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Keep it simple

Redesigning the Safeguard Mechanism to drive emissions reductions

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Overview

The federal Labor Government has legislated a carbon emissions budget to 2030. Its next task is to reform the Coalition's Safeguard Mechanism to ensure the country's biggest emitters contribute their share to meeting the budget.

The carbon budget is a big step forward. The Government has embraced a sector-based approach and all sectors must contribute to meeting the budget. Emissions from heavy industry will soon be the biggest source of Australia's emissions. The Government intends to reform the Safeguard, a limited form of carbon trading, so that heavy industry's emissions can be reduced effectively, efficiently, fairly, and simply.

Without an economy-wide policy to deliver lowest-cost emissions reduction, each sector should have a proportional share of the national carbon budget. A proportional share for the Safeguard Mechanism is a budget of 811 million tonnes, representing its proportional share of emissions falling from 138 million tonnes in 2022-23 to 99 million tonnes in 2030. If the sector emits any more than this, another sector will have to pick up the slack. Trading carbon credits between sectors will lower the overall cost.

The reformed Safeguard will set emissions baselines for each facility covered by the mechanism (i.e. emitting more than 100,000 tonnes of greenhouse gases per annum) and reduce those baselines in line with the overall carbon budget. A facility will be able to create or acquit tradable credits if its emissions are below or above its baseline.

There are three key issues for reform: setting baselines for existing facilities, treatment of new entrants, and treatment of emissions-intensive, trade-exposed industries (EITEs).

Each facility should have a fixed baseline, an absolute annual quantity that declines over time. Fixed baselines create a high level of certainty that the budget will not be exceeded. To allow for greater flexibility, the Government may instead choose to set baselines based on emissions intensity. But if it does that, the decline rates and industry averages would then need to be periodically adjusted, to ensure the budget is not exceeded. Either way, all facilities should have a rolling five-year baseline trajectory.

Baselines for newly built facilities should be based on industry best practice. Their inclusion could be accommodated by creating an initial reserve within the 2030 budget, followed by annual adjustments to decline rates.

No facility should be exempt from the costs imposed by an emissions constraint. Emissions-intensive, trade-exposed industries should be assisted only where the cost will cause the activity to move offshore and lead to an increase in global emissions. Assistance should be external to the Safeguard. Exporting activities could be supported to decarbonise through the Powering the Regions Fund or the National Reconstruction Fund and/or a reserve of government-funded, low-cost Australian Carbon Credit Units. The best way to support import-competing activities is for Australia to introduce a Carbon Border Adjustment Mechanism.

Business groups support reforming the Safeguard Mechanism. The reforms in this submission will ensure that heavy industry contributes its share to meeting Australia's emissions reduction targets, create momentum for policies covering other sectors, and create a real chance of ending the climate wars.

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1 Background and context

Unrestricted carbon emissions place a cost on all human society. The polluter-pays principle should apply: those causing the environmental harm must change their activities to avoid emitting, or pay a price for the damage they cause.

The Safeguard Mechanism is a federal emissions-reduction policy applying to all facilities emitting more than 100,000 tonnes annually (see Box 1).

The Federal Government has committed to reforming the Safeguard Mechanism so that baselines decline, requiring facilities to reduce their emissions – that is, making polluters pay. This submission responds to the Government's consultation paper that canvasses reform options.

We agree with the Government's stated principles for reform, and in this submission we interpret them as follows:

- Effective: reduces emissions consistent with Australia's greenhouse gas emissions-reduction targets.
- Equitable: sets baselines on a consistent and transparent basis and achieves an equitable distribution of costs and benefits *across the economy* (not just within the Safeguard).
- Efficient: allows the market to find the lowest-cost abatement wherever it occurs, and encourages production where it is least emissions-intensive.
- Simple: makes baseline-setting arrangements, reviews, and administrative and reporting arrangements, as simple and transparent as possible.

Box 1: The Safeguard Mechanism

The Safeguard Mechanism applies to all 'facilities' (sites or collections of activities controlled by one corporation) that emit more than 100,000 tCO2-e annually. These facilities must keep emissions below a 'baseline', which reflects the emissions intensity and volume of products they produce. To date these baselines have often been much higher than actual emissions, and so have had little effect on reducing overall emissions.

Facilities that do exceed their baselines currently have several options. They can apply for a multi-year monitoring period, so their compliance is assessed on average over multiple years rather than annually. They can apply for a new baseline that accommodates expanded production. Or they can purchase and surrender Australian Carbon Credit Units (ACCUs) to offset their excess emissions.

The Safeguard has provisions for new-entrant benchmarks: special baselines representing best-practice emissions intensity that should apply to new facilities and significant expansions and replacements. However, successive ministers have failed to implement this measure, and as a result, new facility baselines represent average practice.

Grid-connected power stations are treated differently. The sector behaves more like a single entity, because production is centrally coordinated to meet demand in real time. The Electricity Safeguard applies a collective baseline of 198 million tonnes. If this baseline is exceeded, individual baselines will apply to each generator.

We also use a fifth consideration:

- Strategic: positions Australia to capitalise on its natural advantages and thrive in a net-zero world.

1.1 What reform means

A safeguard baseline is effectively an entitlement to emit. The current design created an entitlement without consequences. This is untenable in an economy that has only 28 years to reach net zero.

Current allocations of the right to emit are based on historic emissions patterns. They don't represent facilities' capacity to adjust their emissions or their exposure to international competition. The current rules in the Safeguard allowed entitlements to be increased. In 2020, 140 out of 184 facilities had headroom[1] of 10 per cent or more.[2]

Past baselines should not be seen as a basis for an ongoing entitlement. Reforming the Safeguard means steadily withdrawing the right to emit without paying for the associated damage. This will result in a reallocation of capital investment and jobs away from carbon-intense industries and towards those with lower emissions intensity.

Reforms will bring challenges and create opportunities. As we explored in our most recent report, *The next industrial revolution*, Australia can continue to prosper in a net-zero world by building on its natural advantages in minerals and renewable energy.[3]

1. Headroom describes the gap when reported emissions are below the facility's baseline.
2. Wood et al (2021).
3. Wood et al (2022).

1.2 What success looks like

Australian business and the Australian community are tired of the climate wars. The Federal Government has a mandate for reform, and it should seize it. To turn the ceasefire into a permanent peace, the Government must ensure that the reformed Safeguard recognisably delivers what voters asked for.

Successful Safeguard reforms would look like this:

- In the first year, emissions fall
- In the first three years, the emissions budget is not over-consumed by more than a few per cent
- In the first three years, business gets on with the job of investing to reduce emissions. Investment in new facilities proceeds and these facilities are built to emit far less than incumbents.
- At the next election, any political debate around the Safeguard focuses on increasing ambition and improving its operation, not seeking to undermine or weaken it.

1.3 The consequences of a legislated target

The *Climate Change Act 2002* commits Australia to achieving a 43 per cent reduction in national emissions below 2005 levels by 2030. The Act sets this target as both a percentage, and a budget: a fixed amount of no more than 4,381 million tonnes that Australia can emit over the period 2021 to 2030.

This fixed budget has consequences for Safeguard Mechanism reform. Every tonne that a Safeguard facility is allowed to emit between now and 2030 is a tonne that another part of the economy – a household, a small business, a commercial property, or a farmer – cannot emit. Achieving the 2030 target is therefore not cost-free – someone somewhere will have to bear the cost of reducing emissions.

This constraint raises the question: How should Australia's emissions budget of 4.4 billion tonnes be divided among different economic sectors?

2 An emissions budget for the Safeguard

The simplest way to divide the national budget is by proportional share of emissions in 2021. Safeguard facilities, excluding grid-connected power stations,[4] were responsible for 28 per cent of national emissions in 2021,[5] so they should do 28 per cent of the work to get to the 2030 national target.

An alternative would be to ask each sector to reduce emissions by 43 per cent on 2005 levels. This is not practical, because some facilities that were in emitting in 2005 have since closed, and other facilities emitting now did not exist in 2005. It is also not equitable or economic: some sectors' emissions have grown strongly since 2005 (passenger transport and LNG, for example), such that a reduction to 43 per cent below 2005 levels is close to a cut of more than half on current levels – in seven years. Meanwhile the electricity sector, where there has been effective policy in place, is on track to deliver at least a 55 per cent cut in emissions against 2005 levels. Presumably the Government would not want that sector to slow down.

A second alternative would be to allocate the budget between sectors based on the relative costs to reduce emissions between now and 2030. This would require whole-of-economy modelling (no small task, and unlikely to be achieved in any useful form within the Government's timeframes). Modelling is notoriously poor at picking the technologies and costs that will deliver on targets, because modelling is based on assumptions and unknowable parameters. Again, the electricity sector is already delivering what it is capable of, largely because of effective policy.

A proportional share for the Safeguard Mechanism is a budget of 811 million tonnes, given by a trajectory from 138 million tonnes in 2022-23 to 99 million tonnes in 2030.[6]

2.1 The Safeguard budget should be fixed

A fixed budget for the Safeguard makes it much easier to meet the fixed national budget, by 'locking in' a large chunk of emissions reductions. It makes all subsequent design decisions simpler. Baselines must be set such that emissions stay within the budget. New facilities must fit within the budget. Concessions for emissions-intensive, trade-exposed industries must fit within the budget.

A fixed budget also makes it simpler to track progress towards the 2030 national target. If the budget is not fixed, the Government will constantly have to re-calibrate policies to allocate shares of the national budget between sectors.

The Government has committed to making the Safeguard Mechanism market-based, through tradable credits. A fixed budget is an important market signal: it allows all participants to see likely demand, and how this is changing over time. Without a fixed budget, determining demand would be more difficult, and credit suppliers would not get a clear signal to enter the market. This could result in an unnecessarily costly Safeguard.

4. Throughout this paper, we have assumed no changes are proposed to the Electricity Safeguard, so all emissions calculations and references to facilities and proposed reforms do not include the Electricity Safeguard.
5. DCCEEW (2022).
6. This assume business-as-usual annual growth of 0.5 per cent between 2021 and the start date of 1 July 2023.

Recommendation 1:

The Safeguard should have a fixed budget of 811 million tonnes over the financial years 2023-24 to 2029-2030. The budget should be declared in the Safeguard Rule.

3 Setting baselines for existing facilities

Under a reformed Safeguard, baselines will decline every year. Where facilities' actual emissions are lower than their baseline, they will be eligible to create Safeguard Mechanism Credits (SMCs). Where their actual emissions are above their baseline, they will need to purchase and surrender either SMCs or Australian Carbon Credit Units (ACCUs).

Baselines will have two characteristics: a starting point, and a decline rate. Together, these keep emissions within the budget. A low starting point and a shallow decline rate will consume the same amount from the emissions budget as a high starting point and a steep decline rate.

The consultation paper canvasses two options: fixed baselines (an absolute amount of emissions per facility each year, which declines over time); and production-adjusted or floating baselines (a fixed emissions intensity for types of products which declines over time, which is multiplied by production volume to calculate an absolute quantity).

3.1 Fixed baselines should be preferred

Fixed baselines will provide more certainty for meeting the 2030 target, because they cannot fluctuate with production. We note the Government's concerns about constraining growth via fixed baselines if facilities choose to forego increasing production in order to avoid breaching a baseline. Yet, the fundamental objective of the policy is to constrain growth of high-emission activities and support growth of low-emitting activities.

For many facilities, this risk is likely to be exaggerated. Take LNG. The government forecasts that Australian LNG exports in 2027 will be worth AU$566 per tonne.[7] On average, each tonne of LNG is responsible for 0.2 tonnes of emissions in Australia.[8] To avoid paying for one tonne of carbon emissions above its baseline, an LNG facility would need to reduce its production by 4.6 tonnes of LNG. But this decision would amount to forgoing $2600 of potential market value. Even if the cost of a credit rose to $100 per tonne of carbon, and noting that production has a cost, it is unlikely a responsible company would discard that much potential revenue for so small a saving.

Not all companies enjoy the lucrative prices that LNG attracts. Zinc and nickel production, for example, are much more emissions-intense and would face higher credit costs per additional tonne of product. But for companies where the cost of carbon is material, the Government has other ways to assist if assistance is warranted. For example, the National Reconstruction Fund, the Australian Renewable Energy Agency (ARENA), the Clean Energy Finance Corporation (CEFC), and the Powering the Regions Fund could all be used to assist companies to invest to lower their emissions intensity, through new equipment or efficiency gains.

We also note the claim that fixed baselines increase the case for assistance to emissions-intensive, trade-exposed industries, because the carbon cost of an extra unit of production must be met in full if it pushes a facility's emissions above its baseline. But this is a temporary problem. As baselines decline, facilities will either adjust towards lower-emissions production, or find that most of their emissions are above their baseline and attract a carbon cost.

7. DISR (2022a).

8. DISER (2021).

3.2 Intensity baselines carry risks

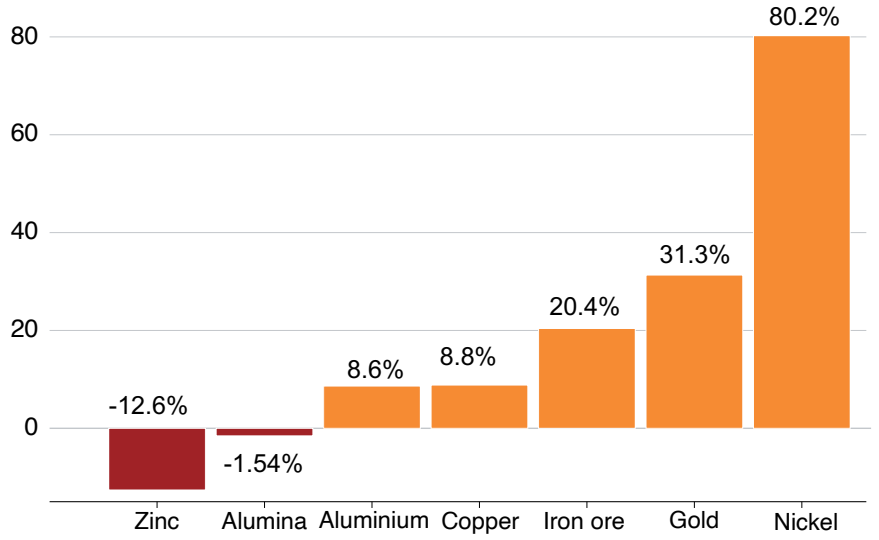
An inherent risk of intensity baselines is that they allow emissions to grow. If emissions intensity is declining more slowly than production is increasing, overall emissions will rise.

Reducing emissions from 138 million tonnes in 2022-23 to 99 million tonnes in 2029-30 represents an average annual emissions cut of 4.6 per cent.[9] Expected growth in Australian commodity production varies considerably (see Figure 3.1).Nickel (expected to grow at an annual average of 10.3 per cent), gold (4.6 per cent), and iron ore (3.1 per cent) are at most risk of outstripping the average annual emissions decline rate required to meet the target.[10]

Intensity baselines provide transparency around likely demand for credits. If baselines are fixed (and published), and the Safeguard budget is fixed, it is relatively easy for market participants to see whether demand is emerging for credits. Using intensity baselines means market participants need to make their own estimates of likely production volumes across sub-sectors to forecast credit demand. Less transparency about demand is likely to increase credit prices.

Recommendation 2:
The Safeguard should use fixed baselines.

Figure 3.1: Emissions from some export commodities are expected to grow in coming years
Projected emissions growth 2021-2027



Note: Assuming emissions grows at the same rate as production.
Source: Grattan analysis of DISER (2021) and DISR (2022a).

3.3 Managing the risks from intensity baselines

If the Government chooses to continue with an intensity approach to setting baselines, the following actions would mitigate the risk that absolute emissions will still rise.

9. That is, the total emissions cut of 38 million tonnes, spread across seven years.
10. Compound annual growth rates 2020-21 to 2026-27: DISR (2022a).

Use industry average emissions intensity to set baselines

Industry averages are a more transparent and equitable way to set baselines. They will immediately constrain the emissions from some facilities. Industry averages will also improve over time as facilities respond to the signal to reduce emissions and as new, more efficient, facilities are built.

Avoid concessions on decline rates

Decline rates for emissions intensity should be at least 4 per cent on average over the period 2023-24 to 2029-30. If decline rates are shallower, aggregate emissions are highly likely to rise and exceed the budget.

The Government should be particularly careful in setting decline rates for industries expected to grow between now and 2030 (see Figure 3.1). This is especially the case where emissions-intensity is high (such as nickel) or aggregate emissions are large (such as thermal coal and LNG).

There is no case for a 'soft start' via shallower decline rates in earlier years. Safeguard participants have had a six-year soft start with no restriction on emissions, because the policy is poorly designed.

Reset decline rates and industry averages periodically

While facility owners will want certainty about likely future baselines to decline investment decisions, keeping aggregate emissions within the budget will require periodic adjustments.

We recommend providing facilities with three pieces of information every year:

- The industry average emissions intensity that applies for the next five years. In the early years of a reformed Safeguard, this would be the current industry averages listed in the Safeguard Document.[11]
- The decline rates for the next five years. The decline rate could vary by industry sub-sector, provided aggregate Safeguard emissions are staying within the budget.
- An indicative decline rate beyond the next five years representing the annual average decline rate between the next two national emissions targets. In the early years of operation of a reformed Safeguard, this would be the decline rate between the 2030 and 2050 targets. Once the government sets a 2035 target, it would represent the required decline between 2035 and 2050.

Table 3.1: Example baseline information for LNG facilities

Baseline calculation		B = I x R x P	
	Industry average (tCO2-e/GJ) (I)	Decline factor (%) (R)	Annual average decline rate
2023-24	0.00401	95.96%	-4.04%
2024-25	0.00401	91.92%	-4.04%
2025-26	0.00401	87.88%	-4.04%
2026-27	0.00401	84.84%	-4.04%
2027-28	0.00401	79.86%	-4.04%
2030-2050 (indicative)			-5%

Note: P= annual production.

Sources: LNG industry average emissions intensity from DISER (2021). Other numbers from Grattan analysis.

Table 3.1 shows an indicative example for LNG.

Every year, the Government should update the above, but only change the value for the fifth year. This way, industry gets five years' notice of changes and has a line of sight to longer-term direction, but the

11. DISER (2021).

Government has flexibility to keep emissions within the budget. This process can also be used to make space in the budget for new facilities (see Chapter 4 for more detail on review cycles).

Recommendation 3:

If intensity baselines continue to be used:

- Industry average emissions intensities should be used to set baselines
- Decline rates should average no less than 4 per cent over the period 2023-24 to 2029-30
- Industry averages and decline rates should be reset periodically.

3.4 Other changes to baseline-setting

Regardless of the choice between fixed and intensity baselines, the following reforms should be made.

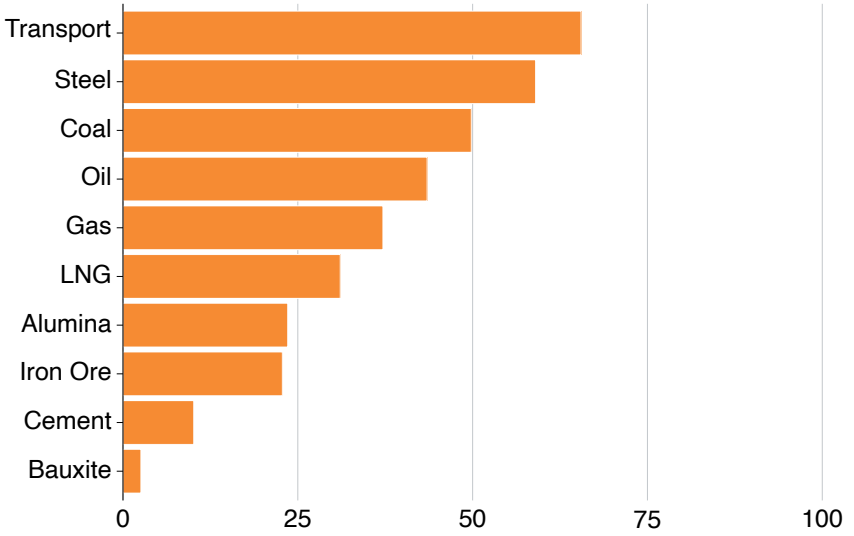
Remove headroom

Currently there is a gap of 38.5 million tonnes between actual Safeguard emissions and the sum of all baselines. If not removed, this 'headroom' will mute the signal to reduce emissions until the decline rate removes it (the consultation paper estimates in 2026 or later). It will also delay the emergence of credit trading.

As we noted in section 1.1, past baseline allocations should not be seen as a right to emit in the future. Headroom is inequitably distributed (see Figure 3.2), meaning within some sectors some facilities will face an easier ride for no reason other than an accident of history. This is particularly unfair if they are able to create credits for being below their baseline.

Figure 3.2: Headroom is unequally distributed across industry sub-sectors

Headroom as a proportion of sector emissions for the highest emitting sectors (per cent)



Source: Grattan analysis of Clean Energy Regulator (2022).

The most transparent and simplest way to remove existing headroom is to use industry averages to set all baselines. Some facilities will still have headroom if they produce at a lower-than-average emissions intensity. But headroom will now be allocated on the basis of performance. It will also create immediate demand for and supply of credits.

Allow banking and borrowing

Changes to emissions in Safeguard facilities are likely to be characterised by plateaus and drops rather than a smooth rate of change, because of the nature of capital investment cycles. Banking and borrowing can help smooth these changes.[12]

Removing headroom removes the need to limit banking.

Borrowing also acknowledges that sufficient credits, whether SMCs or ACCUs, may not be immediately available. Both will have lead times: SMCs because they require facilities to adjust operations or install new equipment; ACCUs because it takes time to secure finance and regulatory approval to proceed with a project, and then more time to undertake the project and create ACCUs.

Allowing too much borrowing represents a transfer of cost and risk from the Safeguard facilities to other sectors of the economy. If the national target is not being met because Safeguard facilities are borrowing too much from future years' obligations, then small business, farmers, and households will have to carry the burden of meeting an extra share of the national emissions target. As well, we should prefer earlier reductions in emissions over later ones because the global warming impacts of greenhouse gas emissions are cumulative. More borrowing means more social costs.

The risk of excessive borrowing could be managed in two ways: a limit on the amount of above-baseline emissions a Safeguard facility can borrow rather than acquit through credits; or periodic 'true-up' years where all borrowings have to be repaid.

Using borrowing limits will be difficult to implement equitably. Some sub-sectors will claim they 'need' higher limits than others, and the government is not best-placed to judge this. Using true-up years keeps the focus on meeting budgets, while avoiding too high a cumulative effect.

A true-up year could be aligned with the five-year national target-setting cycle under the Paris Agreement. Any longer between true-up years would reduce the government's capacity to manage the national and Safeguard emissions budgets; and would increase a facility's cumulative contribution to global warming.

An alternative to a true-up year is an 'interest rate', requiring additional emissions reductions to be paid back along with the amount borrowed. This would recognise that immediate emissions reductions have greater social value than future ones.

Where a facility is borrowing, the amount it has 'on loan' should be publicly reported each year. This would provide transparency to the credit market regarding future demand. It would also provide visibility of future liabilities to investors in the borrowing firm.

Abolish multi-year monitoring baselines

Banking and borrowing will achieve the same outcome as multi-year monitoring baselines.

The issues paper canvasses the idea of long-term multi-year monitoring baselines for facilities that claim to have no technical solutions to reduce emissions in the short term. We do not support this option for three reasons.

First, the purpose of reforming the Safeguard is to internalise the costs imposed in Australia and globally of increased carbon emissions. Long-term multi-year monitoring effectively allows those facilities to continue imposing these costs. It negates the purpose of the policy.

12. Banking allows Safeguard Mechanism Credits (SMCs) created in one year to be surrendered in a future year. Borrowing allows above-baseline emissions in one year to be acquitted in a future year.

Having to pay a price for emitting acts as an incentive to develop new technologies, and brings forward their commercial deployment.[13]

Second, long-term multi-year monitoring would provide a windfall gain for facilities. If the price of credits rises over time (as it most likely will), they will be avoiding having to buy credits when prices are low, but will potentially have excess credits to sell at a later date when the price is high.

Thirdly, while it is true that some Safeguard facilities fall into the internationally accepted definition of 'hard-to-abate', this does not mean there is nothing they can do to reduce emissions. Australia's energy productivity (dollars of GDP produced per gigajoule of energy consumed) compares poorly internationally. Studies continue to find untapped potential to reduce emissions in the industrial sector at low or even negative cost. Extended multi-year monitoring would remove the incentive for facilities to capture these opportunities.

Amend the definition of significant expansion

Section 34 of the Safeguard Rule allows a facility to expand production by 20 per cent before it is required to use a benchmark emissions intensity to calculate its baseline.

In a world where Safeguard emissions must fall by 5.6 million tonnes per year, a 20 per cent expansion in one or two of the larger facilities could put the national and Safeguard budgets at serious risk. This could be guarded against by tightening the criteria in section 34, so that facilities expanding production have an incentive to do so at lower emissions intensity.

Recommendation 4:

Headroom should be removed by using industry average emissions intensities to set all baselines.

Banking and borrowing should be allowed.

Borrowing should be restricted to a maximum of five years, aligned with the Paris target years. Amounts borrowed should be reported to the regulator and published.

Multi-year monitoring baselines should be abolished.

The definition of a significant expansion should be tightened.

13. As we note in our report *The next industrial revolution*, a price on carbon by itself it not sufficient to bring new technology to market; additional government investment in research, development and demonstration, and financial risk-sharing is also required. But all of the above are more effective if carbon is priced: Wood et al (2022).

4 Treatment of new entrants

If the national emissions budget to 2030 is fixed, and the Safeguard has a fixed budget, a new Safeguard facility will take a share of the Safeguard budget from existing facilities.

It is also possible that some facilities may close down or reduce production, freeing up part of the budget for others. Figure 4.1 shows the emissions from facilities entering and exiting the Safeguard over the four years to 2020.

There are two types of new facilities to consider: newly constructed facilities; and facilities that have been operating for many years with annual emissions of less than 100,000 tonnes, but find themselves in the Safeguard because they have increased their output.

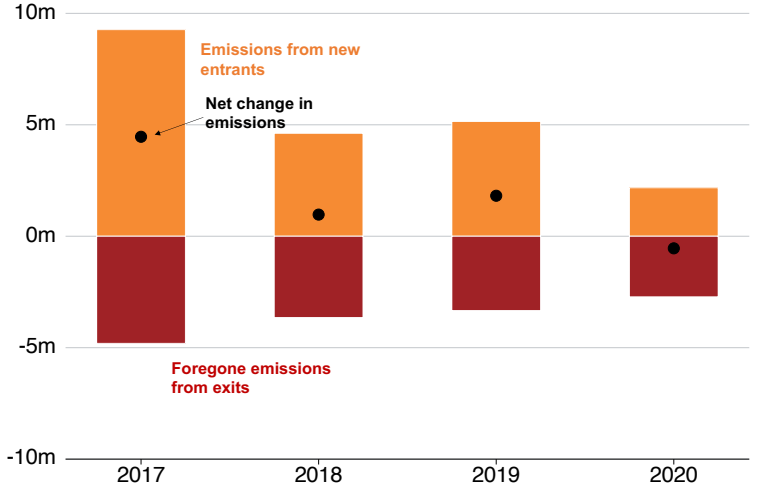
4.1 Setting baselines for newly built facilities

Newly built facilities are likely to be less emissions-intense than the industry average by virtue of being new. But because they are likely to have long lives, minimising their lifetime emissions is critical to achieving and maintaining net-zero emissions.

Globally, companies are factoring the cost of carbon into investment decisions. Our analysis shows that about one-third of companies participating in the Safeguard are already considering the cost of carbon in their investment decisions. Of the 99 companies that currently participate, at least 36 use an internal carbon price.[14] For the companies that disclose this price in public documents, more than half use a price above AU$100 per tonne (see Figure 4.2) – more than three times the current ACCU cost.

Figure 4.1: Emissions from new Safeguard facilities have been partly offset by exits

Emissions (tonnes of CO2-)



Notes: Some entries in the coal and gas sectors will replace older mines or gas wells that are now depleted, so their effect on emissions will be limited. Some exits result from facilities closing down (for example, the Altona refinery closed in 2021); others from a facility's annual emissions falling below 100,000 tonnes so that it is no longer liable to report. In the latter case, the facility still produces emissions each year, but these are not reported through the Safeguard.

Source: Grattan analysis of Clean Energy Regulator (2022), Clean Energy Regulator (2021a), Clean Energy Regulator (2020), Clean Energy Regulator (2019), Clean Energy Regulator (2018).

14. Grattan analysis of publicly disclosed company data.

Using best-practice emissions intensity to set baselines for newly built facilities will minimise lock-in of lifetime emissions and provide an incentive for low- or zero-carbon development and growth.[15] The alternative – using industry average emissions intensity – could lock in higher lifetime emissions.

Newly built facilities will have few options to reduce their emissions (and earn SMCs) in their early years if they are built to best-practice standards. But at some point their baselines will need to start declining towards net zero, just as their older competitors' baselines are.

Decline rates for new facility baselines should be set to converge with the industry average within five years. If the industry average is declining too slowly for this to happen, new facility baselines should have a zero decline rate until the industry average gets closer to their emissions intensity.

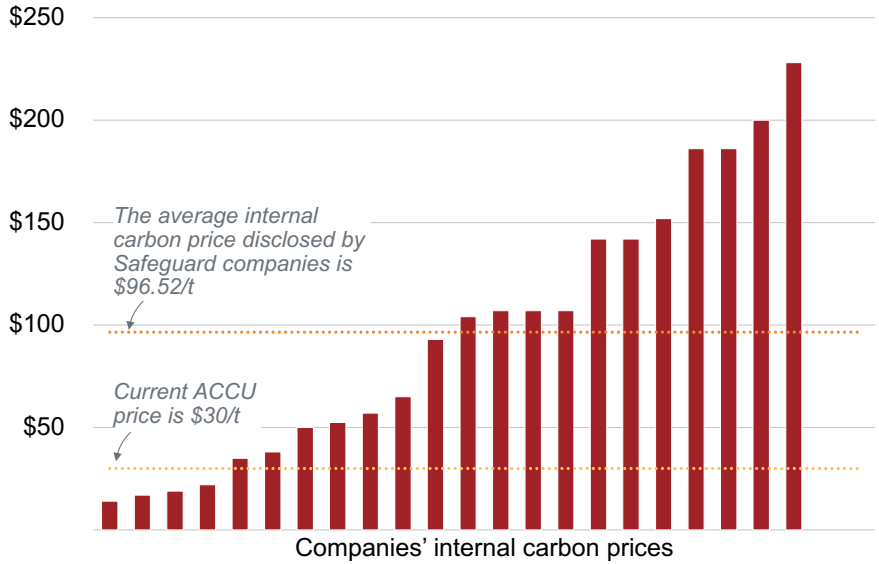
Determining best practice

Determining best practice is difficult. Best Australian practice is not particularly meaningful in a sector where most facilities are old, or where there are few facilities. Best international practice will be hard to determine if data are scarce.

A pragmatic solution would be to establish 'best practice for now' as a fixed percentage below the Australian industry average.[16] The Government should aim to have better estimates in place within two years. These will require periodic revision as global practices change and technology develops.

Figure 4.2: Companies are already testing new investments against a high carbon price

Internal cost of carbon (AU$/t)



Notes: Some companies in the data set use a range of prices. We have shown the highest prices for these companies.

Source: Grattan analysis of publicly available data.

15. This is particularly important in mining, where the coming boom in critical minerals could blow out Australia's emissions: Wood et al (2022).
16. Wood et al (2021).

Recommendation 5:

New facilities should use best-practice emissions intensity to set their baselines. This value should decline at a rate where it converges with the sector average within five years.

Best practice should be defined temporarily as a fixed percentage below the Australian average.

4.2 Setting baselines for existing facilities when they join the Safeguard

Existing facilities that are new to the Safeguard may find it difficult to meet a best-practice baseline, and asking them to do so would amount to discrimination on the basis of size.

Facilities that have been operating for more than five years before entering the Safeguard should use the current industry averages and declines rates to determine their baselines. This would also make it easier to adjust the Safeguard threshold at a later date without having to significantly revise the rules.

Recommendation 6:

Facilities more than five years old should use industry average emissions intensity to set their baseline when they join the Safeguard. This value should decline at a rate consistent with incumbent facilities in the same sector.

4.3 Accommodating new facilities within the budget

As noted above, newly built facilities should be required to meet a best-practice emissions intensity when setting their baseline. But this minimises, rather than eliminates, their draw on the Safegurd budget.

The issues paper suggests a reserve to accommodate new facilities – keeping part of the Safeguard budget unallocated until new facilities arrive. Another way to accommodate new facilities is to adjust decline rates for baselines: steeper decline rates free up budget.

A reserve has to be large enough to treat new facilities equitably. But because it may not get used, it cannot be so large that incumbent facilities face overly stringent baselines and decline rates. This would push up the price of offsets for everyone, making the scheme overall more costly. As baselines decline and facilities face higher liabilities for their emissions, the reserve decreases in importance, because new facilities will also be paying for most of their emissions.

Adjusting decline rates increases uncertainty for incumbent facilities, but gives the government flexibility. As noted in section 3.3, using a rolling five-year series of decline rates, with the fifth year changing annually, strikes a balance between certainty and flexibility.

There are a number of large-emitting projects currently under construction or planned. Figure 4.3 shows the anticipated emissions from currently committed, feasible, and announced projects for coal, LNG, and iron ore. These sectors are the largest sources of emissions in the Safeguard.

Using only adjusted decline rates, which in our recommended model would not be possible until 2028-29, may leave it too late to meet the 2030 target.

We suggest establishing a reserve in the early years of the Safeguard, by increasing the decline rate of every facility. Adjusting the average

annual decline from 4.6 per cent to 5.5 per cent would generate a reserve of 15 million tonnes by 2030.

Over time, the Government should phase out the reserve and use the process of annual decline rate adjustments outlined in Table 3.1 to accommodate new facilities.

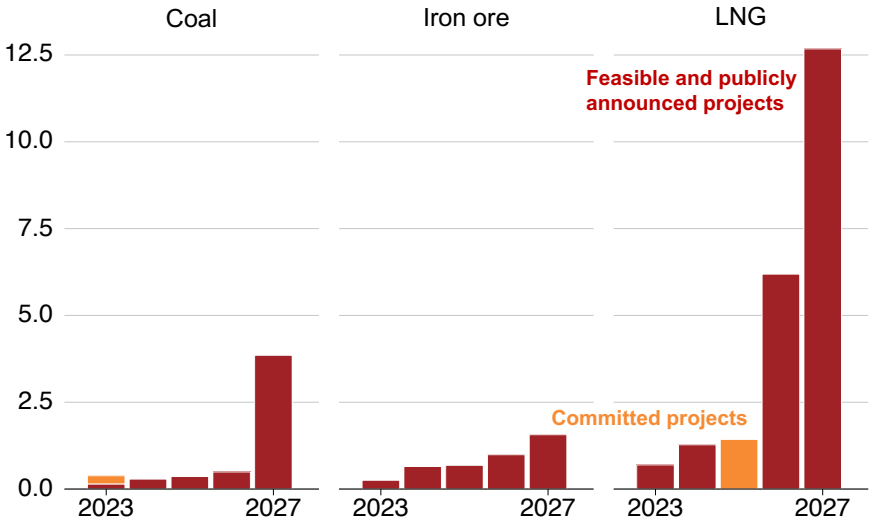
We do not support using the reserve to accommodate higher-than-expected growth in emissions from existing facilities. As outlined in section 3.3, there are better ways to guard against the risks of intensity baselines.

Recommendation 7:

The Government should establish a temporary reserve in the Safeguard budget to accommodate new facilities by increasing the decline rate for existing facilities.

Over time, adjusting decline rates should become the primary mechanism to accommodate new entrants.

Figure 4.3: Potential emissions from new facilities are significant
Emissions (millions of tonnes per annum)



Notes: Where start year was given as 'x date or later than', we assumed start date of x. Publicly announced projects are typically undergoing an initial feasibility study to assess the commercial aspects of developing an identified resource. Feasability stage projects have undertaken initial project definition studies and commenced more detailed planning work such as Front-End Engineering Design (FEED) studies, Bankable Feasibility Studies, commercial plans, environmental surveys, and Environmental Impact Statements. Committed projects have completed all commercial, engineering, and environmental studies, received all necessary government regulatory approvals, and finalised financing to allow construction. Emissions estimates are derived using the industry average emissions intensities in Schedule Two of the Safeguard Document.

Source: Grattan analysis of DISR (2022b) and DISER (2021).

5 Assistance for emissions-intensive, trade-exposed industries

The design of the Safeguard means that no facility is liable to pay for all its emissions. This greatly reduces the need for assistance for emissions-intensive, trade-exposed industries (EITEs) in the early years of the scheme.

The purpose of EITEs assistance is to prevent carbon leakage: goods currently produced in Australia shifting to being produced offshore in jurisdictions with higher emissions intensity of production. This can happen because Australian exporters compete with other exporters that do not face a carbon price in their home country. And it can happen because Australian producers face competition from importers who do not face a carbon price in their home country.

We suggest three criteria for determining eligibility for EITEs assistance:

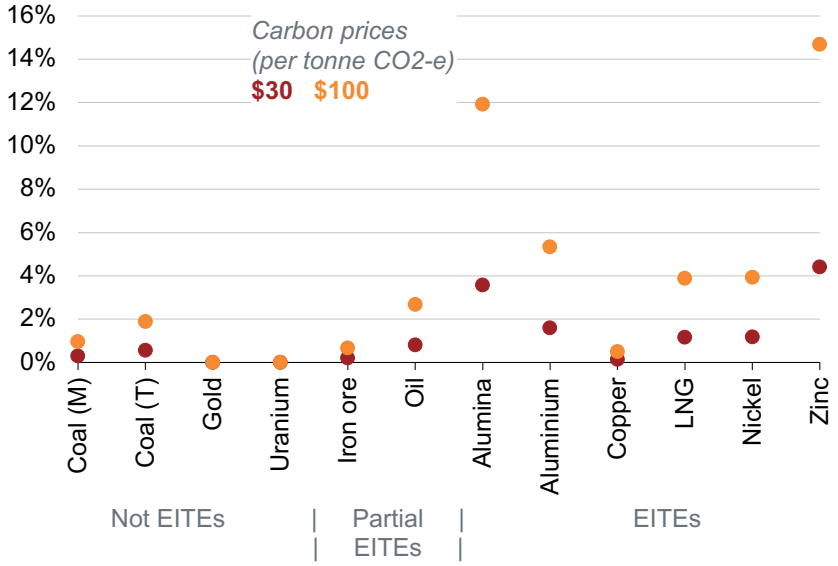
1. The activity is likely to move to another country; and
2. The dominant reason for the move is the cost of complying with the Safeguard; and
3. Global emissions will increase as a result.

There should be some limited assistance for EITEs, and this should be regularly reviewed. Assistance should be provided outside the Safeguard.

The Government should begin exploring the design of a carbon border adjustment mechanism as a long-term replacement for EITEs assistance for those facing import competition.

Figure 5.1: For many exports, the cost of carbon is small compared to their value

Ratio of cost of carbon to value of one unit of commodity in 2027



Notes: EITE activities classified as 'partial' refer to exports where some forms are EITEs and some are not. For example, pelletising iron ore is an EITE activity but exporting non-pelletised iron ore is not.

Sources: Grattan analysis of DISR (2022a) and DISER (2021). EITEs definitions from Clean Energy Regulator (2021b).

5.1 The case for assistance is limited, and shrinking

Many more global emissions are covered by carbon pricing today than when the concept of supporting EITEs was being debated in Australia in 2009. China has implemented an emissions trading scheme in the electricity sector, and is in the process of expanding it to the production of iron and steel, chemicals, paper, aluminum, and cement. The latter two are expected to be included by the end of this year. Indonesia is implementing a carbon tax, albeit at very low levels, which will affect the oil and mining, pulp and paper, cement, plastic, and petrochemicals sectors.[17]

The European Union is moving to phase out EITEs assistance, replacing it with a carbon border adjustment mechanism which prices carbon into imports at a level equivalent to domestic production.

As well, there is emerging evidence of some willingness to pay for commodities that have lower embodied emissions. For example, German automakers are shifting to using 'green' steel,[18] and there are signs of a green premium for aluminium and alumina.[19]

All the above point to fewer activities in Australia meeting the test for assistance.

It is also time to revisit and question the idea that exporting companies cannot pass on any cost of carbon, linking assistance to costs. Our analysis shows that for many exports, the cost of a credit compared to the value of one unit of export is low to negligible (see fig. 5.1). If industry averages are used to set baselines, many facilities will not face a cost impost at all. And, in the early years of the Safeguard when the emissions from many facilities will be below the baselines, the effective cost will be even lower compared to the value of production.

17. Cekindo (2022).
18. Boston (2021).
19. Ker (2021).

In any case, there is always an information gap between government and industry with respect to price impacts, so it is difficult if not impossible for governments to decide what is a fair financial amount of assistance. The case for assistance and its quantum must be limited to addressing the failure of our global competitors to act on limiting their emissions.[20]

Finally, eligibility for EITEs assistance should not be linked to availability of technology to reduce emissions. Non-EITE facilities face similar difficulties: air travel for example is a hard-to-abate sector waiting for technology change. Gas pipeline emissions are calculated per kilometre of pipeline – a pipeline owner cannot shorten their pipeline to reduce their emissions. Meanwhile, many EITE activities have technology available now to reduce emissions, and Safeguard reforms should give them the signal to do so.

5.2 The current EITE assistance framework is not fit for purpose

The current list of EITEs was developed for the Renewable Energy Target (RET). The list focuses on activities that are significantly exposed to electricity costs. There should be no expectation that an activity eligible for EITEs assistance in the RET should also be eligible in the Safeguard. Electricity prices will not rise as a consequence of the Safeguard, and there may be activities that use little grid electricity but are emissions-intense.

The baseline-and-credit design of the Safeguard also prompts a rethink of how EITEs eligibility is determined. The current framework grants exemptions on the basis of activities, but does not take into account emissions intensity of production at different facilities. Using the current framework risks over-compensating some facilities with high intensity. Meanwhile, facilities with below-average intensity potentially receive SMCs that reflects this, as well as EITEs assistance.

20. Ross Garnaut (2008).

It will take time to set up a separate EITEs framework for the Safeguard. The Government should commit to establishing a new framework by 1 July 2024, with new definitions specific to the Safeguard. On average, Safeguard participants will face no more than a 4 per cent carbon liability in the first year of operation, so none is likely to be driven out of business while the framework is being developed. Assistance could be grandfathered once the framework is in place.

Recommendation 8:

The Government should design an EITEs framework specific to the Safeguard by 1 July 2024. This should include new definitions for EITE activities.

Any EITE assistance should be based on closing the competitive gap created by different carbon constraints between Australian firms and their overseas competitors.

No EITEs assistance should be provided while the framework is being designed.

5.3 How to provide EITEs assistance

EITEs assistance should be provided outside the Safeguard. Once a Safeguard budget is in place, every exemption given to an EITE facility inside the Safeguard uses up budget, and places more of the work of reducing emissions onto non-EITEs. Providing assistance outside the Safeguard avoids blunting the signal to reduce emissions. It also improves transparency around demand for credits, which will be critical for an efficient credit market.

There are three ways the government could provide assistance outside the Safeguard. First, it could use its existing funding bodies, the Clean Energy Finance Corporation (CEFC) and the Northern Australia Infrastructure Facility (NAIF), as well as the new National Reconstruction Fund (NRF), to provide low-cost finance for EITEs wanting to decarbonise and avoid lock-in. This would also reduce the need for EITEs assistance in the future. These projects could be supplemented with grant funding if required.

Second, the Government should make available a reserve of high-quality ACCUs that EITEs can buy at very low prices, provided they then surrender them. The Government could do this through current contracts in the Emissions Reduction Fund (ERF). Instead of paying for ACCUs on delivery and cancelling them, the Government could pay on delivery and put the ACCUs into an EITEs reserve, with EITEs being able to buy them at a discounted price.

Thirdly, for facilities that face competition from imports, the Government should consider a carbon border adjustment mechanism. This would require importers to pay an equivalent carbon price to local producers, levelling the playing field and preventing carbon leakage.

We do not support provision of free SMCs as a form of EITEs assistance, because this would act as a tax on facilities whose emissions are below their baseline.

Nor do we support shallower decline rates for EITEs. This would shift the burden of emissions reductions onto non-EITE firms, with no associated benefit to them. Granting EITEs a decline rate that exempted them from 90 per cent of their baseline obligation using current definitions would use up about 60 per cent of the Safeguard budget. It would mean that emissions from non-EITE facilities would need to fall (or be offset) by almost half across the seven years from 2023-24 to 2029-30.

Recommendation 9:

EITEs assistance should be provided outside the Safeguard.

Assistance should take three forms: financial assistance to decarbonise operations; access to low-cost ACCUs; and a carbon border adjustment mechanism. Over time, access to low-cost ACCUs should be phased out.

6 Phases, reviews, and other issues

For the Safeguard to be an enduring and effective policy, it will need to be adjusted regularly. Setting out when and how these adjustments will be made would provide certainty to industry without having to lock in settings.

We support the Government's proposal to have a first phase covering the years 2023-24 and 2024-25. There will be operational issues to iron out. But there is no case for the first phase to include exemptions or concessions. These could turn extending concessions on headroom, decline rates, and banking into election issues. Better to make good design decisions now and have an effective Safeguard mechanism in place at the next election, so that parties can debate increasing ambition rather than extending inaction.

Operational issues aside, the first year of a first phase should be used to settle the issues that need more time, such as a new EITEs framework, exploration of a carbon border adjustment mechanism, and defining best practice for new facilities.

Figure 6.1 summarises our suggested review points.

Figure 6.1: Timeline for the reformed Safeguard

Notes: Key operational milestones shown in orange. A carbon border adjustment mechanism could be introduced at the same time as a new EITEs framework or later.

6.1 Other topics from the issues paper

6.1.1 Choice of production variables

Some Safeguard facilities use site-specific production variables and associated emissions intensities to set their baselines. This concession is inequitable and should be removed. All facilities should shift to using government-defined production variables from the first year of a reformed Safeguard.

New production variables will be needed over time. These should be based on outputs, not inputs (for example, a production variable

for ‘hydrogen’, not for ‘hydrogen produced from natural gas’). Output-based production variables encourage production to shift towards low- or zero-emissions processes, which is consistent with the objective of reforming the Safeguard.

Recommendation 10:

The Safeguard should use government-defined production variables.

New production variables should be be based on outputs.

6.1.2 The Powering the Regions Fund

In section 5.3, we suggested the Powering the Regions Fund be used to provide assistance to EITEs outside the Safeguard.

In our recent report, *The next industrial revolution*, we emphasised that governments should not be funding increases in emissions or potentially stranded assets. This applies to the Powering the Regions Fund too. The Fund should give preference to industries that can transform to net-zero exports. It should not fund expansion of coal or gas extraction or use, or new coal/gas facilities, and be very cautious about any funding to decarbonise existing coal and gas operations.

The Powering the Regions Fund could be used in concert with the Clean Energy Finance Corporation (CEFC), the Northern Australia Infrastructure Facility (NAIF), and the new National Reconstruction Fund (NRF) to fill risk gaps that can’t be bridged with finance. The Government should clarify the respective roles of all four funds, and how they work together.

Over time, the ACCU market should be shifted to private demand for offsets, rather than relying on government purchasing contracts. The Powering the Regions Fund should be an ACCU buyer of last resort through optional delivery contracts for a limited period, but should not be the primary purchaser.

Recommendation 11:

The Powering the Regions Fund should not fund expansions of coal or gas use or extraction.

The Government should clarify the respective roles of the Powering the Regions Fun, the NRF, the CEFC, ARENA, and the NAIF.

The Government should support emergence of a mature market for ACCUs by acting as buyers of last resort for a limited period (via optional delivery contracts).

6.1.3 Credits

There are a small number of ERF projects currently creating ACCUs at Safeguard facilities. No more projects that reduce Scope 1 emissions should be allowed to register at Safeguard facilities. Projects that reduce Scope 2 emissions should be allowed. Existing ERF projects at Safeguard facilities should be allowed to continue creating ACCUs, but projects that are yet to create any ACCUs should be given a deadline to do so, or be deregistered.

There should be no international units at this stage. Once the rules for international trade have settled and baseline rules are 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. This should include consideration of international units in the Safeguard.

Recommendation 12:

No further ERF projects for Scope 1 emissions reductions should be registered at Safeguard facilities.

Existing ERF projects for Scope 1 emissions reductions at Safeguard facilities should be allowed to continue creating ACCUs. Projects that are yet to create any ACCUs should be given a deadline to do so, or be deregistered.

The use of international units in the Safeguard should be decided in the context of a National Carbon Market Strategy.

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