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RE: Call for public submissions on the National Energy Guarantee

The ESB has started a consultation process to seek input from stakeholders for the high level design of the National Energy Guarantee – NEG.

We thank the ESB for offering us an opportunity to make these inputs and we look forward to working with the ESB in the future.

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 CO₂ 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 is currently developing 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.

Besides, 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).

It is in this context that we welcome the opportunity to provide our comments and inputs on the Consultation Paper. In the attached ANNEX we provide our comments on general matters rather than on specific sections of the consultation.

Yours faithfully,



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ANNEX: Comments to NEG

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ANNEX

1. General considerations:

On a very general basis, we would like to stress the importance of the following pillars that should transversally apply to all the NEG-related issues, in order to ensure the required certainty to foster new investments in the electricity sector.

1. **Transparency:** the key feature to ensure acceptability and effectiveness of the NEG.
2. **Regulatory clarity**, while also ensuring **flexibility** to revise targets, procedures, standards etc. to adapt to dynamic political and economic context.
3. **Competition:** avoid the creation of entry barriers for new participants and ensure smaller operators can compete on a level playing field.
4. **Consistency** of the NEG with the many interacting energy market reform initiatives currently underway (eg FFR, Strategic Reserve procured through the Reliability and Emergency Reserve Trader process, storage integration, DER) as well as with the various renewable energy targets and supporting mechanisms at State level.

2. Emissions Guarantee:

2.1 Emissions reductions:

- The Government should consider the target trajectory of annual average emission per MWh levels considering factors such as technology trends, current and planned policies and other influencing drivers, to project a logarithmic, linear or exponential pathway in order to make the system transition both consistent with the 2030 GHG emission reduction target and cost efficient.
- However, the proposed emission reduction target for the electricity sector (-26% of emissions by 2030 versus 2005 levels) is not very challenging and falls substantially short of the requirement for the 2 degrees scenario. Furthermore, this does not provide a clear investment signal for clean generators and risks to void the intent and the effectiveness of the Emissions Guarantee itself: the NEG is expressly “designed to encourage new investment in clean and low emission technologies while allowing the system to continue to operate reliably”. With such a low target, new investments in clean technologies – which are becoming more and more competitive with conventional generation - would be hindered rather than encouraged.
- Such target would be further diluted by allowing the use of external offsets (both ACCUs and international units); we recommend no external offsets should be allowed.
- The target would also lose efficacy in case of excessive flexibility in compliance options is allowed, with particular reference to *borrowing*. To maintain efficacy we would suggest to allow a maximum of 10% of *banking* from one year to the following (with compliance rolling limited to 3 years). Non-compliant entities should pay a significant penalty with very limited borrowing options.

- The Guarantee's effectiveness is linked to its flexibility. In this perspective, 5 years advance notice for target revision may be too much as it may lock-in weak targets.
- Adjusting target emissions (at sector and operator/plant level) due of variances between forecast and actual demand of electricity should be made in a way to fulfil the 2030 target, and not be postponed after 2030. To provide both a clear signal to investors and to be consistent with the GHG emission trajectory compatible with Paris Agreement long term, a "carbon budget" (i.e. a quantified target of total cumulative emissions) for the 2020-2030 period should be set. Ongoing negotiations at UNFCCC level to adopt the Paris Agreement Rulebook will provide clarity on post-2030 framework.
- Geographic neutrality: retailers should be allowed to meet their emissions requirements from across the NEM.
- Market competition: the combination of requirements upon each Customer along with inadequate emission reduction targets, raises barriers for new entrants in the market favouring large, vertically integrated market players. Therefore there is a high risk of increasing market concentration and reducing competition in the power sector, to the detriment of energy consumers.
- The Consultation Paper does not address how a generator will obtain its reliability and emission components, in particular with respect to external factors. For instance, in case a plant is limited by network constraints or outages, will the generation plant be affected in being considered "less reliable" or "less emissive"? Closely related to the abovementioned topics is how the components will be calculated – whether on potential components (theoretical calculation) or on realized values. Such critical factors need to be clearly defined.

2.2 Emissions calculation from contracts:

- Each Customer will be required to meet an average emissions intensity for MWh purchased on the wholesale spot market in the compliance year. The Customer's average emissions intensity would be derived from their contracts to procure MWh from generators. A liquid marketplace where these contracts could be exchanged in a transparent manner is essential to foster liquidity and competition and better outcomes for consumers. Healthy liquidity and widespread market participation is based on the opportunity to exchange "standardized contracts". The contract options proposed in the consultation do not seem capable to guarantee standardization and market liquidity, potentially reducing market competition.

2.3 Storage:

- The calculation of the emissions intensity of battery generation should be differentiated according to the energy source used to charge the battery. In case of batteries integrated to renewable energy plants, storage shall automatically be considered at zero emissions. In case of stand-alone batteries, the same emission intensity that will be defined for energy sourced in the spot market shall apply.

3. Reliability Guarantee:

- A centrally managed reliability allocation through AEMO would make the system more transparent and reliable.
- We look forward to having a detailed list on what will be considered “dispatchable generation”. Our view is that storage must be included within such list exactly on the same level as other more conventional technologies such as coal and gas, considering that the reliability and dispatchability of “energy intensive” storage is in line with the other conventional generation technologies.

3.1 Demand Response:

- Specifically focused on demand response (DR), and what must occur in order for DR to play its envisaged role in the Reliability Guarantee element of the National Energy Guarantee (NEG) we provide here a short summary of the main points, also directly provided by EnerNOC in its submission, namely relating to:
 1. Issue #1 – DR provision must be 'unbundled' from the choice of retail supply contract, and made a separately contestable service.
 2. Issue #2 – There is no way for independent aggregators to directly interface with the wholesale market and capture the value of DR
 3. Issue #3 – There's no way to sell financial hedge contracts (like caps) that are backed by physical load reductions (instead of generation).
 4. Issue #4 – There are no standards in place to measure and verify DR

EnerNOC also suggests that the ESB work closely with the AEMC on their Reliability Frameworks Review to ensure that a useful new mechanism to facilitate wholesale demand response is designed, accepted, and implemented on a timeline that will allow for DR's incorporation in the Guarantee.

The NEG's implementation faces a number of challenges that this initial Consultation Paper does not address. A more detailed positioning will be provided once the ESB will issue insight on the preferred high level design.