



Advice to COAG Energy Council on the Finkel Review

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The Clean Energy Council has welcomed the Finkel Review into the future of Australia's energy system. We now urge the COAG Energy Council to ensure a measured and coordinated response to the Chief Scientists' recommendations that ensures Australia's energy transition is managed more effectively.

The Chief Scientist clearly recognises that Australia's energy problems have become dire as more than half of Australia's coal generation is beyond its operating life. Irrespective of Australia's reaffirmed commitment to the Paris agreement, old coal will continue closing. Gas is in crisis and priced out of the electricity market and we have under invested in new forms of energy generation. Higher gas prices and basic economics of reduced supply means wholesale power prices have at least doubled.

While we have increased our use of renewable energy (up from 10 percent to around 17 percent over the past decade), we haven't done a great job of evolving how we manage the system, integrate these new technologies and take advantage of their very sophisticated capabilities.

Navigating this tightrope isn't easy. But it can be done.

The policy stars have aligned for a rare moment in time as the 2020 Renewable Energy Target (RET) combines with support from state and territory governments to produce a boom in renewable energy investment. Over \$7.5 billion worth of wind and solar projects are being built around Australia today by private investors, putting achievement of the 2020 RET comfortably within reach. This is injecting 3,500 MW of new generation capacity, enough to replace Hazelwood twice. This level of new investment must continue if we are to keep the lights on.

The cost of renewable energy has fallen dramatically over the past three years. We can modernise our energy fleet at materially lower cost than before. But if we expect private investors to continue to do the heavy lifting, there needs to be long term policy certainty to underpin the business case for new projects. Without some form of policy, the market will remain too volatile and the risks too great for private investors to lay billions of their own capital on the line for any form of new generation.

There are many policy options - a carbon tax, an extended RET, Emissions Intensity Scheme or a Low Emissions Target. While each option has respective strengths and weakness, and devil in the detail, it is a fact that each offers the potential to more effectively manage the transition of the Australian energy sector and underpin investment confidence in new generation. It is evident that any enduring policy is better than no policy.

The absence of a long term policy will result in stalling of new investment. If we cannot secure enduring and coordinated energy policy, then we are doomed to a future of high power prices and diminishing energy security as our old coal generators keep closing and new investment stalls.

The path forward is clear. A technological transformation is underway and must be embraced as the NEM moves forward. Rather than a risk, the transformation of electricity generation is an opportunity for major innovations, economic development, jobs and growth in Australia. Australia is on the brink of a major opportunity to position as a global leader in renewable energy integration and grid design. The changes afoot will deliver benefits in the form of a cleaner, more diverse and competitive, resilient and robust energy mix that will continue to deliver for future generations of Australians.

The technology to achieve this is available today. However, major industrial transformations of scale take a planned and measured approach to ensure investor confidence through the transition. The following strategic priorities need to be urgently taken forward to deliver Australia's energy needs:

Investment-grade policies

- A policy mechanism in the electricity sector that facilitates the predictable and orderly closure of Australia's most carbon-intensive coal-fired generators and commits Australia to a zero-emission electricity sector by at least 2050. The clean energy sector supports a well-designed carbon policy mechanism such as an Emissions Intensity Scheme (EIS) or similar market-based scheme that reflects the full cost of generation.
- Strong and long-term renewable or clean energy targets that ensure the continued and steady deployment of renewable energy beyond 2020. There are numerous policy mechanisms that have the potential to achieve this, including an extended RET, a Low Emissions Target.
- Alignment of the NEM's governance frameworks to deliver the stated policy objectives of the above schemes. While the NEM is an outlier in this regard globally, this alignment is critical for the long-term planning and management of the electricity system.

Investment-grade market design

Both electricity and generation are becoming more controllable, faster and more flexible than ever before. Yet the electricity market's paradigm remains in the 20th century, assuming little diversity and low demand-side participation. The electricity market now needs:

- The implementation of a regime that aligns settlement to dispatch so that fast acting demand response and energy storage can be rewarded efficiently. The current plan to transition to a 5 minute settlement regime is crucial for this outcome.
- Consumer participation through virtual power plants and other solutions that aggregate distributed storage, generation and demand response. Consumer investments in new energy solutions should be encouraged to properly integrate with the broader electricity market through energy and ancillary service markets.

Smart regulation and reform to deliver a 21st century energy system

Innovation and technological change is rampant, however many solutions that can deliver energy system security from a base of renewable energy and energy storage have not been called upon in the NEM. The markets, rules and regulations must accept and draw upon these capabilities. The necessary changes include:

- A revised Frequency Control Ancillary Services (FCAS) market that ensures frequency is controlled properly by existing generation while rewarding fast-acting and accurate control of frequency by new entrants.
- Technical standards that accept and promote fast-frequency-response from battery storage, solar and wind turbines alongside conventional forms of inertia. These new solutions to mechanical inertia are available now and will be needed as conventional generation retires.
- Regulation and standards that enable efficient customer-side investments in clean energy and remove barriers to innovation, including nationally consistent standards for grid integration of residential and SME scale solar and storage.
- More effective and advanced renewable energy forecasting tools that reduce error to more effectively manage the variability of renewable energy resources. World's best practice here will be essential in the NEM.

There can be no doubt that this is a challenging policy environment. The clean energy industry remains committed to strong engagement with all Governments through the consideration and implementation of the Finkel Review recommendations.

The CEC considers genuine, bipartisan cooperation across the COAG Energy Council is critical to deliver the future prosperity benefits that are possible through sound long term energy policy.