

Update to the Regulation Impact Statement— Underwriting New Generation Investments Program

The Regulation Impact Statement (RIS) for the Underwriting New Generation Investments (UNGI) program was developed throughout July and September 2019 by the former Department of the Environment and Energy. The final version was assessed by the Office of Best Practice Regulation as compliant with the Government's requirements and consistent with best practice on 24 September 2019.

The UNGI program is one policy lever to support firm generation capacity and increase competition as part of the Australian Government's commitment to lower electricity prices and improve reliability in the National Electricity Market (NEM).

During the more than two years since the RIS was developed, there have been several major developments across Australia's energy landscape exacerbating significant supply and demand pressures across the NEM. This has increased the scope of necessary action to ensure adequate dispatchable capacity across the grid. Examples of these pressures are outlined below.

- The Australian Energy Market Operator's (AEMO) Integrated System Plan (ISP), released on 30 July 2020, forecast up to 19,000 megawatts of new dispatchable capacity will be required across the National Electricity Market by 2040.
- Clean Energy Regulator data shows that in the two years since the original RIS was developed, a record 13,300 MW of renewable capacity was installed over 2019 and 2020 – the equivalent of four thermal power stations. In this same period only 235 MW of new dispatchable capacity was added to the grid, a ratio of 56 to 1.
- The significant increase in the level of variable renewable energy is occurring alongside the looming retirement or mothballing of large thermal generation.
 - The Energy Security Board's final advice on Post 2025 market design forecasts that over half the coal fleet in the NEM could retire by 2030.
 - AEMO's 2020 ISP forecasts 63% of today's coal-fired power stations will retire by 2040.
- In 2021 there have been four major announcements about bringing forward the closure of dispatchable capacity. This includes:
 - closure of a coal fired power station in Victoria brought forward by four years
 - closure of a units at a coal fired power station in New South Wales (NSW) brought forward by two years
 - closure of a whole coal fired power station, also in NSW, brought forward by two years
 - mothballing units at a gas fired generator in South Australia.
- The market is not responding sufficiently to clear gaps in dispatchable capacity with new investment, for example, the announced closure of the 1680 MW Liddell power station in 2023:
 - Independent modelling completed in 2020 showed around 1000 MW of new dispatchable capacity would be needed to replace the Liddell power station on its closure in 2023.

- The Government called for an industry-led response to fill this gap, providing the private sector with an opportunity to reach final investment decision on 1000 MW of dispatchable capacity by the end of April 2021. The private sector did not sufficiently fill this gap, with decision reached for only 316MW of replacement capacity, with some government support.
- Continued examples of high wholesale prices occurring following the closure or unavailability of dispatchable generation. Following the closure of the Hazelwood Power Station, average wholesale electricity prices in Victoria jumped by 95% from 2016 to 2017.
 - Modelling for the closure of the Liddell power station found power prices could rise by up to 30% in two years if not replaced with sufficient dispatchable capacity.
 - In Quarter 2 2021, outages at a power station in Queensland combined with reduced coal availability in NSW saw average wholesale prices across the NEM nearly triple to a top of \$123/MWh. Prices returned to \$37/MWh by Quarter 3 on return of most dispatchable capacity.
- Release of state based renewable energy policies, including commitments to increased renewable energy and decreased thermal generation, has also impacted operation of the market and investment decisions around new dispatchable generation projects.
 - At least three announced dispatchable generation projects have made a commercial decision not to proceed in the last 18 months – a gas peaker, an upgrade to a coal fired power station and a large battery.

These developments have necessitated a suite of reforms, alongside the UNGI program, to keep prices low and ensure reliability of the system is maintained. Examples of the reforms include:

- The Government's commitment to the 660 MW Hunter Power Project through Snowy Hydro, to address the lack of private sector investment in dispatchable capacity to replace the Liddell power station.
- National Cabinet's endorsement, in October 2021, of a final package of reforms for the Post-2025 market design of the NEM. The Energy Security Board found that changes in the market, driven by the rapid increase in variable renewables, are creating investment uncertainty "that the existing architecture of the market may no longer be equipped to address". A capacity mechanism was recommended by the Energy Security Board as a key means to address the weakened investment signals for existing and new dispatchable capacity. The capacity mechanism can provide the long term signals needed to support investment in dispatchable capacity and ensure a sufficient level of dispatchable capacity is available to firm up the influx of variable renewable generation.

The UNGI program remains an important short-to-medium-term solution to ensure a pipeline of investment in dispatchable capacity, as part of this suite of measures. The UNGI program RIS is representative of the time it was developed, especially regarding its analysis of the costs and benefits of the UNGI program, as well as its broader discussion of the energy market and government policy.

The UNGI program RIS developed in 2019 is no longer representative of the most recent analysis of the Department of Industry, Science, Energy and Resources, nor does it reflect broader market analysis and policy discussion that has informed the Government's current suite of energy policies. The RIS notes that changed market dynamics may mean an alternative support mechanism could result in achievement of the program objectives. What we have seen is that a combination of

measures, including those contemplated in the RIS, in addition to the UNGI program are now necessary to achieve the Government's objective's for the program.