

Safeguard reforms: managing the risks

Tony Wood, Alison Reeve, and Esther Suckling

1 Introduction

This submission is made by Tony Wood, Alison Reeve, and Esther Suckling from the Energy Program at Grattan Institute. Grattan Institute is an independent think tank focused on Australian domestic public policy. Grattan aims to improve policy by engaging with decision-makers and the community.

In January 2023, the Department of Climate Change, Energy, the Environment, and Water released a Position Paper: *'Safeguard Mechanism Reforms'*. This followed a consultation paper released in August 2022 with the same title and on which Grattan Institute made a submission.¹

This current submission supports most of the positions described in the position paper and focuses only on areas where we have concerns with individual design elements and potential risks that emerge from the choices outlined therein.

1.1 The Safeguard needs reform to achieve its objectives

Grattan Institute has advocated for reforms to the Safeguard since the policy was introduced by the Abbott Government in 2016. Our 2016 report, *Climate Phoenix: A sustainable Australian climate policy*, set out a realistic policy roadmap designed to seize on the bipartisan commitment to emissions reduction in the absence of support for an economy-wide climate policy. The centrepiece of this roadmap was a proposal to modify the Safeguard to meet the then-government's 2020 emissions reduction target within its political constraints and allow for greater aspiration by future governments.²

In August 2021, we released *Towards net zero: Practical policies to reduce industrial emissions*. This report recognised that the industrial sector is responsible for more than 30 per cent of Australia's emissions and that those emissions were projected to grow rather than fall. A key recommendation was to modify and expand the Safeguard Mechanism to deliver immediate emissions reductions and create momentum towards the Coalition's long-term target of net zero.³

At its simplest, the objective of reforming the Safeguard should be to make the mechanism an effective and efficient policy to reduce emissions. The policy was designed to progressively tighten the carbon budget through the 2020s, 2030s, and beyond.⁴ It is now time to realise that ambition.

1.2 The proposed reforms are a good starting point, but carry some risks

The reformed Safeguard is not first-best policy, but with careful design and appropriate management, it can do the job it was always intended to do. It provides a clear signal to investors that Australia is transitioning in line with the rest of the world. In turn, clear policy decreases the cost of capital for Australian firms and increases its availability.⁵

Direct impacts on household electricity, gas, and petrol prices are likely to be negligible. Proposed measures for trade-exposed industries should prevent emissions leakage. Importantly, these measures recognise that Australia's future prosperity lies not in fossil fuels, but in sunrise industries that can combine our natural resource endowment with cheap renewable energy. The potential costs are low: an effective

1. Wood et al (2022a).

2. Wood et al (2016).

3. Wood et al (2021a).

4. Hunt (2015).

5. Frydenberg (2021).

carbon price of about \$17 per tonne of carbon across the next seven years.

Overall, the proposals in the position paper are a reasonable starting point. None should be softened or delayed.

But several of the proposals, while sound in principle, create risks that the carbon budget will be exceeded or the costs will escalate significantly:

- Continuing to set emissions baselines using emissions intensity values rather than fixed levels may allow emissions to exceed the carbon budget if production expands.
- The proposed rate of emissions decline of 4.9 per cent per year is intended to create a reserve within the Safeguard carbon budget to account for emissions growth in existing or new facilities and for adjustments to baselines for trade-exposed facilities. The risk is early exhaustion of the reserve.
- In the early years, actions to reduce emissions may be expensive, making the use of government funding, Australian Climate Change Units (ACCUs), or Safeguard Mechanism Credits (SMCs), sound in principle. However, it is unclear how their supply will be matched to rising demand.

We have made specific recommendations to mitigate these risks.

We also support expanding the role of the Climate Change Authority to provide a transparent view of the operation of the Safeguard Mechanism in meeting its targets at the lowest cost.

We have identified several of the proposed changes to the Safeguard Mechanism where more detail is needed before the policy is finalised. As with any market, the liquidity and transparency of the market for ACCUs and SMCs will be central to the successful operation of the

modified Safeguard Mechanism and maintaining the confidence of investors and facility owners.

There is no time to delay. Australia has wasted more than a decade arguing about climate policy, and as a result, emissions from Safeguard facilities have failed to fall on the trajectory required to meet our net-zero target. The longer action is put off, the harder it will be.

Summary of recommendations

An overarching recommendation is that the Climate Change Authority should have an expanded review and advisory role across the operation of the Safeguard Mechanism.

Risk to the carbon budget

- The Safeguard emissions budget should be fixed in the Safeguard Rule.
- The transition from a site-specific to industry-average baseline should be made over five years, with the weighting changing by 20 per cent each year.
- The industry average value used to set baselines should be periodically updated to reflect the real, rather than historic, average.
- Baseline decline rates should be set in rolling five-year blocks, updated annually.
- The government should publish the size of the reserve, and the Clean Energy Regulator should report annually on how much of the reserve remains.

Operational risks

- Baselines for new facilities should be temporarily set at a fixed percentage below the Australian average, until 'international best practice' is determined.
- Best-practice emissions intensity should use the broadest practical product definition.

- An Industrial Transformation Future Fund should be established to augment funding available through the Powering the Regions Fund. Its funding should be delivered through an independent statutory agency, either new or existing.
- The integrity of Australian Carbon Credit Units (ACCUs) should be improved.
- 'Sunset' industries such as coal, oil, and LNG should be excluded from assistance via the Powering the Regions Fund.

Market transparency

- Ensure delivery of the Australian Carbon Exchange currently under development by the Clean Energy Regulator.

Further detail required

The government should publish more information on the following before finalising the policy:

- **Multi-year monitoring:** Details on expectations of firm and credible plans to access multi-year monitoring, and consequences for facilities that do not achieve the expected emissions reductions.
- **Cost containment measure:** The way the government will participate in the ACCU market as a buyer, how much funding will be set aside each year to purchase ACCUs, and what will happen to unused ACCUs in the cost containment measure.

2 Responses to proposed policy settings

2.1 Targets and baselines

2.1.1 The emissions reduction task

The Safeguard Mechanism's 2030 target and 10-year budget between 2021 and 2030 represent a proportional share of the nationally legislated target and budget. Based on published figures, 421 million tonnes, 34 per cent of the budget, will be used up before the revised Safeguard Mechanism begins, leaving 66 per cent of the budget available for the remaining seven years.

The position paper is unclear on how binding the Safeguard budget will be. In our view, the budget should be declared in the Safeguard Rule, so that investors and industry have certainty that it cannot be changed on a whim. The Clean Energy Regulator (CER) should publish annually how much of the budget remains.

A sector-based approach to emissions reduction policy leaves potential gaps between the policies and the national targets. Several of the proposals in the position paper create risks to the carbon budget. The role of the Climate Change Authority (CCA) in advising the parliament on Australia's progress against its targets should explicitly include periodic reviews of all policies, including the Safeguard Mechanism, against the national target, including as they may be revised in the future.

2.1.2 Baseline setting

The government has decided to continue setting baselines using emissions intensity values, rather than fixed levels of emissions. Fixed baselines carry a risk that a facility may choose to forego increasing production in order to avoid breaching its baseline. Yet, the fundamental objective of the policy is to constrain the growth

of high-emissions activities and support the growth of low-emitting activities. The inherent risk with intensity baselines is that they allow emissions to grow.

The risk of emissions rising under intensity baselines arises if production growth outstrips the baseline decline rate. This risk varies by sector: for mining, there is a risk it will occur because the sector is experiencing strong growth (an annual average of 6.5 per cent over the past decade). Manufacturing, by contrast, had an annual average growth of 0.4 per cent over the same period.⁶

Three additional actions would mitigate the risk of rising absolute emissions:

- The full transition from site-specific baselines to industry averages is not proposed to occur until 2030. Making this move earlier would immediately constrain emissions from some facilities and more strongly drive the shift to more efficient facilities. We recommend making the transition over five years, with the weighting towards industry averages starting at 20 per cent in the first year and rising by 20 per cent each year.
- The industry average value used to set baselines should be periodically updated to reflect the real, rather than historic, average. Failure to do so will result in headroom re-emerging, allowing emissions to rise.
- Periodic adjustments are one avenue to ensure aggregate emissions are contained within the budget. The position paper envisages a decline rate of 4.9 per cent each year to 2030, a possible adjustment for the last two years, and then setting the

6. ABS (2022).

decline rates post-2030 in five-year blocks. Given the risk created by intensity baselines, we suggest using rolling five-year blocks, updated annually. This would give facilities five years of certainty at all times.

2.1.3 Baseline decline rates

On balance, the headline uniform decline rate seems appropriate. The position paper suggests that the headline decline rate will create a reserve within the budget to account for higher-than-expected emissions growth, new facilities, and any adjustments for trade-exposed facilities. This is a further risk inherent in the design of the revised Safeguard Mechanism.

While the size of the reserve is not published in the position paper, we note remarks from departmental officials putting it at 17 million tonnes.⁷ Our best estimate is that committed new coal and gas projects alone would consume 58 per cent of this budget.⁸ If committed expansions of coal and gas are included, the reserve is blown by 3 million tonnes.

The government should confirm and publish the size of the reserve and the assumptions on which it is based, and have the CER report on its depletion every year. This would also give Safeguard participants early warning of potential future baseline adjustments, and allow them to manage their own emissions risks more effectively.

2.1.4 Site-specific intensity values

Our submission to the consultation paper argued that industry averages would be a more transparent and equitable way to set baselines. The position paper describes a hybrid approach that involves a transition

7. Environment and Communications Legislation Committee (2023).

8. Based on the Department of Industry, Science, and Resources' Major Project data and industry average emissions intensities. Assumes new projects are subject to a baseline declining at 4.9 per cent each year

from site-specific levels to industry averages by 2030. While the emissions outcome may be the same over the period to 2030, this approach could distort the emissions-reduction burden in favour of older, less efficient facilities; and means that some facilities will have rising baselines, a somewhat perverse outcome.

A faster transition to industry averages (as we recommend in Section 2.1.2) would reduce this distortion.

2.1.5 Baselines for new facilities

Now that the national emissions budget is fixed in law, a new facility makes no difference to the quantum of national emissions. Instead, it changes the distribution of the emissions: a new coal mine or aluminium smelter means someone else in the economy has to emit less.

Fixing the Safeguard budget in law, as we suggest in Section 2.1.1, would mean that this redistribution of emissions takes place among companies in the industrial sector, rather than spilling over to households, small businesses, and farmers.

We support the proposal that baselines for new facilities should be set using best-practice emissions intensity. However, the position paper proposes that best practice should be based on international best practice adapted for Australian circumstances. This metric is likely to be difficult to determine in some sectors, such as LNG production or coal mining, and will be highly contested. It may also put the reserve at risk. We suggest a clearer basis should be developed, as suggested in the position paper. And we refer back to our recommendation that best practice should be defined temporarily as a fixed percentage below the Australian average.

Best-practice emissions intensity should use the broadest practical product definition. Narrowing best practice by geography or technology

will be less effective in encouraging new investments to be as low-emissions as practical. For example, 'best practice' for steel should not be split into 'best practice steel from a blast furnace' and 'best practice steel from a DRI (direct reduced iron) furnace'. Similarly, no distinction should be made between shale gas, onshore gas, and offshore gas.

2.2 Flexible compliance arrangements

2.2.1 Emerging technologies

The proposal that a facility could access a five-year multi-year monitoring period (up to 2030) sounds like a practical response to the hard-to-abate challenge in some industries. However, it will only be useful for facilities where there is a realistic chance of commercialising new technology before 2030, and the banking and borrowing provisions could be sufficient to manage this uncertainty.

A number of industries will be waiting longer than 2030 for commercially viable decarbonisation technologies. For steel and alumina producers, high thermal heating technology is not anticipated until after 2035. Cement decarbonisation is not expected until 2040.

The criterion that the facility has a firm and credible plan in place should be supported by more detail. What should the plan entail? And what are the consequences if the cumulative reduction in emissions is not achieved before the end of the five-year period? See Appendix A for detail on what this plan should include.

2.2.2 Offsets

We support the proposals that allow facilities to use Safeguard Mechanism Credits and ACCUs to meet their compliance obligations, noting that the implementation of the Chubb Review is likely to reduce

the supply and/or increase the price of ACCUs while improving their integrity.

The position paper allows for possible future use of international offsets. Such a possibility should occur only after the rules for international trade and for baselines have settled. The government should implement the Climate Change Authority's recommendation to publish a National Carbon Market Strategy, setting out how Australia will use carbon markets in its transition to net-zero emissions by 2050.

Facilities that exceed their baselines will need to choose between making changes to their operations to reduce emissions below the baseline (either new technology or efficiency gains), buying and acquitting Safeguard Mechanism Credits, buying and acquitting Australian Carbon Credit Units, or paying the penalty.

The choice they make will vary by facility and will depend on a range of technological and financial parameters, notably the relative cost of the choices both immediately and in the planning horizon of the facility. In our assessment, many participants will choose to offset much of their emissions in the first few years of the reformed Safeguard's operations, simply because of the time needed to plan and implement changes to complex industrial facilities.

Emissions reductions are preferable to offsetting because they limit the risk of making climate change worse (explored in more detail in Box 1). Large-scale offsetting would involve massive changes in the economy and in patterns of land and water use, away from agriculture and towards creating nature-based units. It would involve setting aside most of the available geological carbon storage sites for potential direct air capture use. And, it would involve doubling or tripling current electricity generation and network capacity.⁹ We do not consider these changes likely or desirable.

9. Wood et al (2021b).

Box 1: The potential impacts of limits on offsets

In a net-zero world, every tonne of emissions that goes into the atmosphere would be balanced by immediate equivalent removals. These remaining emissions would come from sources where no viable technological solution, practice, or alternative has been found. The only way to offset them would be to remove carbon dioxide from the atmosphere and store it permanently. This would keep the global concentration of atmospheric greenhouse gases stable, which in turn would stabilise global average temperatures, and limit climate change.

But, emitting now and removing later will not help mitigate climate change. While a tonne of greenhouse gas is in the atmosphere, it is contributing to global temperature rise, and may push the global climate system past a 'tipping point' – a sudden and irreversible change in the climate. Removing greenhouse gases after a tipping point has been passed will not return the climate to its previous state. For this reason, offsetting is not a substitute for avoiding emissions in the first place.^a

Relying heavily on offsetting slows the rate of adoption of new lower-emissions technologies, because there is no signal to develop and deploy them. This stymies the development of sectors in areas of low-emissions competitive advantage, and slows structural changes in the economy towards low-emissions activities.

There are some facilities where a limit on offsets could result in greater emissions reductions within the Safeguard. Those that are planning major upgrades in the next few years might be encouraged to bring forward the timing of those upgrades. And a limit could improve the economics of changing practices for those facilities that can do so without new technology.

a. There is scientific debate as to whether offsetting is a one-in-one-out calculation. There is some evidence that large amounts of emissions cause an asymmetric response in the global carbon cycle, and the overall concentration of carbon dioxide in the atmosphere is slightly higher after offsetting than if the emissions had not occurred: Zickfeld (2021). However current international carbon accounting rules, which are used to determine whether countries have met targets, assume a one-in-one-out approach.

However, placing a regulatory limit on the use of offsets in the Safeguard could have perverse consequences.

Some companies will not have immediate opportunities to reduce emissions. For some, technology to reduce emissions at a facility may not exist outside the laboratory, or there may be no efficiency gains available. And some facilities will reach the end of their lives in the next few years, meaning there is little opportunity to recoup capital investments. A limit on offsets will push these facilities toward paying the penalty. Safeguard emissions will not fall, but the government will gain revenue.

For facilities where the technology to reduce emissions exists, but is too expensive compared to the cost of offsetting, a limit on offsets changes the economics of technological change. The cost gap will determine the outcome, possibly increasing demand for government funding. Safeguard emissions will fall, but the government may have to pay for it.

There will be some facilities that do not have access to the capital required to purchase new technology. This could include facilities with an overseas parent company that is not willing to invest in Australia; and those that produce a low-margin commodity. Limiting offsets for these facilities will probably push them toward closure. Australia's emissions would fall but there would be other impacts on the broader economy. And global emissions could increase if demand for the commodity is then filled through imports.

But a hard limit on the use of offsets could have perverse consequences, including pushing up global emissions, and failing to reduce emissions within the Safeguard. The latter would leave the sector more poorly positioned to adapt to a net-zero global economy.

Rather than limiting offsets, the government should ensure there is sufficient assistance available to close the risk gap on new technologies for facilities that have a future in a net-zero economy.¹⁰ Existing allocations to the Australian Renewable Energy Agency (ARENA) and the Clean Energy Finance Corporation (CEFC) are a good start, as are the proposed National Reconstruction Fund and Powering the Regions Fund. But the amount of money needed is likely to be much larger than currently allocated. We recommend the government establish an Industrial Transformation Future Fund, as outlined in our 2021 report, *Towards net zero: practical policies to reduce industrial emissions*.¹¹

In addition, the government should adopt the recommendations from our 2021 report, *Towards net zero: practical policies to offset carbon emissions*, to improve the integrity of Australian Carbon Credit Units (ACCUs):

- Provide extra resources for regular independent expert reviews of methods for creating ACCUs, and improve methods where necessary.
- Invest in R&D and early-stage deployment for improved measurement and verification technologies and practices.

10. In our 2022 report, *The next industrial revolution*, we divided the industrial sector into three parts: commodities that are incompatible with a net-zero economy (coal, gas, oil, and LNG); commodities whose production processes can transform to low- or zero-emissions (such as steel, cement, ammonia, and aluminium); and emerging commodities such as lithium and other critical minerals that will leap in value in a net-zero world. We advocated that industrial policy should target the latter two groups, and not subsidise the first.

11. Wood et al (2021a).

- Include an ‘upside-downside’ clause in contracts for the purchase of ACCUs and other offsetting units, to share the risk that units have integrity issues and to encourage the adoption of amended methods following reviews (see Wood et al (2021b, p. 34) for a fuller description).
- Place time limits on the use of units from outdated methods.

2.3 Cost containment measure

Because facilities are not liable for 100 per cent of their emissions, the proposed ceiling price for ACCUs of \$75 per tonne is a very low effective cost of carbon: about \$17/t across the seven years to 2030, and equivalent to a long-term (2050) cost of \$105/t. It is well below the average internal carbon price of \$96/t disclosed by Safeguard companies.¹² This implies that new projects and expansions will be viable without needing to purchase ACCUs from the government; and that the cap could be higher without imposing significant costs.

How the government manages the supply and demand for ACCUs for the cost-containment measure will be critical to its effectiveness.

If the supply of ACCUs available from the government is constrained, the amount that companies are willing to pay will rise to somewhere between \$75/t and the penalty price of \$275/t, with the exact price reflecting the market’s view on how many ACCUs the government is likely to make available. In this case, the government makes a loss on any sales to Safeguard participants.

The government should clarify the following:

- As the largest potential purchaser in the market, how will it avoid exercising excessive market power, and reducing the market supply of ACCUs for other purchasers?

12. Wood et al (2022a, p. 16).

- Will government purchases be prospective (buying ACCUs ahead of Safeguard participants' accessing the cost-containment mechanism) or retrospective (going to market for ACCUs once payment has been received)?
- How will price transparency around ACCU trades be created to maximise market confidence?
- How much will be set aside by the government each year to fund ACCU purchases for the cost containment measure?

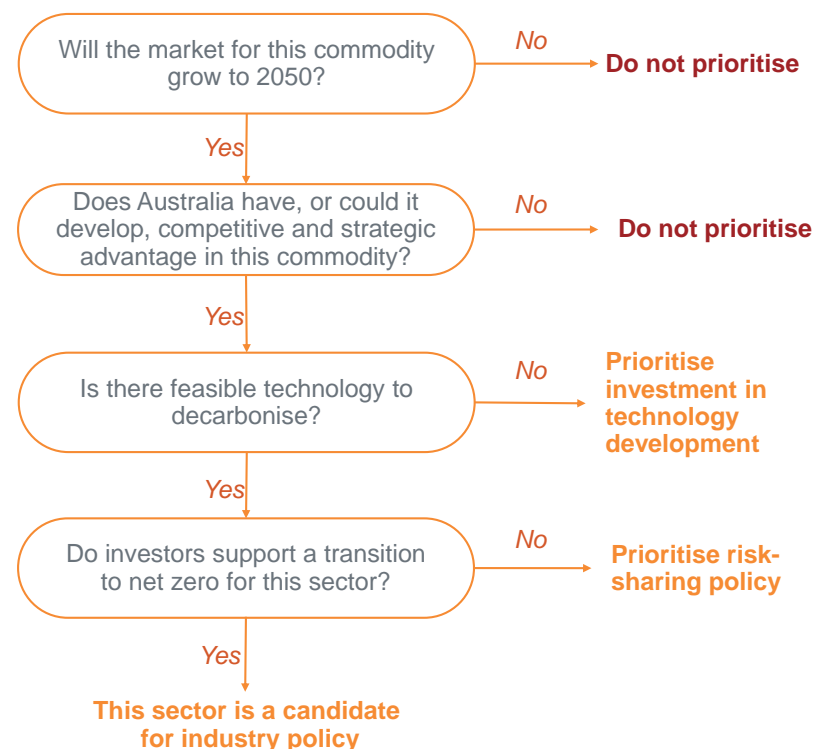
The market for ACCUs currently lacks any real transparency and the market for Safeguard Mechanism Credits (SMCs) is yet to be introduced. To minimise demand for ACCUs from the cost-containment measure, the government should ensure delivery of the Australian Carbon Exchange currently under development by the Clean Energy Regulator, ideally well before the end of the first compliance year. The major benefits will be greater investor confidence and lower overall cost.

2.4 Treatment of emissions-intensive, trade-exposed facilities

We support the proposals to update the current emissions-intensive, trade-exposed (EITE) list to reflect current global conditions and provide assistance outside the Safeguard Mechanism via the Powering the Regions Fund. As recommended in our 2022 report, *The next industrial revolution*, risk-sharing with the private sector is necessary to achieve transformational change in the industrial sector.¹³ Government must avoid picking losers: some industries do not have a future in a net-zero world, and these should not be propped up with subsidies (see Figure 2.1).

Timing for assistance is critical. The decision to renew, refurbish, or retire an industrial facility begins well before the end of its life. For

Figure 2.1: Prioritising access to the Powering the Regions Fund



Source: Adopted from Wood et al (2022b).

13. Wood et al (2022b).

example, BlueScope's blast furnace will reach the end of its design life sometime between 2026 and 2030. But the process to decide its future started in 2021.¹⁴ Where the government is sharing risk with industry through financial assistance, such assistance must be available over the same timeframe as decisions are made. This means moving away from three-year funding cycles and grant rounds linked to the budget's forward estimates and towards legislated funding delivered through independent statutory agencies, similar to the CEFC, the Northern Australian Infrastructure Fund (NAIF), and ARENA. The funding organisations will then be enabled to develop and maintain deep expertise in the sector and better tailor assistance to meet business needs. It avoids perceptions of pork-barrelling and provides assurance of long-term commitment to the sector.

As with several concerns raised earlier in this submission, the decline rate concession will need to be tightly managed to minimise pressure on the carbon budget, particularly since the size of the concessions will increase as a share of the budget as baselines decline.

It is unclear from the position paper how the quantum of available EITE assistance was determined and therefore how likely it is that the amount proves inadequate.

14. BlueScope (2021).

Appendix A: Reporting guidelines for hard-to-abate sectors

The option for certain facilities to go onto multi-year monitoring periods will need to be tightly managed. Companies should provide comprehensive reporting on their management of emissions and the timeline of their decarbonisation pathway. Below is our recommended report structure.

Introduction

- Background information on the company
- Outline of scope and limitations of the report
- Baseline

Overview of current emissions

- Provide metrics on monitoring and reporting change in emissions since mechanism commencement
- Identify current and future forecast sources of emissions by Scope
- Detail changes to supply chains to achieve emissions reductions
- Monitoring and Evaluation plan
- Decarbonisation Targets and timeframes attached to each target

Strategy for decarbonisation

- Overview of potential solutions on a short, medium, and long-term basis
- Implementation plan for each solution; and projected internal rate of return for capital projects

- Risk assessment and management plan
- Estimates of capital costs required to make these changes, including a summary of assumptions and shadow carbon price used
- Inclusion of an independent certifier's report recommending company strategy and proposed stakeholder and monitoring and evaluation plans

Stakeholder engagement

- Stakeholder engagement plan
- Summary of collaboration with suppliers, customers, and other partners

Conclusion

- Implications for the company where the report's plans are followed and where not followed
- Certification by company directors as to the reliability and accuracy of the contents of the report

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