

Cheaper, cleaner, reliable energy within our grasp

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The national energy guarantee modelling results are a revelation. Reliability is up, emissions are down and the savings to household electricity bills are higher than initially expected by the Energy Security Board.

Conducted by Frontier Economics, which produced the emissions intensity scheme modelling Labor has relied on, the national energy guarantee is expected to produce the following outcomes.

First, price. Wholesale electricity prices fall on average by 23 per cent between 2020 and 2030 and as much as 30 per cent by 2030. For a typical household, struggling with significant bill increases, the modelling finds annual bills could be about \$400 lower compared with this year. About \$280 of that reduction is due to the increased supply coming into the system from current investments under way. This is locked in and built on with another \$120 of savings from the implementation of the national energy guarantee.

For businesses, big and small, the savings from the national energy guarantee will be higher. Small businesses such as cafes could save hundreds of dollars a year; medium-sized businesses such as supermarkets could save more than \$400,000 a year; and large energy-intensive manufacturers such as chemical plants could save about \$1.4 million a year and paper mills could save more than \$10m — the type of electricity price relief our country desperately needs.

Prices fall for a couple of reasons. The agreement on a new mechanism brings investment certainty, paving the way for new generation assets to be built, both thermal and renewable. Increased liquidity and competition also lead to lower prices as retailers contract with generators to meet the two new obligations for reliability and emissions. Energy market modelling is based on a series of assumptions related to fuel prices, technology costs and demand forecasts.

In this case, the assumptions have been informed by data from the Australian Energy Market Operator, Australian Energy Market Commission and the Australian Renewable Energy Agency as well as stakeholder consultations. Not only are they robust but they also capture the rapid decline in the renewable cost curve as technology takes hold, making the need for subsidies and a

repeat of certificate-based schemes such as the renewable energy target or clean energy target unnecessary.

For example, in 2020, it's estimated that the cost of wind and solar could be \$73 a megawatt hour and \$75 a megawatt hour respectively, which drops then to \$64 a megawatt hour and \$57 a megawatt hour by 2030. If these assumptions turn out to be conservative, as some in the renewable industry claim, the household savings will be greater.

Second, reliability. Blackouts, load-shedding and the urgent deployment of diesel generators in South Australia and Victoria have underlined the increasing fragility of our system. The national energy guarantee fixes this problem by requiring retailers in a region by region basis to access a certain amount of dispatchable power — power that can be controlled irrespective of the weather. No longer will intermittent sources of power such as wind and solar be entering the grid without the adequate back-up, be it pumped hydro, batteries, gas or coal.

Across the 2020-30 period, under the guarantee there is more than 3600 megawatts of investment in dispatchable generation capacity to “firm up” intermittent renewables. This is more than 2½ times the capacity of Hazelwood. The mix of energy in 2030 will depend on how electricity demand, technology and fuel costs evolve across the next 13 years. However, the modelling shows that the share of renewables is likely to be about 32-36 per cent, of which about 8 per cent comes from hydro that has the characteristics of baseload power.

Because the national energy guarantee is truly technology neutral and provides maximum flexibility to retailers to adjust their asset portfolio, there is an expectation that existing, younger coal-fired generators will be upgraded, whereas older generators may reduce their output.

Third, emissions. Consistent with Australia's 2030 Paris target, the guarantee will see a 26 per cent reduction in emissions for the National Electricity Market compared with 2005. It will do so at the least cost through a mix of technology. The trajectory need not be linear but rather the most cost-effective, taking into account the decline in the renewable cost curve the closer you get to 2030.

It was interesting talking last week at the climate change conference in Bonn with ministers from other countries also facing the difficult challenge of

integrating climate and energy policy. Indeed, in her address to the summit, German Chancellor Angela Merkel made some telling points about no longer needing subsidies for renewables and the sensitivities about employment in particular regions about reducing coal.

Since the Turnbull government's announcement last month that it was accepting the recommendation of the national energy guarantee by the Energy Security Board, there has been widespread support. Bloomberg Energy Finance has described it as "innovative and elegant", the Grattan Institute as "the last piece in the complex jigsaw puzzle of a credible energy and climate change policy for Australia", and the Business Council of Australia as "the most practical, workable thing we've seen in business for quite some time".

Big energy users such as BlueScope and BHP, energy companies with both thermal and renewable assets, and leading industry groups such as the Australian Chamber of Commerce and Industry and the Australian Industry Group have also joined the chorus in support.

Now, it's up to the states and territories to help advance this proposal. At Friday's Council of Australian Governments energy council meeting in Hobart, they will have in front of them the plan from the experts, the modelling they asked for and the endorsements that matter from industry. Let's hope they can come to the meeting with an open mind, put short-term politics aside and support the national energy guarantee, which is in Australia's long-term national interest.

Josh Frydenberg is the federal Environment and Energy Minister.