

11 The National Energy Guarantee (NEG)

Frustrated Reductions in Electricity Emissions and Dirty Party Politics

Interview With Chris Dunstan

Introduction

Former Australian Prime Minister Malcolm Turnbull was described as ‘obsessed about renewable energy reducing electricity prices’,¹ and his chosen policy instrument is the National Energy Guarantee (NEG) under discussion and negotiation with the states.² The electricity industry, as a whole, is in the throes of a major transition and transformation away from fossil fuels and it’s the subject of great impact and disruption by innovative renewable energy technologies.

Australia has been engaged in a protracted three decades-long ‘climate wars’, and this has effectively stymied the development of a clear policy framework for climate policy, transition to renewables and investors in the energy sector.³ For many years, that debate has been driven by and focused on the climate change issues and the target emissions, and has been politically a really fraught discussion. The government’s preferred NEG approach is a horribly complex policy instrument that seeks simultaneously to tackle the three inter-related questions of the price of electricity, the reliability of electricity supply and the level of carbon emissions from the sector. All within one policy bundle. Understanding the likely impact of this policy instrument, turns particularly on how the industry itself will be transformed towards sustainability using renewable technologies.

Keywords: Base load; climate wars; electricity; electricity market; electricity price components; emissions commitments; energy; energy market; Energy Security Board (ESB); fossil fuels; least-cost emissions reduction; national energy guarantee (NEG); network reliability; network services; network stability; Paris Climate Agreement; renewable energy; renewable energy targets (RETs); renewable energy technologies; SDG7; SDG11; SDG12; SDG13; UNFCCC

Interviewee Profile

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study on the topic,⁴ Chris is a specialist and prominent public commentator on issues of climate change, renewable energy and the electricity sector.

The Interview

ML: The NEG has three policy objectives: electricity price, reliability of power supply and carbon emissions targets. You have argued that the NEG is likely to achieve very little on all three counts in the foreseeable future.⁵ According to government modelling,⁶ savings are estimated up to \$550 per year on the average for the average household over the next ten years. What sort of impact do you expect on prices as a result of the NEG?

CD: Electricity prices have gone up quite rapidly over the last couple of years and they are expected to fall over the next few years, regardless of whether the NEG is implemented or not. Of that \$550 per annum figure, only \$150 is attributed by the government and its modelling to the NEG. The remaining \$400 is a reduction in price that is expected anyway, primarily due to more generation being built, and in particular more renewable energy being built, over the next few years, and the main driver for that is actually the current Renewable Energy Target (RET)⁷ which runs through to 2020. So that, when I say the NEG impact on prices is likely to be relatively small, that is also what the government is saying; of the \$550 saving, only \$150 is coming from the NEG.

CD: Breaking the figures down, electricity prices comprise a number of elements. The first of two big ones is the cost of network services, paying for the poles, wires and substations that deliver electricity from the power stations to the customers. The NEG is not aiming to have any impact on network charges at all.

ML: Apparently in recent years, these networks have been termed as ‘gold plated’.^{8,9} Have their costs contributed to the big retail price increases we have experienced over the last couple of years?

CD: Certainly over the last seven or eight years, network investments had a big impact, but not over the last couple of years. We did have a massive boom in network infrastructure spending, particularly in Queensland and NSW, over the period of about 2010 to 2015. But that has passed and network investment is now falling. There was a recognition that we certainly overdid it, and in the most recent determinations by the Australian Energy Regulator (AER),¹⁰ network investment has been wound back quite significantly, but that too has nothing to do with the NEG as a policy.

The NEG is focused on the other of the two big contributors to our electricity prices, and that is the cost of generation. Unlike networks, which is a regulated monopoly, where prices are essentially set by the

regulator, generation operates in a competitive market and so it depends on the forces of supply and demand. What we saw over the last couple of years has been the closure of a number of power stations thereby reducing supply, particularly with the closure of Hazelwood Power station in Victoria.¹¹ That tightened supply and while demand remained much the same that led to a significant rise in electricity prices.

Now that supply is starting to increase again, most particularly because of investment in renewable energy, that's pushing prices down. What the NEG is proposed to do is give greater confidence for the market participants to invest in even more generation capacity over the next ten years. That increased supply will then have an impact on reducing prices even further than expected in the absence of the NEG.

ML: So in the generation space that we've been talking about, prices have been coming down because of renewables not because of any big investments. The closure of some coal-fired power stations brings us to the second target of the NEG, which is the reliability of the generation capacity. What and how is the NEG supposed to address the question of appropriate levels of investment and what is the need for investment in generation over the period that the NEG is to operate?

CD: This is one of the more complex parts of the NEG proposal. Essentially, it will look over a rolling ten year time horizon to estimate demand in the electricity market and the expected need for supply of generation. If there is an identified gap – that is, an expected shortfall in generation relative to demand – that will be announced to the market. That'll trigger the 'reliability' provisions of the NEG and the regulators will require that electricity retailers and other customers prove that they have adequate capacity to ensure that a shortfall of supply is not realised. That initial requirement is relatively light handed but if the expected shortfall persists to within a three-year period the requirements get a bit tougher.

The retailers who've purchased electricity to sell to customers will need to reveal their purchase contract details and if not regarded as satisfactory to close the expected gap in supply the regulator can impose upon them the costs of providing the required additional capacity. While this is certainly a more heavy-handed approach than in the past, it's probably also a good idea. In going through this transition away from coal to more renewable energy, it will provide an extra 'reliability' safety net, but the regulators aren't expected to have to trigger this reliability component because they expect the market to ensure that there's enough generation capacity anyway.

ML: I understand that modelling used for the NEG by the Energy Security Board (ESB) sees virtually no need for new generation capacity over the coming decade barring a nominal amount of 1000 MW, which could easily be satisfied by any form of energy.¹² Is that correct?

CD: That's the case at the moment but as we have seen over the last few years, for example, with the closure of the Hazelwood power station, there's only six-month notice between when the owners Engie announced and then actually closed it down. So, while neither the regulator (AEMC)¹³ nor the market operator (AEMO)¹⁴ anticipate such a shortfall at present, it's still possible. And from the point of view of prudence, there is an argument for putting these tougher 'reliability' provisions in place.

There's another dimension which people tend to overlook. On current projections, there is not a lot of closure of coal-fired power stations between now and 2030, but if we are going to be serious about addressing the climate problem and reducing Australia emissions, we probably need to close quite a few more coal-fired generation capacity by 2030. The NEG does not envisage that, but the nice thing about it and its reliability provisions is that if we do move more aggressively then we've got a mechanism to ensure as we move to lift coal and more renewables than there's a mechanism to ensure that that's done in a reliable way. So, it's a bit ironic because we're about to talk about the emissions component of NEG, that it actually provides quite a good mechanism to facilitate a much greater shift to renewables than the basis on which it is premised.

ML: On that question about reliability and investment in new generation, there was talk about last-minute changes to the NEG and reference to what was being called the NEG-Plus. There seemed to be suggestions that the government should underwrite private-sector investment in new coal-fired generation capacity. Is that correct, where did it come from and what's it all about given what you've just been saying?

CD: Yes, this was a strange eleventh-hour contribution coming, to my understanding, from outside the advice of the Energy Security Board (ESB).¹⁵ It seems to be from the political realm, in particular from some government backbencher enthusiasts for coal-fired generation as a condition for their support for the NEG. As we have discussed, the 'reliability' provisions provide a 'safety net' and a mechanism to bring additional capacity to the market if it's required. I certainly don't see a need for this NEG. Plus additional underwriting. The idea is to get the private market to respond. It would be quite counterproductive if such government underwriting were to support technology that is neither environmentally sustainable nor economically competitive in the form of coal-fired generation.

ML: The third aspect of what the NEG is trying to achieve is carbon emissions reductions and the question of Australia's commitments to the Paris climate targets. What is the likely impact of the NEG on our emissions targets and commitments?

CD: The intent of the NEG is to apply Australia's Paris Agreement commitments,¹⁶ of a 26% reduction in emissions to the electricity sector. There's

been a lot of criticism of simply applying the same overall national target to the electricity sector when we know that the electricity sector is already reducing its emissions quite rapidly with the shift away from coal and towards renewables. There is recognition that there is a lot of very low-cost emission reduction that could be achieved in the electricity sector at a much lower cost than could be achieved in other sectors such as farming and transport. So, if we're going to take a least-cost approach to meeting our emission reductions targets, we should probably expect the electricity sector to contribute more than just that 26% emissions reduction.

ML: If there were in place a market mechanism as there was for a while, namely in the form of a carbon price, presumably those producers and emitters of carbon in the market who had relatively lower costs would be investing more in reduction and those with higher costs would be carrying less. As you say. That would deliver an overall lower, least cost of emissions reduction for the economy as a whole. Does the NEG imply some sort of *pro rata* idea that if the overall target we've got under Paris for Australia is 26%,¹⁷ then each sector including electricity should carry 26%, which presumably will mean that the overall cost of meeting a national target is going to be much higher than it needs to be?

CD: That would be the consequence although it's not quite right to say that Australia is adopting the same target for every sector, because the only sector for which the government is actually proposing to have a firm target is the electricity sector. It remains to be seen what targets would apply to other sectors and whether they would be met at all, which might be also one of the issues that need to be considered. But if we were to meet our Paris obligations, and if we were to apply the 26% target to every sector, including sectors like transport and agriculture, then yes, that would likely be significantly more expensive than taking a least-cost approach, which allows for those sectors that can achieve reductions more cheaply to carry a larger share of burden.

ML: As you say, at the moment, the NEG certainly doesn't tackle the other sectors being focused as it is on the electricity energy sector, which is a major emitter of course, and being only one part of bigger energy policy questions. But aren't there suggestions that, even in the absence of the NEG, this sector anyway would be hitting Paris targets regardless?

CD: Yes, the modelling from the ESB suggests that in the absence of the NEG, emissions from electricity will fall by about 24% by 2030 as a result of the increased contribution from renewable energy. So the NEG is only providing a very small additional emission reduction by 2030. Indeed, if the market continues to grow for renewable energy the way it has, then there's every likelihood that we would meet that 26% emission

reduction target within the electricity sector in the early years of the 2020 decade.

ML: I find all of this most perplexing. We've talked about electricity prices, which I think you've been saying are likely to come down to a large part anyway without the NEG. We've talked about the reliability and the need for additional investment in generation where according to the ESB's own modelling there isn't a foreseeable need, although there could possibly be in the future, but none foreseen or forecast. And now we're talking about emissions targets, which again in the absence of the NEG would be largely – if not completely – achieved. It seems that all three key policy objectives and targets are probably achievable without the NEG. But one last question on NEG emissions targets: being set so relatively low, including with reference to the ESB modelling, are they likely to even create an investment drought in renewables and likely discourage renewable investment and need later action?

CD: Well, there's two ways of looking at it. On the one hand, there's nothing in the NEG, and the way it's written, that puts a cap on the amount of renewables installed but on the other hand its whole rationale is that it creates greater certainty for investors. If we've got a policy like NEG that sets a target that is not binding in the sense that we meet the target by 2021–2022, then it seems to me that does not create an awful lot of certainty for investors.

As a consequence, from the investor's point of view, clearly this policy is not sustainable because it's not achieving anything. An investor might want to sit on their hands and wait and see what other policy gets put in place because this one is essentially ineffectual. So while the letter of the NEG doesn't put a cap on the growth in renewables, I think the practical impact could be that it creates more uncertainty or rather, it doesn't resolve the uncertainty that we have now. The consequence is that we don't get the greater investment in generation, and in particular, renewable generation that we need in order to drive electricity prices lower.

ML: If and when the NEG goes through, there are criticisms from a couple of the States and from the ACT,^{18,19} that it is locking in weak emission targets for a decade by placing them in legislation and law rather than putting them in as regulations that can be readily changed administratively under the framework of the law. Is that a valid criticism?

CD: It's not a criticism with which I have a lot of sympathy. A few years ago, when the Coalition government came to power, it wanted to wind back the existing renewable energy target built into legislation, but it couldn't do that unless it changed the legislation. That meant they had to go through the Parliament to reduce the target which they did ultimately, but they needed to go through a long process of negotiation and as a

consequence the renewable energy target was reduced but by nowhere near as much as the Coalition government had wanted.

As a consequence, we have now this very large investment happening in renewable energy, which is helping to drive electricity prices lower as we said earlier. So that having the target in legislation rather than in regulation provided greater stability. Now, the same people who are arguing for putting the renewable energy target in legislation are saying no, if you're going to have low emission targets you should put them in regulation.

I don't have a problem with it being in legislation but I do have a problem with the emissions targets being so low and very weak. If the government does want to change those targets, and it certainly should, it should make them much stronger. Whether there's a change of government or otherwise, that would mean going through legislation and it's not really locked in. Just because the proposed NEG legislation targets for the year 2030 doesn't mean that they can't be changed, it just means they need to be changed by legislation.

One of the nice things about the NEG is that because we would have the structure in legislation of those targets, it's much easier to change the number or level of the target than it is to create a whole new legislative structure so we would have to go through a legislative process. But I think whoever is in government will have to recognise the inadequacy of these proposed targets and they will need to change. I would rather have the NEG in place with weak targets and a solid legislative structure than to not have a structure at all. Certainly, it would also make it easier for future governments to put in regulations; but there's always the risk that the regulation goes downwards as well as upwards in terms of the level of ambition.

Conclusion

The complexities, trade-offs and politics involved in framing policy, legislation and regulation to achieve a transition in the electricity sector from fossil fuels to sustainable renewable energies are vividly demonstrated by Australia's experience with the National Energy Guarantee (NEG). The endeavour to integrate within the national electricity grid the three objectives of emissions targets, renewable energy technologies and affordable electricity prices not only became bogged down in political wrangling but ultimately came up with a framework that was 'ineffectual' on all three scores. Network stability was not advanced and sufficient investor certainty was not provided. While at the same time, the impact on holding prices down was marginal, and emissions targets and investment in renewable technologies would have been met anyway on the basis of previously set 'renewable energy targets'.

Seeking to meet Australia's Paris Climate commitments of 26% reduction in overall emissions by 2030 by focusing on the electricity sector puts a potentially

higher load on reductions in other sectors such as transport and agriculture with more costly abatement profiles rather than minimising the overall cost to the economy by relying more heavily on available proven low-cost solutions in the electricity sector.

The debate was highly politicised and often ‘toxic’ in a framework of ‘climate wars’ that stymied long-term investment and least-cost restructuring of the sector for a sustainable future.²⁰ The Coalition government even entertained proposals from within its own ranks for massive government underwriting of additional investment in new coal-fired power stations in the name of network ‘reliability’ premised on ‘base load’ fossil energy-fired power stations.²¹ The NEG proposal embedded emissions targets in the draft legislation which locked in specific weak targets. It did not offer the future flexibility to lift the targets by incorporating them as regulations under the legislation that would not require reference back to the legislature.

Notes

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- 13 The Australian Energy Market Commission (AEMC) undertakes reviews and provides advice to governments on improvements to regulatory and energy market arrangements www.aemc.gov.au/
- 14 The Australian Energy Market Operator (AEMO) manages ‘electricity and gas systems and markets across the country with the aim of ensuring access to affordable, secure and reliable energy’ <https://aemo.com.au/en>
- 15 The Energy Security Board (ESB) was established after the Finkel Review which looked at energy security in the electricity market <https://esb-post2025-market-design.aemc.gov.au/who-is-the-energy-security-board#about-the-energy-security-board-esb>
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