



Leading in sustainability

Energy Security Board
By email to: info@esb.org.au

1 July 2019

Converting the ISP into action

Supplementary submission

Dear Energy Security Board

Renew (formerly known as the Alternative Technology Association) is a prominent advocate for all Australian residential energy consumers. As a member of the National Energy Consumer Roundtable, Renew works closely with other consumer advocacy organisations, providing expertise and experience in energy policy and markets. We also conduct independent research into sustainable technologies and practices.

As well as advocating on behalf of all residential consumers, we are the direct representative of our 11,000 members – mostly residential energy consumers with an interest in sustainable energy and resource use – who, like many Australians, are concerned about both energy costs for themselves and others, and the challenge of reforming our energy system to reduce emissions and thus our impact on climate change.

Renew endorses the submission to this consultation made by the Public Interest Advocacy Centre and others and appreciates your flexibility in allowing late submissions. We would like to raise an additional issue that was not discussed in the PIAC submission.

Renewable generation levels

High levels of renewable energy deployment require energy storage and transmission assets to ensure reliability. At some point the increasing cost of these items may require a trade-off between consumer energy prices and emissions.

The ISP should present several trajectories for renewable uptake terminating between 50% and 100%, along with an assessment of the generation, storage and transmission assets required. If the ISP models only a single trajectory and end-point for renewable energy as a proportion of total generation, its recommendations would be vulnerable to criticism that a higher or lower deployment might have produced better outcomes.

Such a range of trajectories will enable AEMO and stakeholders to select and plan to a defined end-state for the energy system. This may affect decisions made today, such as the selection of renewable energy zones. For example when working towards a 100% renewable grid, wind farms may need to be built in locations that have lower average wind speeds but tend to be windy at times when other farms are not. In a 50% renewable grid such considerations are less important because less generation depends on the weather.

This work should be underpinned by robust models with transparent data sufficient to allow other researchers to investigate and replicate the results. Since wind and solar generation is weather-dependent, they require a simulation approach using historical weather data. To provide confidence that renewable trajectories would prove reliable in the real world, the modelling should

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cover many years of history. It should also use an “out-of-sample” approach so that the model doesn’t work on the basis of unrealistic foresight.

Thanks for considering our views on the implementation of the Integrated System Plan. If you have any questions, please contact our Energy Analyst **Andrew Reddaway** on (03) 9631 5406 or at andrew@renew.org.au.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'DLombard', written in a cursive style.

Dean Lombard
Senior Energy Analyst