



The Australian Prime Minister has repeatedly claimed that Australia will meet our Paris 2030 emissions targets “in a canter”. Yet commentary consistently reports that Australia is not on track to meet these targets. Our analysis suggests that despite official projections, Australia is well on track for Paris and should consider more ambitious targets in 2030, including Labor’s proposed 45% target. This briefing note explains why.

Each December as the Australian Government releases new official emissions projections, commentators are quick to jump on this as evidence that Australia will miss our emission reductions targets, much like Punxsutawney Phil predicting another long winter.

Some may think it’s a “gotcha” to use the official forecasts against the Government claims, but there’s a reason that the Government remains confident that targets will be met despite very conservative official projections. The easiest way to cut emissions is to conservatively project high emissions growth.

The official emissions projections always include a disclaimer that they are **not** forecasts: they regularly omit known policies and technology improvements. This underestimation of the economy’s capability to reduce emissions results in a much larger apparent abatement task. It should therefore come as no surprise that when subsequent emission projections released, the abatement task ahead is always considerably lower than originally presented. The same will be true of the latest projections.

The debate over whether Australia will hit its targets is like a magician’s misdirection – it



distracts from the real debate that we should be having, which is whether Australia could pursue harder emissions reduction targets. Many people fear that if we can't even hit current targets, how could we afford to adopt harder targets? Stoking these fears gives substance to the myth that deeper cuts could be a “wrecking ball” on the economy.

The problem is that very few people have any perspective on whether hundreds of millions of tonnes of emissions reductions over a decade is achievable or not. We show in the following briefing that a 45% reduction target is easily achievable and is highly unlikely to be a wrecking ball on the economy.

2020 targets

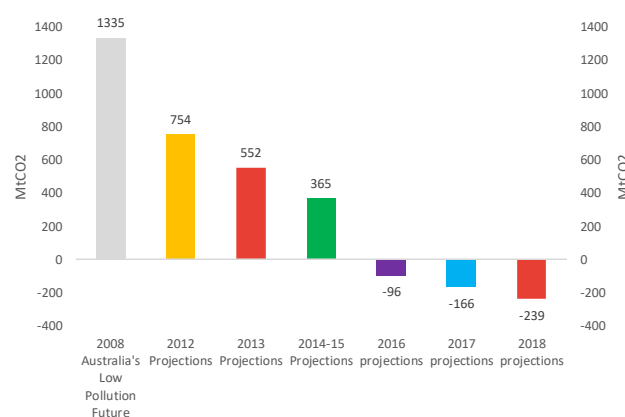
Australia's 2020 target is a 5% reduction on **2000** emissions, but this is expressed as a **cumulative** target for the period 2013-2020.

Until recently the official projections reported that we would not meet this target. The estimated **cumulative** abatement task over time is shown in Figure 1. Each bar reflects the cumulative difference between official emissions projections and the target between 2013-2020.

In 2008 the estimated abatement task was 1.3BtCO₂. As the annual emissions projections reduced, the task fell to 552MtCO₂ in 2013 and 365MtCO₂ by 2014/15, without any reliance on carryover credits¹. By 2016 the task was **negative** 96MtCO₂ excluding any carryover, which means that we were on track to deliver more abatement than required to meet the target. The 2018 projections continue this

trend, and we are now (based on **actual emissions**) expected to outperform the 2020 targets by 239Mt without any reliance on carryover credits.

Figure 1: Cumulative abatement task 2013-20, Official projections



Task above excludes reliance on any surplus carryover from 2008-12

Source: adapted from <https://www.environment.gov.au/climate-change/publications/emissions-projections-2018>

Yet in 2014, most commentators were still stating that Australia was not on track to meet 2020 targets based just on the official projections:

A UN report says Australia and just three other nations will not meet their pledge to reduce emissions by 2020 (Nov 2014)²

"Best case scenario, we see the Emissions Reduction Fund purchasing about 50 per cent of Australia's abatement task, about 120 million tonnes. (April 2015)³

Australia instead looks set to increase its emissions by 12% in 2020. (Nov 2013)⁴

¹ Carryover credits refers to Australia being below the 2008-2012 goal. If this surplus (carryover) were used then this would reduce the expected task to 421Mt in 2013 and 236Mt in 2014/15.

² <https://www.theguardian.com/australia-news/2014/nov/21/australia-one-of-four-nations-forecast-to-miss->

[2020-emissions-target](#)

³ <https://www.abc.net.au/news/2015-04-12/analysts-say-direct-action-auction-is-likely-to-fall-short/6383822>

⁴ <https://climateactiontracker.org/press/australian-climate-move->



By March 2015 there were still doubts.

Climate groups were disputing the government's claim on Monday that it will hit Australia's target.

Our modelling shows that the combination of the emission reduction fund, the proposed 'safeguard mechanisms' on large emitters and the full, uncut renewable energy target aren't enough to get to the 5 per cent goal

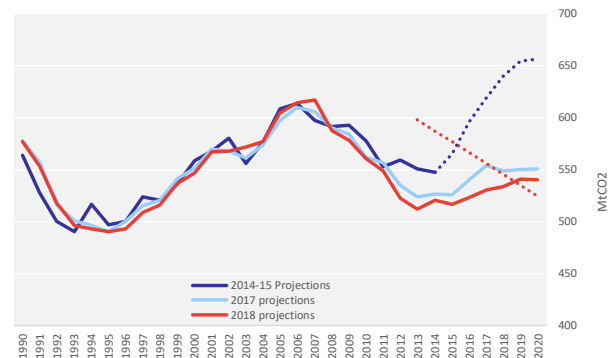
If Australia meets its 5 per cent emissions reduction target by 2020 it will be by "luck not design"⁵

This is not to demonise analysts or commentators as emissions forecasting is imprecise. But this public and media response to this issue provides important context for abatement tasks and how much weight to place on official projections currently and in the future.

Equally, this is not to give sole credit to the Federal Government for meeting the 2020 targets as this has been achieved *in part* due to State Government action and market conditions.

At the time of the comments above, **actual** emissions to 2014/15 were comfortably below target and the official projections (dotted blue) were for a massive increase in emissions: Figure 2. It seems hard to believe in hindsight that even in 2015 many commentators relied on these projections to claim that Australia was not "on track".

Figure 2: Projections versus target: 2013-20



Source: adapted from <https://www.environment.gov.au/climate-change/publications/emissions-projections-2018>

In football terms, Australia had kicked away to a ten goal lead in the first quarter; the game was effectively over but the projections were like your overly pessimistic mate fretting a catastrophe. The Government was happy to just "park the bus", concede small losses in the last three quarters and do just enough to comfortably hit the cumulative target, hence actual emissions have crept up again in recent years.

However, emissions reduction should be the end goal, not just hitting targets. Australia is now expected to beat the 2020 target by 239Mt without any reliance on carryover credits, so even the pessimistic mate has calmed down.

Frontier Economics' view at the time was that we should be confident of meeting the 2020 target, and that could pursue harder 2030 targets⁶.

[would-turn-climate-target-emissions-increase/](#)

⁵ <https://www.smh.com.au/politics/federal/luck-not-design-will-enable-australia-to-meet-2020-emissions-targets-20150323-1m5imj.html>

⁶ <https://www.frontier-economics.com.au/documents/2014/09/can-australia-still-meet-emissions-target-changes-ret.pdf>



We expect that Australian's abatement task to 2020 will be considerably easier than expected in the most recent official projections.

Australia should be pleased with its progress towards achieving its reduction target and more confident that the target is achievable with the existing suite of policies.

The speed with which Australia has moved from an ambitious target (at the time it was set) to an eminently achievable target may ease concerns about setting a tougher emissions abatement target post 2020. (Sep 2014)

2030 targets: history repeating

Now that it is broadly accepted that we will meet the 2020 targets, attention has turned to the 2030 targets. Australia has an emissions target of a **26-28% reduction on 2005 emissions by 2030**⁷ which was pledged at the 2015 United Nations Climate Change Conference (Paris, Dec 2015).

To put the task in perspective, based on what was projected in 2008 (before the target was set), the cumulative abatement task would have been 3.4BtCO₂ for the 2021-30 period (Figure 3)⁸.

By 2015, the task was still estimated at 2.1BtCO₂ prior to Paris (where targets were set) and dropped to 990MtCO₂ a year later (after targets were set).

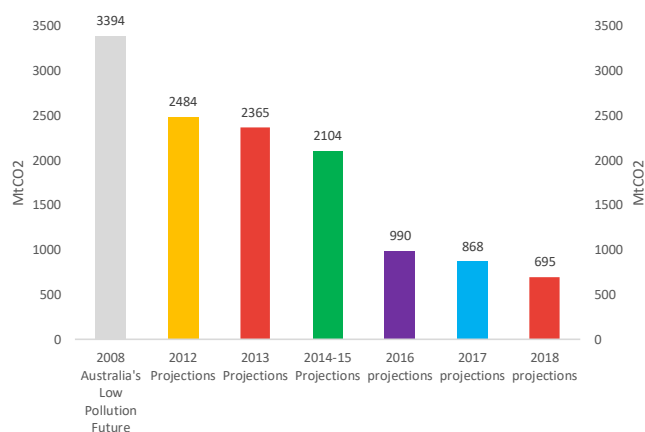
The Federal Government frequently points out in recent months that this is now down to 695MtCO₂ in the 2018 projections, or just 328MtCO₂ if carryover permits are used.

This means that the 2030 abatement task has fallen by 2.7BtCO₂ since 2008, or

1.4BtCO₂ just in the last 4 years.

Clearly, very large cuts can be achieved in a very short time with minimal noticeable upheaval to the economy despite the official projections: **either abatement is easier to achieve than typically expected, or the projections tend to overestimate emission growth in the first place.**

Figure 3: Cumulative abatement task 2021-30, Official projections



This excludes reliance on any surplus carryover from 2008-2020. The 2018 projections suggest potential carryover of 367Mt, which would leave a task of 328Mt if carryover is used.

Source: <https://www.environment.gov.au/climate-change/publications/emissions-projections-2018>

To reiterate: the Australian economy has not experienced a wrecking ball going through it with emissions cuts of 2.7BtCO₂. On that basis it seems highly improbable that it would be vastly more expensive to cut the last 695Mt (or just 328Mt if carryover is used) to achieve the Coalition's target, even if much of the low hanging fruit in terms of emission reduction opportunities has been taken.

⁷ <https://www.dpmpc.gov.au/sites/default/files/publications/Summary%20Report%20Australia's%202030%20Emission%20Reduction>

[%20Target.pdf](#)

⁸ This is retrospectively given emission projections, as the 2030 target was only set in 2015.



Even then, the 2018 projections are already out of date and overstated.

The Government released a Climate Solutions Package (Feb 2019) after these projections which conservatively reduces the task by around 240MtCO₂⁹.

The official projections also don't include Victorian and Queensland renewable energy targets or known retirements of coal plant such as Liddell. These adjustments alone would reduce the cumulative task by around 200MtCO₂, yet the official projections have electricity emissions improbably rising from 2021 to 2030.

Taking into account these policies that are in place and the effects of which are ignored by the Federal Government, the real abatement task would be closer to 250MtCO₂ before reliance on carryover credits. What's more Australia still has 12 years to achieve this relatively small reduction in emissions.

Technically, this remaining emissions task would be met already if carryover is allowed, though given "technology improvements" and other factors it is highly likely that carryover won't be needed and the official projections would have us on officially on track in about 2-3 years.

Direct comparison of 2020 and 2030

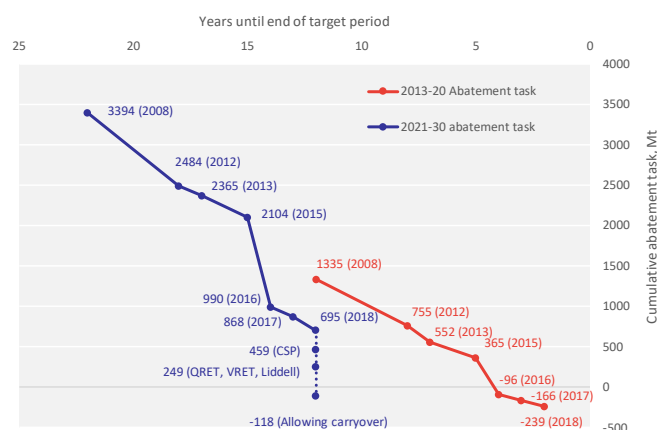
Most people have no context for what cuts in emissions are "achievable" in a given timeframe. Figure 4 shows how the cumulative abatement task (Y-axis) falls over time against

the time to achieve the target, which is years until the end of the end of the target period (X-axis). The 2020 task is in red and the 2030 tasks is in blue.

When the 2008 projections were released (a task of 1.3BtCO₂), there was 12 years until the end of the 2013-20 target period (red). This fell to 755MtCO₂ in 2012 (8 years remaining). At the time of the 2018 projections there is 2 years until the end of the 2020 target (red), and it is estimated that we will outperform that target by 239MtCO₂.

For the 2030 targets (blue) there is 22 years between the 2008 projection and the end of the 2030 target period (blue), and the estimated task (in hindsight) was 3.4BtCO₂.

Figure 4: Comparing abatement tasks based on official projections



Task excludes any use of carryover from prior periods. 2013-20 task is over 8 years; 2021-30 task is over 10 years. Y-axis reflects projected abatement task; X-axis reflects years until target. The figures in brackets reflect the year of each forecast.

Both lines should move toward 0,0 at bottom right, which means cuts required with zero years

⁹ <https://www.environment.gov.au/climate-change/climate-solutions-package> This includes Emissions Reduction Fund 103Mt, energy efficiency 63Mt, HFCs 35Mt, Electric vehicles 10Mt, Battery of the Nation 25Mt. It also includes "technology

improvements" of around 92Mt (which acknowledges that the projections are conservative) but we don't include this in the adjustments here.



remaining.

For the 2020 target, the task appeared challenging in 2008 (1.3BtCO₂) but this has been comfortably met a few years ahead of schedule, despite fears that we wouldn't meet it even as late as 2014/15.

Similarly, the 2030 target appeared challenging even in 2015 when the target was officially set (2.1BtCO₂). However, the **projected** task has fallen rapidly in recent years. **At a comparable stage (12 years out), the official task for 2030 is only around half of what was expected at the same stage for 2020, though it is far lower than this if updated for more recent policies.**

Labor's 45PC target

Labor's proposed 45% target would mean an additional 630Mt from 2021-2030 over the current targets, noting that the remaining task is already far lower than the last official projections.

There is some argument that easy emissions abatement options have been used and that the electricity has already done most of the heavy lifting to-date, so abatement will get harder from there. But there is still plenty of scope for efficiency improvements in other sectors such as transport which have been relatively untapped so far.

The Government will point to strong growth in the economy and jobs over the last 10 years while almost 3BtCO₂ was cut from the 2030 cumulative emissions task. But when it comes to harder targets the Federal Government argues that it would unleash a wrecking ball on the economy, jobs and wages. This is a

remarkably specific "tipping point" given the history of projections and abatement: having achieved massive cuts for no noticeable economic impact, they argue that a fraction more would devastate the economy. This is based only on unofficial modelling that simply assumes that all abatement is significantly more expensive than has been experienced in Australia and elsewhere.

The BAEconomics modelling on which these "wrecking ball" claims are based¹⁰ originally included modelling of both 27% and 45% targets. It found that even the 27% targets would require a carbon price of at least \$90/tCO₂ (with cumulative GNP/economic cost of \$89B), allowing for surplus carryover. The BAE carbon price for 27% targets was \$263/tCO₂ without reliance on carryover (\$293B GNP cost). Yet the Government's Climate Solution Package claims to deliver this target for just \$12/tCO₂ (or \$3.5B in total spend¹¹), and as we demonstrate above, Australia is most likely on track to meet this target without the need for any carryover. The carbon prices from this modelling are essentially input assumptions that have no bearing on reality and this drives the wrecking ball results.

Accepting the Prime Minister's claim that we're already on track for 2030, Australia could sit on its policy hands for the next 12 years or it could be looking at how to achieve further emission reductions regardless of the targets. Cutting emissions should be the point, not simply hitting arbitrary targets.

¹⁰ <http://www.baeconomics.com.au/wp-content/uploads/2019/03/Climate-Policy-Report-14March19.pdf>

¹¹ There is a difference between economic costs and

government spending, but this would not explain the material difference in carbon prices.



FRONTIER ECONOMICS BRIEFING



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