



A gap remains between Federal Coalition Government and Federal Labor ambitions for emissions reductions. Labor is attempting to bridge the divide (or wedge the Government) by adopting the mechanism that the Government developed and then abandoned: the NEG. We project that Labor's 45% emissions reduction target will result in prices that are about the same as the Federal Government's current policy of achieving an emissions reduction of 26% by 2030. Importantly, we also find that the Government's costly Snowy 2.0 proposal does not deliver any price or emissions benefit. It is a waste of money.



State of play

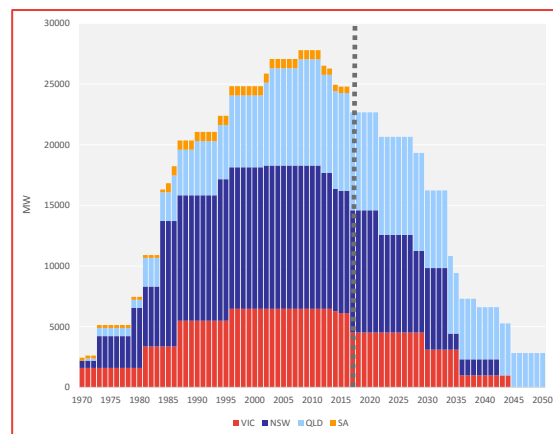
The Federal Coalition Government remains committed to an emissions reduction target of **26-28% reduction on 2005 emissions by 2030**¹, which was pledged at the 2015 United Nations Climate Change Conference (Paris, Dec 2015). The Government has since rejected several mechanisms to achieve this, including an **Emissions Intensity Scheme (EIS)**, a **Clean Energy Target (CET)**, and a retailer emissions obligation under the **National Energy Guarantee (NEG)**, as proposed by the Energy Security Board (ESB).

Despite the appearance of a national policy vacuum, Frontier Economics projected in Feb 2017² that Australia would comfortably meet this 2030 target, largely as a result of State and Federal renewable targets and the closure of coal plant at end of their technical lives.

State renewable targets include: ACT 100% by 2020, Victoria 40% by 2025 (recently proposed to increase to 50% by 2030), Queensland 50% by 2030, South Australia 75% by 2025. Most of these targets will be achieved via Contracts for Difference (CfDs) that target *new entrant* renewable supply.

Meanwhile, Figure 1 shows the cumulative historical entry, and looming exit, of the existing NEM coal fleet. This will need to be replaced with new entrant capacity.

Figure 1: Cumulative NEM coal entry and retirements



Labor's 45PC target

Prior to the 2016 election, Federal Labor proposed a 45% reduction on 2005 emissions by 2030 and a 50% renewable target. Labor remains committed to this. In an attempt at bipartisanship, and building on the policy foundations developed by the AEMC and others, Labor have now announced that it will adopt the NEG emissions obligation or similar as a mechanism for achieving emission reductions. The NEG is an EIS.

If they cannot legislate a NEG, Labor could pivot to the CfDs favoured by the States. As Australia's toxic emissions politics has shown, governments will otherwise be hard pressed to convince investors to have confidence in making long term investments based on legislation that can be changed at the whim of parliaments. Investors will only be attracted to a scheme that provides financially secure long-term contracts with a counterparty investors can rely upon. However, standard CfDs can be financially risky to government balance sheets:

¹ <https://www.dpmc.gov.au/sites/default/files/publications/Summary%20Report%20Australia's%202030%20Emission%20Reduction%20Target.pdf>

² <https://www.frontier-economics.com.au/publications/easy-target-renewables/>



as more generation enters under CfDs, this increasingly risks undermining the energy price signal and there is a risk of the government effectively becoming a “single buyer” funding all generation. This may require a change in the fundamental design of the NEM rather than having an emissions scheme sitting alongside the NEM

This note briefly looks at the price impacts of Labor’s proposed deeper emissions cuts.

Assumptions and scenarios

The modelling uses Frontier Economics’ proprietary electricity market models. Key assumptions for this analysis include:

- AEMO 2018 demand, gas and coal prices.
- State renewable targets proceed in full in all scenarios, regardless of the national emissions policy. The Victorian target modelled is 40% by 2025, not the more recently announced 50% by 2030.
- Committed entrant supply of around 6GW capacity to 2025, mostly renewable, *in addition to* the State renewable targets. This reflects projects under construction or with finance/PPAs secured. This number *excludes* rooftop PV, which is treated separately as a reduction in grid demand.
- Snowy 2.0 enters in 2024 (two scenarios).
- Coal retires as announced, or at approximately 50 year life (Liddell 2022/3, Vale Point 2028/9), or for economic reasons if unable to cover fixed maintenance costs
- We do not assume any risk premium on new entrant supply in any scenario: new renewables entering under CfDs or long term PPAs face limited policy risk, and the falling cost of renewables is reducing their reliance on additional support (such as a carbon price) to deliver a financial return.
- Renewables/storage have shorter lead

times to entry, and can enter at smaller scale, which increases their ability to sign corporate PPAs (effectively vertically integrating) or respond quickly to any sudden large plant exits to capture any medium term price spikes over an investment cycle. Although this is likely to increase competition, we do not assume a change to generator bidding behaviour as a result.

We have modelled the following scenarios:

- **BAU/26PC:** the 26PC case reflects 26% cuts on 2005 emissions by 2030. BAU emissions are projected to meet the 26PC 2030 target without a national carbon scheme. This is in part due to the assumption that State renewable targets proceed in full. We assume Snowy 2.0 enters in this scenario.
- **45PC:** this scenario assumes a 45PC emissions reduction target by 2030, achieved via an EIS or NEG (and complemented by State renewable targets). We model this both **with** and **without** Snowy 2.0 entering.

Price forecasts

The resulting wholesale price forecasts for the NEM are presented in Figure 2:

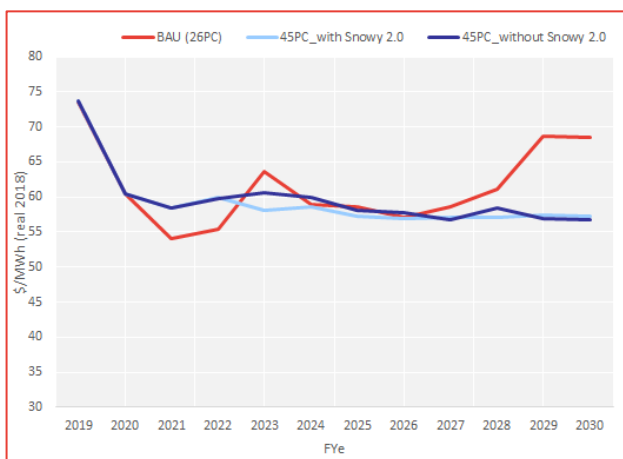
- Prices fall in all scenarios due to flat demand combined with a large increase in new entrant supply, which is mostly committed or State supported renewables.
- Prices initially fall further in the BAU case as there is no carbon penalty for existing coal. However, once Liddell exits, prices also jump more rapidly as there is no carbon premium to support low emissions new entrant capacity to replace Liddell.
- In contrast, a carbon premium in the 45PC cases reduces the price gap between existing coal and new entrants: existing coal



bears the burden of the higher resource cost from reducing emissions and subsidises the entry of lower emissions replacement capacity (to replace Liddell, and later Vales Point).

- The exit of Vales Point in 2028/9 again raises prices in the BAU. Prices remain relatively flatter in the 45PC case post Vales exit as the new entrant replacement capacity receives a carbon premium to enter. The price gap between the scenarios in 2029/30 is coincident to plant retirement dates: it does not suggest a trend or that the price gap widens post 2030.
- The difference between the 45PC with Snowy and without Snowy is negligible: despite an additional cost of Snowy 2.0 in the billions, this largely crowds out other private investment that would otherwise occur, delivering limited price benefit.

Figure 2: Wholesale price forecasts, NEM weighted average



The price results are subject to the following caveats:

- Like all modelling, it assumes perfect foresight that is not possible in reality: plant exits are replaced instantly with new entrants in modelling, while in reality prices

follow an investment cycle. Offsetting this to an extent, the shorter lead times and smaller scale of new entrant plant, combined with attempts to ensure more notice of plant exit (and the greater incentive of vertically integrated energy companies to replace their own closures) should reduce some of the historical investment cycle volatility that occurs in the market.

- Deeper emissions cuts require higher **resource costs**; this can only be consistent with lower or unchanged **prices** where the policy drives continual oversupply of capacity that suppresses prices at the margin. By lowering prices and raising costs it shifts the overall burden onto incumbent existing generators with sunk capital costs, as opposed to consumers. This is difficult to sustain long-term and there is an increasing risk of disorderly/early exit with far more rapid emissions cuts. Although the model does take account of technical and economic plant retirements, retirements can be sensitive to portfolio factors and the price results can be sensitive to plant exits: earlier disorderly exits would lead to higher prices. However, early retirement **caused by** low prices that are in turn caused by oversupply are unlikely to result in prolonged/long term high prices if the root cause was too much capacity.

Emissions forecasts

Figure 3 shows the emissions forecasts for the NEM and SWIS. Emissions fall in BAU to meet the 26PC target. This is driven by significant entry of new renewables, either already committed or driven by State targets. The closures of Liddell and Vales Point also contribute to emissions reductions.

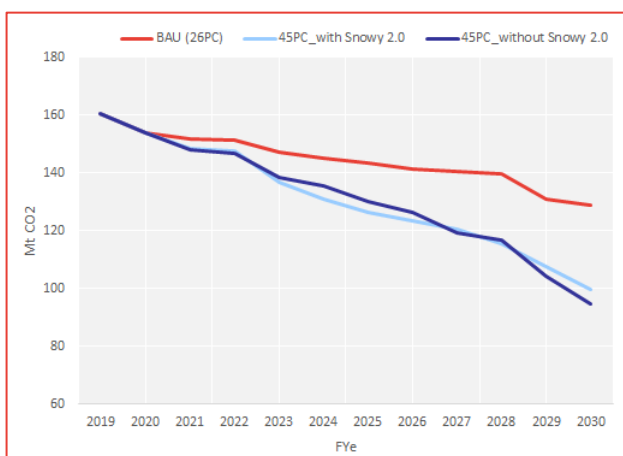
The 45PC case results in deeper cuts, with 160Mt less cumulative emissions from 2021-30



compared with the BAU. This is approximately equivalent to one year of sector emissions saved³.

The impact of Snowy 2.0 on total emissions is negligible: emissions are marginally lower around 2025 and marginally higher by 2030, which is to be expected for a fixed emissions target.

Figure 3: Electricity emissions (NEM+SWIS)



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³ For context, at a comparable stage ahead of our 2020 target the 2008 projections of Australia's cumulative abatement task (across all sectors) was 1.3BtCO₂, though by 2016 the

projections had Australia on track for delivering this.

