MEDIA RELEASE

The Annual Health of the National Electricity Market

The Energy Security Board today published its first Health of the National Electricity Market Report. This follows recommendations made by Dr Finkel in his independent review into the future security of the NEM published in June 2017.

The Energy Security Board reports that the National Electricity Market (NEM) is not in the best of health. The three immediate symptoms are:

- electricity bills are not affordable
- reliability risks in the system are increasing; and
- future carbon emissions policy is uncertain.

Retail electricity prices have increased by about 80-90% in real terms over the last decade. Affordability is a major concern. Customers report 'bill shock' and low income households have been especially affected.

Business customers have not been spared from price increases either. In the last two years electricity costs have doubled, or in some cases trebled for business customers.

Renewable generation powered by sun and wind is increasing its proportion of generation in the NEM. About 5,318MW in committed renewables will be delivered to the NEM before 2020. There has also been an increasing uptake in solar PV generation behind the meter. About 20% of households have solar PV and a further 18% report they are likely to take up solar PV in the next two years.

On the other hand very few megawatts of power that can always be dispatched has been added to the NEM. This really matters because when the sun is not shining and the wind is not blowing we still need power.

The aging fleet of (mainly) coal generators is retiring. In recent years Northern, Hazelwood, and Wallerawang generators retired. Liddell is expected to follow in 2022 and many others will go in the decades following. Both reliability and system security are more at risk unless the generation mix between intermittent renewables and dispatchable power is better balanced in all jurisdictions.

At present in some jurisdictions and at some times, the operator is not able to dispatch generators in their price merit order. Lower bids typically get dispatch preference. But this can only occur when the operator is confident that there is sufficient reliability and system security. When this is not the case certain generators are directed to come or stay on-line. The number of times these directions have to be made is increasing. This adds to customer costs as generators are dispatched out of price merit order.

In the longer term the pattern of the transmission grid in the NEM must change. The grid was designed in the last century to run from large coal-fired generators to the load in the cities. It must now be reconfigured so that it runs from renewable energy zones (and dispatchable power resources) to the cities. Planning for this long term change has commenced.

There are many other measures being taken to meet the challenges. One of the most important is the National Energy Guarantee. This will be examined further at the COAG Energy Council in April 2018. Under the National Energy Guarantee all retailers are obliged to arrange their acquired load so they meet both an emissions reduction target (set in line with international commitments) and a reliability target that ensures there is always sufficient dispatchable power. The emissions reduction target is a national target; and the reliability

obligation will vary across regions depending on the need for dispatchable power in those regions.

The National Energy Guarantee is not designed to solve all the reliability and system security issues in the NEM. Modifications to existing tools may be needed, and new mechanisms may have to be introduced. This is being explored.

There is major reform in the regulatory area. This is aimed at reducing network costs, and at encouraging innovation. Networks have traditionally have been viewed as one-way transport providers of power from generators to customers. Many customers with solar PV and energy management systems behind their meter, now want to export into the network when their power supply is exceeding their demand. Generation is becoming widely distributed. Using smart meter information customers also want to manage their energy use in an efficient and least cost way. This is disruption in the traditional network world.

To encourage these changes, a number of rules in the NEM have been changed. About one quarter of the network is only needed for 40 hours of peak demand each year. Rather than meeting this demand through expensive network upkeep and operation there are non-network alternatives. Consumers can be rewarded for managing their demand, especially in peak periods. The use of smart meters and energy demand systems are being encouraged. The impact of these developments will take time but the cost reductions for network companies and their customers are likely to be substantial.

The regulator has had their role strengthened in a number of ways. They have greater power to ensure that costs in the network are efficient. They have had their budget increased to (amongst other things) get more information and data about what is happening behind the meter, and to improve easy access to their EnergyMadeEasy site where retail offers can be compared.

There has also been government intervention insisting that the large retailers reform their billing so that offers are clear and can be more easily compared.

On the basis of these measures, and many others, the health of the NEM is improving. The NEM is not out of intensive care yet but the Energy Security Board reports that this care is being provided.

The Energy Security Board has five members;

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ESB Media Enquiries: 02 8296 7877 | Email: info@esb.org.au