting, bipartisan energy policy solution through the NEG.

EGP believes that under the right settings, the NEG could help deliver a reliable energy supply for Australia at least cost. However, its proposed settings need further consideration to appropriately manage risks related to the scale of investment required in Australia's energy system and to deliver Australia's international commitments at least economic and reputational cost.

Power plants, including thermal generation, do not last forever. Towards the end of their design life, they become less reliable and begin to affect market volatility. Eventually, plant becomes so old that is technically and economically unviable to operate. It either needs to be extensively refurbished or replaced with new technology.

The NEG aims to deliver the most reliable energy system at least economic cost to consumers. The best way to achieve this is to invest in a combination of renewables, storage, and demand management that allows ageing coal plant to steadily exit the market at the end of its design life.

The price of renewable energy and battery storage is already cheaper than refurbishing ageing coal plant or building new coal or gas plant to replace it. The cost of renewable generation, storage and demand management will continue to fall and seriously undercut thermal generation costs.

As Minister Frydenberg has correctly noted, "constructing a new coal fired power station would take more than five years and have an uncertain utilisation rate and return on capital."<sup>1</sup> In comparison, renewables can be built more modularly than traditional plant. They also do not need to be made large to take advantage of economies of scale, which minimises investment risks.

Storage, renewables and demand management can also provide the same reliability that Australia's coal plant once did. For example, solar plant generates energy during the day and wind plant tends to get generate energy overnight (and also sometimes during the day). A combination of wind, solar and storage assets can provide the same round-the-clock 'baseload' power as coal plant at lower cost. Yet his combination can also ramp up to deliver services during peak times – something that coal plant struggles to do efficiently.

However, Australia needs to start building these assets now so we have the necessary generation in place to allow ageing coal generators to steadily – or unexpectedly – exit. By 2025, around two-thirds of coal generators operating today will reach the end of their design life. By 2035, it will be over 85%. To

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<sup>1</sup> Frydenberg, Josh, (2018) "Powering Forward: the National Energy Guarantee", *Address to the National press Club of Australia*, Canberra, 11 April 2018. Accessed at: <http://www.joshfrydenberg.com.au/siteData/uploadedData/Frydenberg%20-%20Speech%20-%20Address%20to%20the%20National%20Press%20Club%20of%20Australia%20-%202011%20April%202018%20-%20FINAL.pdf>

allow this plant to exit at least-cost, Australia would need to replace at least 21GW of plant over the next 17 years.

To put that in context, that's the equivalent of building six Snowy Mountain hydro schemes.

Renewable energy and storage can be built far quicker and more strategically than new coal plant, but it cannot be built overnight. These new technologies also need to be built *before* ageing coal plant reaches the end of its design life. This way, these ageing assets can exit the market when they are economically unviable without affecting reliability or market volatility, both of which increase costs for consumers.

The problem is, the market will not build these assets until there is a clear price signal to do so. It is too risky for new entrants to enter the market until they know when ageing plant will exit. This means it will delay investment until the last moment, which will expose the market to more volatility and risks of shortfalls as thermal generators age.

The NEG could ensure efficient, effective and least-cost investment in electricity generation, but its proposed 26% emissions target does not provide a strong enough signal to deliver this generation in time. In fact, it provides no incentive beyond those provided by existing state government policies.

Analysis indicates the electricity sector can deliver the largest amount of cost-effective emissions reductions of any sector in the economy.<sup>2,3</sup> But while Australia could achieve cost-effective reductions simply by embracing the inevitable need to replace its ageing generation fleet, the proposed NEG target would not take advantage of this opportunity. Analysis also indicates that to deliver Australia's Paris Agreement at least cost, the electricity sector would need to lower emissions by 40-55% below 2005 levels in 2030.<sup>4</sup>

The 26% target and the proposed process to legislate it as a ten-year trajectory also do not consider the subsequent actions Australia would need to take to meet its commitments in the Paris Agreement and how these may expose the Australian Government to legislative and reputational risk. The Government would either need to default on the Paris Agreement, change legislation to deliver more cost-effective reductions in the electricity sector or introduce new policies to reduce emissions in other sectors of the economy. These emissions will be more expensive and difficult to achieve, particularly as EITEIs contribute significantly to Australia's industrial emissions.

Enel Green Power would like to offer its recommendations on how the Australian Government might best alter the proposed settings for the NEG to best manage these identified risks.

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<sup>2</sup> Climate Change Authority, *Policy Options for Australia's Electricity Supply Sector: Special Review Research Report Summary*, 2016, p.4. [http://www.climatechangeauthority.gov.au/files/files/Target-Progress-Review/Targets%20and%20Progress%20Review%20Final%20Report\\_Chapter%2011.pdf](http://www.climatechangeauthority.gov.au/files/files/Target-Progress-Review/Targets%20and%20Progress%20Review%20Final%20Report_Chapter%2011.pdf)

<sup>3</sup> Climateworks Australia (2017) *Power Up*. Available at: [https://climateworks.com.au/sites/default/files/documents/publications/cwa\\_power\\_up\\_report\\_final\\_12\\_jul.pdf](https://climateworks.com.au/sites/default/files/documents/publications/cwa_power_up_report_final_12_jul.pdf)

<sup>4</sup> Cambell, Rod (2017) *Meeting our Paris Commitment*, The Australia Institute, Canberra. Accessed at: <http://www.tai.org.au/sites/default/files/P439%20Meeting%20our%20Paris%20Commitment%20-%20TAI%20Climate%20and%20Energy%20Program%20-%20September%202017.pdf> Cf. Jacobs Group (2017) *Report to the independent review into the Future Security of the National Energy Market: Emission mitigation policies and security of electricity supply*. Accessed at: <https://www.energy.gov.au/sites/g/files/net3411/f/independent-review-future-nem-emissions-mitigation-policies-2017.pdf> and Reputex (2017) *It's the economics, stupid: Scenarios for the NEM wholesale price to 2030*. Available at: <https://www.reputex.com/research-insights/update-its-the-economics-stupid-wholesale-price-scenarios-in-the-nem-to-2030/>

### **Recommendation 1: Establish a process to identify the most cost-effective emissions target and adjust it over time**

Enel Green Power recommends that the Australian Government establishes a process to determine an initial emission reduction target trajectory with annual milestones and, if necessary, to adjust it over time so it continues to deliver reliability and emissions at least cost in line with the NEG's objectives. This approach balances the need to provide investment certainty with the need to also ensure emissions are delivered at least cost.

The Government should appoint independent scientific and economic experts who would develop analysis and recommendations to government for an initial target. These experts should continually monitor the NEG's performance and make subsequent recommendations to ensure the target remains appropriate over time. These experts would consult with the public to ensure that the process adequately considers all relevant issues and is based on accurate data.

While the Government would have the final say on what the emissions target should be and whether to change it, this process would allow for transparency, build bipartisanship, and ensure the target is well informed. This is crucial given the proposed 26% target does not seem to have considered the major issues we have raised in this paper.

Importantly, the Government could conclude this process after it legislates the NEG framework. The Government could make provisions in the NEG legislation to set the target at later date through supporting Commonwealth regulation.

Finally, the market may be able to innovate and deliver emissions reductions cheaper and faster than the NEG's trajectory assumes. The mechanism to set the emissions trajectory should reward this innovation and efficiency.

We recommend the Australian Government establishes a mechanism to increase the emissions target if the market delivers surplus emissions reductions for two consecutive years. This would provide further market certainty, reduce effort to meet future emissions targets, and ensure the economy does not lose progress on emissions reductions.

### **Recommendation 2 – Do not include offsets in the NEG**

Offsets can be useful tools for emissions reduction. Globally, Enel supports offsets as a way to reduce global emissions efficiently, effectively and at least cost.

However, given the imminent need for investment to replace Australia's generation assets, offsets are inappropriate in the context of the NEG. They are also unnecessary given the already weak 26% target.

Again, the need for investment in Australia's generation sector is inevitable and it is cheapest to build renewables, storage and demand management and allow coal assets to exit at their end of life. Extending coal assets and paying for offsets will only diverts funds away from productive capital investment and will ultimately raise energy costs for consumers.

Given this imminent need for investment, Enel Green Power recommends that the Australian Government does not include offsets in the NEG.

### **Recommendation 3 – Consider gradually removing exemptions for EITEIs**

Renewable energy doesn't increase costs for businesses – it reduces them. Large industrial customers, both in Australia and internationally, are already cutting their bills through power purchase agreements, which deliver energy at a price lower than market average.

Gradually removing exemptions for EITEs would ensure that companies focused on other aspects of their operations begin to find market-based solutions to lower their emissions and electricity costs over the long term. This would help ensure major players in the Australian market remain competitive in an increasingly decarbonised world. Importantly, this would also help reduce the burden on other smaller electricity consumers, further reducing energy costs in line with the NEG's stated objectives.

**Recommendation 4 – do not establish a 'bolt-on' fund**

The media has recently reported that the Australian Government may be considering a fund to extend the operating life of ageing coal plant.

Extending the life of ageing coal plant is more expensive than replacing it with a combination of renewables, storage and demand management at the end of its operating life. Extending the life of ageing coal plant is against the stated objectives of the NEG because it increases energy costs for consumers.

This fund would also increase the amount of emissions Australia needs to save to reach its emissions target, reduce investor confidence, and increase costs consumers and possibly taxpayers (if this fund is established using consolidated revenue).

If you would like to further discuss anything we have raised, please kindly contact Tyson Vaughan, Regulatory Affairs Manager for Enel Green Power Australia at [tyson.vaughan@enel.com](mailto:tyson.vaughan@enel.com).

Yours faithfully,



**Javier Blanco**

Country Manager

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