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Executive summary

This paper seeks feedback on proposed changes to the Safeguard Mechanism to deliver emissions reductions consistent with Australia's Nationally Determined Contribution under the Paris Agreement and strengthen Australia's competitiveness in a decarbonising global economy.

The Government has increased the ambition of Australia's climate goals, committing to reduce national emissions to 43 percent below 2005 levels by 2030, and reaffirming Australia's commitment to achieve net zero emissions by 2050. The *Powering Australia* policy sets out the Government's plan to meet these climate targets—including by building on the existing Safeguard Mechanism to reduce industrial sector emissions. The Government has announced a 1 July 2023 start date for the reforms.

The Safeguard Mechanism has been in place since 2016. It provides a legislated framework that limits the emissions of around 215 large industrial facilities. Together, Safeguard Mechanism facilities contributed 28 per cent of national emissions in 2020-21. Building on this framework will promote policy certainty and stability. The current coverage threshold of 100,000 tonnes of Scope 1 (direct) CO₂-e emissions each year will remain in place under the reformed scheme.

The Government aims to deliver its climate targets in a way that minimises costs and shares the effort across the economy. Reforms to the Safeguard Mechanism will balance the principles of being effective, equitable, efficient, and simple. This paper seeks options for setting and reducing baselines in a predictable and gradual way, to allow the Safeguard Mechanism to contribute its share of the 2030 target on a trajectory to net zero by 2050. It proposes new flexible compliance mechanisms—such as crediting and trading—to help businesses manage the costs of declining baselines. This will allow facilities without immediate access to their own low cost abatement opportunities to access the lowest cost abatement within the scheme (through trading), and outside the scheme (through offsets).

Tailored treatment for emissions-intensive, trade-exposed industries will be based on the principle of comparative impact—helping to ensure businesses are not competitively disadvantaged, and that emissions do not 'leak' overseas, noting that, in an increasingly decarbonised world, competitiveness will increasingly depend on being a low emissions producer. This could include a facility-specific approach that targets estimated cost impacts *at the facility level*. This approach could build on established emissions-intensive, trade-exposed arrangements in Australia.

We understand that some facilities may face delays in accessing cost effective abatement technologies. We are seeking views on a facility-by-facility approach to accessing arrangements that would allow a facility's baseline trajectory to match available and emerging technologies within a multi-year compliance period. This approach would deliver the same emissions result at the end of the multi-year period, but provide flexibility within that period.

While final decline rates cannot be settled until other policy settings have been finalised, indicative decline rates are expected to be between 3.5 and 6 percent each year. Post-2030 decline rates could be set in 5 year blocks, with the process for setting them aligned with updates to Australia's Nationally Determined Contribution (NDC) under the Paris Agreement.

The Safeguard Mechanism is only one component of the *Powering Australia* policy and the industrial transformation involved will also be assisted by the Powering the Regions Fund, National Reconstruction Fund, Clean Energy Finance Corporation, Australian Renewable Energy Agency and other related policies and measures.

Summary of matters where feedback is sought

The Safeguard Mechanism's share of the national abatement task

- What should the Safeguard Mechanism's share of Australia's climate targets be?

Fixed (absolute) versus production-adjusted (intensity) framework

- Should we retain, and build on, the existing production-adjusted (intensity) baseline setting framework or return to a fixed (absolute) approach?

Setting baselines for existing and new facilities

- Views are sought on the proposal to reset baselines in a way that removes aggregate headroom so crediting and trading can commence when baselines start to decline.
- What is the preferred approach for setting baselines for existing facilities? Approaches may include:
 - Option 1: setting all baselines using industry-average benchmark emissions-intensity values.
 - Option 2: setting all baselines using facility-specific emissions-intensity values.
 - Other proposals, noting there are many possible approaches.
- What are the advantages of best practice, industry average benchmarks or alternative approaches for setting baselines for new entrants, noting that a final decision will be informed by baseline setting arrangements for existing facilities?

Crediting and trading, domestic offsets and international units

- Are there any other issues to consider with the proposal to allow the Clean Energy Regulator to automatically issue tradable credits to Safeguard facilities whose emissions are below their baseline, with crediting and trading commencing on 1 July 2023 subject to baseline setting arrangements that remove aggregate headroom?
- Should banking and borrowing arrangements be implemented for Safeguard Mechanism Credits?
- Should Safeguard facilities no longer be able to generate ACCUs for reducing direct (scope 1) emissions unless they have an existing registered ERF project? Further, should no new ERF projects be able to be registered at Safeguard facilities? Additional feedback is sought on:
 - allowing existing ERF projects at Safeguard facilities to continue to generate credits and retaining double counting provisions to prevent a facility from generating ACCUs and SMCs;
 - options for the treatment of deemed surrender;
 - continuing to allow Safeguard facilities to participate in ERF projects that reduce emissions from electricity use (scope 2) emissions; and
 - mechanisms to promote the transparency of the ACCU market, such as publishing unit holding, to assist with market decision making, supply and cost effectiveness.

- Should international units be able to be used for compliance under the Safeguard Mechanism at a future time, noting that any decision would depend on the rules for international trading?

Tailored treatment for emissions-intensive, trade-exposed (EITE) businesses

- Should a facility-specific comparative impact assessment that builds on existing EITEs definitions be used rather than a sector wide designation?
- Would additional funding opportunities effectively assist EITE facilities to adapt to declining Safeguard baselines?
- What kinds of funding, finance or other arrangements and measures would best support EITE Safeguard facilities to reduce their emissions?
- In particular, what potential design features of the Powering the Regions Fund would support covered facilities with their decarbonisation priorities?
- Is the direct provision of SMCs an appropriate way to mitigate cost impacts for EITE facilities?
- Are differential decline rates an appropriate way to reduce the impact on EITE facilities?
- How could differential decline rates be structured so that emissions reduction and fairness outcomes are maintained?

Taking account of available and emerging technologies

- Should multi-year monitoring periods be extended to allow facilities with limited near-term abatement opportunities to manage their own abatement path?

Indicative baseline decline rates

- What are the appropriate characteristics for the decline trajectory to 2030 that can deliver the Safeguard Mechanism's share of Australia's climate targets, and the process for setting baselines post-2030?

Other policy issues

- What transitional or other arrangements should be in place for site-specific production variables, including:
 - whether the use of Government-defined production variables (prescribed in Schedule 2 of the Safeguard Mechanism Rule) should be mandatory from the start of Phase 1;
 - whether transitional arrangements for facilities using bespoke, site specific production variables should be considered for phase 1; and
 - the proposal that only Schedule 2 production variables could generate Safeguard Mechanism Credits (SMCs)?
- Should oil refinery production variables:
 - remain fixed (in Schedule 3) and not generate SMCs; or
 - become production-adjusted (move to Schedule 2) and be eligible to generate SMCs?
- Are existing Government-defined production variables suitable for the Safeguard Mechanism to drive least cost emissions reductions?

- Should the inherent emissions variability calculated baseline approach be removed?
- How should landfills be treated, including:
 - should landfill baselines decline at the same rate as other facilities;
 - should landfills be able to generate SMCs in phase 1; and
 - should long-term arrangements for landfills be considered prior to phase 2?

How to make a submission

Submissions to this consultation paper can be made via the [Department's Consultation Hub](#) and by clicking the "Make a Submission" button. Submissions will be published online after the consultation closes, however stakeholders may request that their submission is kept confidential and not published. The Department will also publish information on the outcome of the consultation on the Consultation Hub.

This consultation will close on **Tuesday 20 September 2022**.

1 Introduction

The Government has increased the ambition of Australia's climate goals, committing to reduce national emissions to 43 percent below 2005 levels by 2030, and reaffirming Australia's commitment to achieve net zero emissions by 2050.

These targets have been formalised in Australia's updated Nationally Determined Contribution (NDC) under the Paris Agreement¹, and the Government is seeking to legislate them in the new Climate Change Bill that has passed the House of Representatives.

Australia's new climate targets are realistic and achievable, but it will take deliberate and sustained effort to meet them. Businesses are well prepared. The majority of companies controlling or operating Safeguard facilities have medium and long term climate targets, including net zero goals, and are factoring Australian and global decarbonisation into their decisions, operations and investments.

Australia is well placed to benefit from a more sustainable growth path. Green growth will attract new industries and jobs; and help to diversify the economy, improving energy security and reducing Australia's vulnerability to external price shocks.

Reducing emissions could also help to protect against global transition risks, including potential trade measures, such as the European Union's proposed Carbon Border Adjustment Mechanism, as well as private investors seeking to avoid carbon risk that may impact the competitiveness of Australian businesses as the world continues to decarbonise.

The *Powering Australia* policy sets out the Government's plan for meeting its climate targets and includes Rewiring the Nation, the Powering the Regions Fund, the National Reconstruction Fund and the National Electric Vehicle Strategy. All sectors must play their part. Alongside new measures for electricity and transport, the plan commits to build on the existing Safeguard Mechanism to reduce industrial sector emissions.

The Safeguard Mechanism provides a legislated framework that is intended to limit the emissions of large industrial facilities that produce more than 100,000 tonnes carbon dioxide equivalent (t CO₂-e) each year, which currently numbers around 215 facilities. Businesses are familiar with the scheme. It has been operating for six years. Building on the current framework will promote policy certainty and stability and has been identified by a broad coalition of business leaders and groups as the preferred approach to provide policy certainty for large industrial emitters.

To date, the Safeguard Mechanism has not been effective in reducing emissions. Instead, emissions limits, known as baselines, have allowed business-as-usual operations and aggregate emissions from Safeguard facilities to grow. Elements of the Safeguard Mechanism will need to evolve for it to deliver large-scale, low-cost emissions reductions.

This paper considers options for reforming the Safeguard Mechanism, consistent with the principles outlined in the Government's *Powering Australia* plan, so that it can meaningfully reduce emissions, taking into account facility-specific circumstances while also including options to support emissions-intensive, trade-exposed businesses. It seeks feedback on the following high level policy areas:

¹ Australia's Nationally Determined Contribution 2022 (<https://unfccc.int/sites/default/files/NDC/2022-06/Australias%20NDC%20June%202022%20Update%20%283%29.pdf>)

- Section 2: The Safeguard Mechanism’s share of the national abatement task
- Section 3: Setting baselines to achieve an equitable distribution of costs and benefits
- Section 4: Lowering costs with crediting and trading, offsets and international units
- Section 5: Tailored treatment for emissions-intensive, trade-exposed businesses
- Section 6: Taking account of available and emerging technologies
- Section 7: Indicative baseline decline rates
- Section 8: Other design issues

The current coverage threshold of 100,000 tonnes of Scope 1 (direct) CO₂-e emissions each year will remain in place under the reformed scheme, as will the current approach for grid-connected electricity generators. Energy Ministers have agreed a new National Energy Transformation Partnership, underpinned by the Government’s Rewiring the Nation Plan, to support the ongoing decarbonisation of the electricity sector while maintaining the reliability and security of the electricity system.

1.1 Timing and process

Climate change is not a distant threat. Its impacts are being felt now—taking action cannot wait. Transition risks to Australian businesses and workers are also growing quickly as our trading partners decarbonise and private investors align investment strategies with carbon reduction goals.

We have announced a 1 July 2023 start date for the Safeguard Mechanism reforms.

Consistent with the current legislative framework for the Safeguard Mechanism, the details of the reformed scheme, including baseline setting and baseline decline rates, will be implemented through subordinate legislation, including the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* (the Safeguard Mechanism Rule). Primary legislative changes will be needed to implement crediting and related changes.

Feedback on a more detailed design proposal accompanied by proposed changes to the Safeguard Mechanism Rule will be sought later this year following feedback on this paper. We will then progress the changes to the Safeguard Mechanism Rule in the first quarter of 2023. Primary legislative changes focused on the crediting aspects of the design would be progressed in parallel.



This is a tight timeframe, but strong institutional arrangements are already in place and businesses are well prepared for the change which was part of the *Powering Australia* policy announced in December 2021. Safeguard Mechanism facilities have over a decade’s experience measuring and reporting their emissions, a clear understanding of their climate profile and risks, and many are already working towards climate targets of their own.

Regardless, these reforms are meaningful. This paper suggests two phases in the period to 2030 to ease the transition.

- **Phase 1 (2 years from 2023-24 to 2024-25):** transition commencing 1 July 2023.
- **Phase 2 (5 years from FY26 to FY30):** changes commence in full on 1 July 2025.

A range of options for implementing the transition phase are discussed in their relevant sections below.

1.2 Objective and policy principles

The Government aims to deliver its climate targets in a way that maximises benefits, minimises costs and shares the effort among participants. There is no single solution—we will work to balance the following policy principles:

- **Effective:** reduces emissions consistent with Australia’s greenhouse gas emissions reduction targets.
- **Equitable:** baselines are set on a consistent and transparent basis and achieve an equitable distribution of the costs and benefits.
- **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, and administrative and reporting arrangements, as simple and low cost as possible.

2 The Safeguard Mechanism’s share of the national abatement task

The Government has reaffirmed Australia’s commitment to achieve net zero by 2050 and committed to reduce national emissions to 43 per cent below 2005 levels by 2030. The Safeguard reforms are intended to put facilities on a broad trajectory to the net zero target by 2050. A number of approaches could be used to give effect to this.

The 2030 commitment represents a major milestone on the path to the 2050 net zero goal. It is characterised as both:

- **a single-year (point) target:** the indicative value for national emissions is no more than 354 Mt CO₂-e in 2030; and
- **a multi-year emissions budget:** the indicative value for the national emissions budget is no more than 4,381 Mt CO₂-e for the decade from 2021 to 2030.

The emissions budget is important. Global warming impacts are linked to cumulative greenhouse gas concentrations, so the total volume of emissions released over the decade better represents Australia’s contribution to global warming than emissions in a single year.

Facilities covered by the Safeguard Mechanism contributed 28 percent of national emissions in 2020-21². To contribute this proportional share of the national emissions target, aggregate baselines would need to fall to 99 million tonnes CO₂-e by 2030³. This compares with covered emissions of 137 million tonnes CO₂-e in 2020-21. The Safeguard Mechanism’s corresponding share of the national emissions budget for the decade would be net emissions of 1,227 million tonnes CO₂-e⁴. Setting and achieving this 2030 target will ensure that Safeguard emission reductions are on track and aligned with the broad trajectory to reach net zero by 2050 (Figure 2.1).

Figure 2.1: Indicative emissions decline trajectory to net zero by 2050

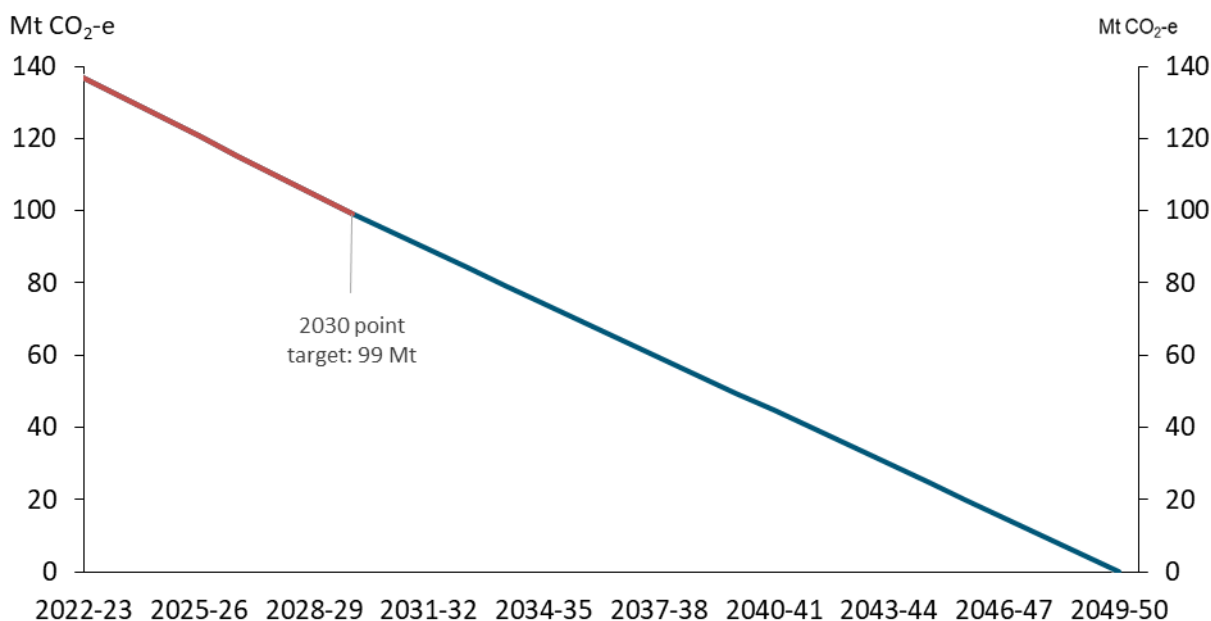


Figure 2.2 presents a stylised representation of the Safeguard Mechanism’s potential emissions budget and indicative abatement task. If emissions fall from 1 July 2023 in a linear trajectory consistent with the 2030 point target, total Safeguard emissions will remain within the emissions budget for the decade. This is an illustrative example only, and there are a range of possible trajectories that could meet this budget.

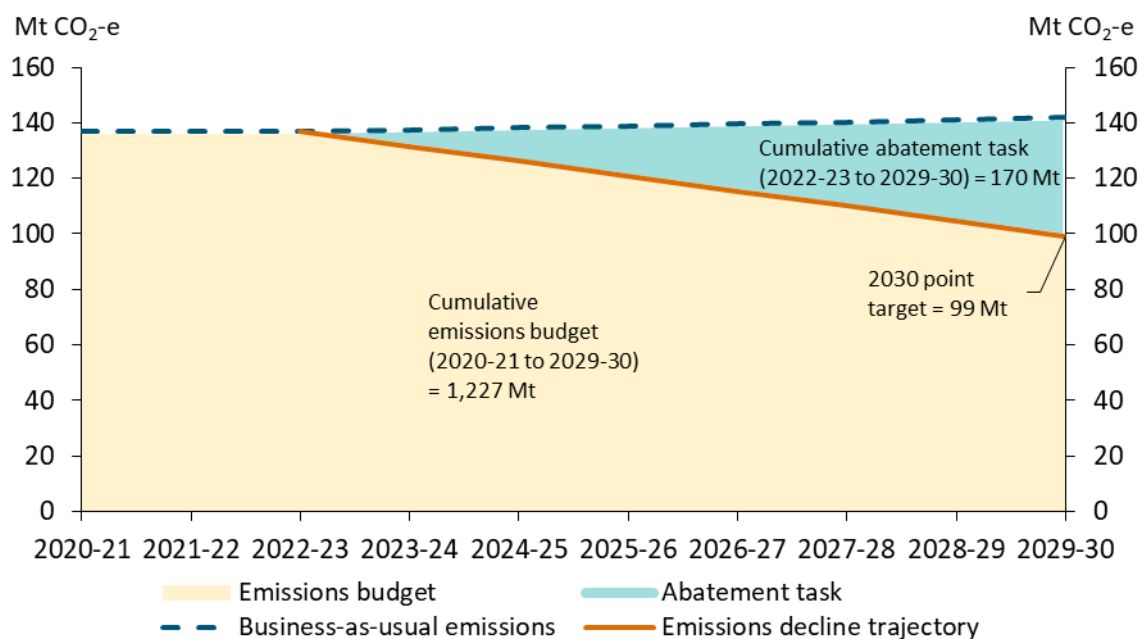
The abatement task depends on projected emissions growth. Assuming modest emissions growth of 0.5 per cent each year, Safeguard facilities would contribute around 170 Mt of abatement to 2030. Stronger than expected business-as-usual growth would increase the abatement task—for example, 2 per cent annual emissions growth would increase the abatement task to 230 Mt.

² This does not include grid-connected electricity generation which is subject to a sectoral baseline.

³ National emissions were 621.1 million tonnes CO₂-e in 2005 and must fall to 354 million tonnes CO₂-e by 2030 if Australia is to meet its international target. In 2020-21 (the most recent year that data was available), Safeguard Mechanism facilities contributed 28 percent of national emissions. The corresponding share in 2030 is 99.1 million tonnes CO₂-e (28 percent of 354 million tonnes CO₂-e).

⁴ The indicative value of the emissions budget is 4,381 million tonnes CO₂-e corresponding to the 2030 target. The Safeguard Mechanism’s proportional share is 1,226.7 million tonnes CO₂-e (28 percent of 4,381).

Figure 2.2: Proposed emissions budget and indicative abatement task for Safeguard facilities



A proportional share is not the only option for assigning a share of Australia’s climate commitments to the Safeguard Mechanism. The Safeguard Mechanism can be considered to cover ‘hard to abate’ sectors, where some emissions sources, such as process-related emissions, face challenges in terms of abatement technologies and costs.

These challenges are not insurmountable and having a credible and stable investment signal underpinned by clear targets will be fundamental to developing new technologies and processes. Flexible compliance mechanisms such as trading and access to offsets could help businesses manage costs in the short to medium term by providing access to the lowest cost abatement, and manage the lumpy nature of abatement technology deployment.

What should the Safeguard Mechanism’s share of Australia’s climate targets be?

3 Setting baselines to achieve an equitable distribution of costs and benefits

Baselines must fall for the Safeguard Mechanism to contribute its share of the 2030 target and for Australia to reach net zero by 2050. How baselines are set will play a big role in determining the decline trajectory. It is a key element of scheme design that determines the costs and benefits faced by each facility to meet its Safeguard obligations. The aim is to design policy in a way that shares these impacts equitably. This section considers the following baseline setting issues:

- fixed (absolute) versus production-adjusted (intensity) framework;
- headroom and the need to remove it;
- setting baselines for existing facilities; and
- setting baselines for new facilities.

3.1 Fixed (absolute) versus production-adjusted (intensity) framework

Aggregate baselines determine the overall emissions constraint under the Safeguard Mechanism. They can achieve this using either of the following frameworks:

- **Fixed** (absolute) baselines place an absolute limit on covered emissions. They can be met by reducing output and/or improving emissions-intensity.
- **Production-adjusted** (intensity) baselines rise and fall annually with production (see Box 3.1). They can only be met by improving the emissions-intensity of production.

Both types of baseline can be subject to a decline rate and calibrated to meet any given climate target (see Box 3.2).

Box 3.1: The mechanics of production-adjusted baselines

Production-adjusted baselines are calculated each year using the following formula:

For all relevant production variables (or outputs):

$$\text{Facility baseline} = \sum (\text{Production} \times \text{Emissions Intensity})$$

Where the:

- **production variable** identifies the product of service being delivered, for example tonnes of alumina or passenger kilometres; and
- **emissions intensity value** specifies the emissions intensity of production, for example, emissions per tonne of alumina or emissions per passenger kilometre.

The Safeguard Mechanism started in 2016 with fixed baselines, which could be increased by significant expansions or allocated to new entrants based on their expected emissions. A range of other flexibility mechanisms were also included.

The Safeguard Mechanism is currently in the final stages of transitioning from fixed to production-adjusted baselines. Stakeholders have argued the benefits in retaining the new production-adjusted (intensity) framework are as follows.

First, baselines adjust to and do not penalise business output. This helps to meet the dual goals of reducing emissions and growing the economy. Decoupling emissions from economic growth will help businesses remain competitive and grow jobs as the world continues to decarbonise.

Second, intensity baselines have a lower impact on production costs and consumer prices. This is because each new unit produced is accompanied by additional baseline, covering some portion of the emissions from that production. Under a fixed approach, baselines are independent of production, so full scheme costs are factored into pricing decisions. This makes production-adjusted baselines well suited to sectors that have difficulty passing on costs, such as those with emissions-intensive, trade-exposed activities.

Box 3.2 Fixed (absolute) versus production-adjusted (intensity) baselines

Both fixed and production-adjusted baselines can be calibrated to meet any given climate target.

Fixed (absolute) baselines provide a simpler way of meeting climate outcomes (with the disadvantages described above), while production-adjusted (intensity) baselines can be calibrated to meet a target based on a forecast of economic growth. Design options to ensure the target is met include:

- Periodic assessments, with adjustments to baseline decline rates in response to higher or lower than expected economic growth; or
- Building a ‘reserve’ into decline rates, to accommodate higher than expected growth and new entrants.

In some circumstances, a production-adjusted framework can deliver a better emissions outcome than a fixed approach. If growth is unexpectedly low:

- fixed baselines could be met through lower production, reducing demand for abatement and potentially stalling efforts to reduce emissions and develop cleaner technologies;
- under a production-adjusted approach, aggregate baselines fall with output so incentives to reduce emissions will be maintained (assuming baseline decline rates are not re-calibrated). This would retain momentum in periods of low growth and could be expected to reduce the costs of meeting Australia’s longer term, net zero commitments.

Third, businesses cannot meet their baselines by reducing output. Instead, effort is tightly focussed on improving the emissions intensity of production, so there is a reduced risk of businesses moving production off-shore, resulting in carbon leakage. Under a fixed baseline framework, a facility could meet its baseline by reducing domestic production, with perverse outcomes for domestic output and employment.

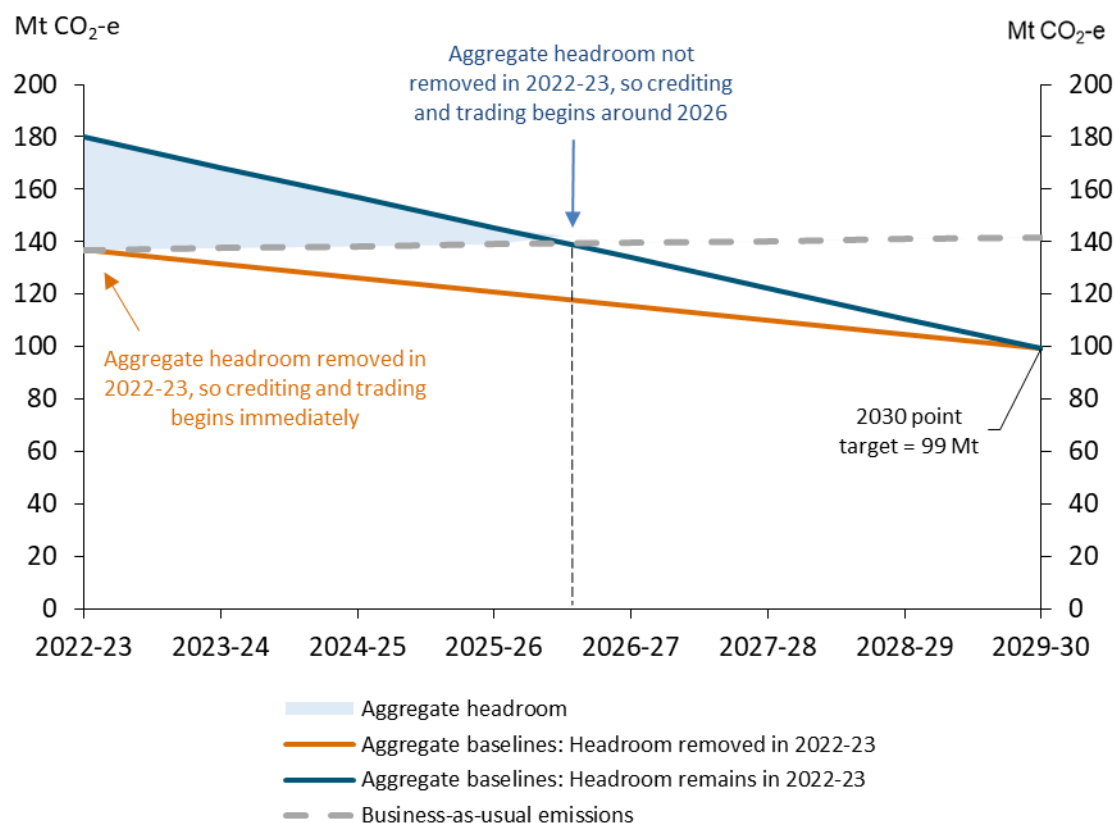
Should we retain, and build on, the existing production-adjusted (intensity) baseline setting framework or return to a fixed (absolute) approach?

3.2 Headroom and the need to remove it

Legacy baseline setting arrangements mean that, in aggregate, current baselines are well above emissions. In 2020-21, aggregate baselines were 180 Mt CO₂-e, compared with covered emissions of 137 Mt CO₂-e. This 43 Mt gap—referred to as ‘headroom’—is distributed unevenly across facilities, and has two consequences.

First, if headroom is retained, all facilities would face an artificially high baseline decline rate (see Figure 3.1). Facilities without headroom may consider the higher decline rate to be inequitable. Much of the headroom is a legacy of the initial allocation process, which fixed baselines at the high point of emissions over three years, and/or the significant optionality in baseline setting arrangements that followed.

Figure 3.1: Decline trajectory with and without headroom



Second, crediting and trading, which are important to help businesses manage their compliance costs, cannot commence until there is scarcity in the market—that is, aggregate baselines must be below aggregate emissions—or no abatement will occur. If current baselines (including headroom) are retained, crediting and trading could not commence until around 2026-27 (Figure 3.1—see the dashed line)⁵.

Views are sought on the proposal to reset baselines in a way that removes aggregate headroom so crediting and trading can commence when baselines start to decline. Options for setting baselines are considered in the next section.

3.3 Setting baselines for existing facilities

Over the past four years, during the transition to production-adjusted baselines, facilities could choose to use either site-specific or benchmark industry average emissions-intensity values in their baseline applications⁶. The previous Government set up the option to use site-specific values in baseline applications as a transitional arrangement, which expired in 2020-21. However, under the current rules, once a site-specific emissions intensity value has been used in a baseline, it can continue to be used by the facility into the future. From 1 July 2021, most new baseline applications

⁵ Assuming a uniform and linear baseline decline rate.

⁶ Benchmark industry average emissions intensity values are referred to as default emissions intensity values in the Safeguard Mechanism Rule.

must use industry average benchmark values⁷.

- **Industry average emissions-intensity benchmarks** are set by the Government and published in the Safeguard Mechanism Rule. They represent the industry average emissions intensity of production at Safeguard Mechanism facilities over five years.
- **Site-specific emissions-intensity values** are calculated by businesses and independently audited. They represent the emissions-intensity of production at an individual facility at a particular point in time.

This optionality in baseline setting arrangements is a key contributor to headroom. There are two main options for resetting baselines that would remove it:

- **Option 1: all baselines are set using benchmark (industry average) emissions-intensity values** – they hold all facilities making the same product to the same standard and make the least emissions-intensive producers relatively better off.
- **Option 2: all baselines are set using site-specific emissions-intensity values** – they approximate actual facility emissions levels—this is often referred to as ‘grandfathering’.

Both options could deliver Australia’s greenhouse gas emissions reduction targets; allow crediting and trading to commence immediately and give all facilities the same incentive to reduce their emissions. The main difference relates to how costs are distributed across facilities.

Option 1 holds all facilities making the same product to a common standard, and provides a relative advantage to low emissions producers. This encourages least emissions-intensive production helping to deliver Australia’s greenhouse gas emissions reduction targets at least cost to the economy. It rewards investment in low emissions resources or technologies, and past actions to reduce emissions. It places relatively high emission producers within each sector at an initial disadvantage relative to low emission competitors.

Under Option 2, all facilities initially receive the baseline they need to cover their emissions. The baselines may better reflect differences within industries related to the location and technologies of facilities. As baselines decline, all facilities would face costs and effort associated with reducing their emissions. However, Option 2 would not encourage production where it is least emissions-intensive because it would not automatically reward the least emissions-intensive producers—credits would be equally as likely to be created at highly emissions-intensive facilities as lower emissions-intensive facilities. Low emissions producers who have already invested in low emissions production and implemented their existing low cost abatement may find it relatively more difficult to reduce their emissions compared with their more emissions-intensive competitors.

Some businesses have raised a third option, where all facilities would initially retain their existing baselines, but they would be scaled to remove headroom in the first year. This option is considered in Box 3.3.

Option 1 may be more transparent—benchmark (industry average) emissions-intensity values are already published in the Safeguard Mechanism rule. Under option 2, facility-specific emissions-intensity values could be commercially sensitive and may not be able to be published in all cases, reducing the transparency of the baseline setting process.

⁷ The exception is facilities that are eligible to apply for a calculated baseline using the inherent emissions variability criteria until 1 July 2025. Inherent emissions variability is discussed in section 8.4.

Box 3.3: Removing headroom through uniform scaling

Some businesses have raised the option of retaining existing baselines, but scaling them so aggregate baselines equal aggregate emissions in the first year.

In its simplest form, the scaling would be similar to a uniform, once-off baseline decline in the first year. The decline rate would need to be substantial to eliminate the headroom—in the order of 15-20 percent assuming headroom falls to around 20-30 Mt in 2022-23 as facilities progressively move to new production-adjusted baselines.

This would benefit the most emissions-intensive businesses, at the expense of facilities whose emissions intensity is close to, or below, industry average. Many of these average or good performers would receive baselines that are well below their actual emissions.

Alternative models could use a more targeted approach, for example calibrating the reduction to the level of headroom at a facility level. Noting an average decline rate of 15-20 percent is needed, a more targeted approach would lower the reduction for some, leading to a bigger reduction for others. If headroom is assessed at the industry levels, individual facilities could face highly concentrated impacts.

Baseline setting costs for businesses are higher under Option 2. The least emissions-intensive facilities (those performing better than industry average) would need to calculate their site-specific emissions-intensity values, and these calculations are currently audited before being submitted in a baseline application. Under Option 1, baselines for the high emitters would be reset using published emissions-intensity values.

Consideration could also be given to other approaches, including hybrid approaches, such as baselines with a proportion of site specific and industry average intensities, although such options could add to complexity and transaction costs. Such options would also need to address the aggregate headroom in the scheme, rather than allowing facilities to choose the approach most advantageous to their interests.

What is the preferred approach for setting baselines for existing facilities? Approaches may include:

- Option 1, which would see all baselines set using industry-average benchmark values.
- Option 2, which would see all baselines set using facility-specific emissions-intensity values.
- Other proposals, noting there are many possible approaches.

3.4 Setting baselines for new facilities

Under both the existing Safeguard Mechanism and the Government's reforms, new entrants are defined as facilities that first trigger the Safeguard Mechanism threshold of 100,000 tonnes CO₂-e after 1 July 2021⁸. Under current arrangements, new entrant baselines will be set using emissions-intensity benchmarks—though the level of these benchmarks has not been set. Consultation and public discussion has focussed on two main options:

⁸ Section 33 of the Safeguard Rule establishes that a new facility is one that, among other things, was not required to report its emissions under NGERs for any 5 or more years before the year it became covered by the Safeguard.

- **best practice:** calculated as the average emissions intensity of the top 10 percent of Australian industry performance; or
- **industry average:** consistent with the current framework for existing facilities from 1 July 2021.

Both options would be subject to an annual decline rate, consistent with baselines for existing facilities. Other options have also been publicly canvassed by some stakeholders.

The policy will apply to production that occurs at an entirely new Safeguard facility, but not to the expansion of production at existing Safeguard facilities. This introduces the potential for competitive imbalances between ‘greenfield’ and ‘brownfield’ developments if different rules apply. While not the only factor, a decision on new facility baselines should consider the approach for existing facilities with the aim of minimising this imbalance.

A best practice approach recognises that new facilities have the opportunity to use the latest technology and build best practice emissions performance into their design. The best practice approach for new facilities is more suited to Option 2 for setting baselines for existing facilities (see section 3.3).

An industry average approach may be simpler and assist in avoiding market imbalances between ‘greenfield’ and ‘brownfield’ projects if baselines for existing facilities are also set using declining industry average benchmark values (Option 1 in section 3.3 above). All facilities would be treated equally, and new facilities would have an incentive to perform better than the declining industry average emissions intensity for their sector due to the credits available for such performance.

There would be a number of challenges in using a site specific intensity for new entrants. For example, this could create incentives to design facilities with higher emissions-intensities and then reduce those emissions and benefit under the mechanism.

What are the advantages of best practice, industry average benchmarks, or alternative approaches for baselines for new entrants, noting that a final decision will be informed by baseline setting arrangements for existing facilities?

4 Crediting and trading, domestic offsets and international units

4.1 Crediting and trading

The Safeguard Mechanism already includes a range of flexible compliance options to help businesses meet their compliance obligations. Notably, Safeguard participants can currently surrender carbon offsets, Australian Carbon Credit Units (ACCUs), as an alternative to reducing their on-site emissions. This feature is intended to continue under the reformed scheme.

Removing ‘headroom’ and declining baselines will allow the Safeguard Mechanism to unlock an additional source of flexibility by allowing facilities to generate tradable credits specific to the Mechanism when their emissions fall below their baseline. By introducing crediting and trading, facilities with relatively low cost abatement can sell credits to facilities whose abatement options are more costly or limited. Crediting and trading will help businesses to manage compliance costs as baselines decline.

It is proposed that the Clean Energy Regulator will automatically issue Safeguard Mechanism Credits (SMCs) to facilities with emissions below their Safeguard Mechanism baseline⁹. Those credits can be sold to other Safeguard Mechanism facilities and surrendered to meet compliance obligations, but cannot be used outside the Safeguard Mechanism.

This is a relatively simple approach to crediting that avoids the administrative costs of project-based offsets (see Box 4.1). Further, the Government does not need to identify which facilities have access to the low cost abatement opportunities as this will be left to the market.

Box 4.1: Nature of crediting

Under the reformed Safeguard Mechanism, Safeguard Mechanism Credits (SMCs) will not be carbon “offsets”, because they are generated within a regulated emissions limit. The integrity of SMCs arises from the regulated emissions limit, which constrains the overall emissions of Safeguard participants. Aggregate baselines form the limit—they can be calibrated to meet the desired contribution to the 2030 target.

This means that, unlike ACCUs—which are offsets—SMCs will not need to be 'additional' as defined under the *Carbon Credits (Carbon Farming Initiative) Act*.

The presence of the limit ensures that, in aggregate, Safeguard entities stay within their overall emissions budget. If one facility emits less than their baseline, they can sell a credit to another facility that emits more than its baseline. It is not necessary to know how or why a facility has reduced their emissions, or what business-as-usual emissions hypothetically would have looked like.

This is a key benefit of the Safeguard Mechanism compared with an offsets scheme. It has lower administrative costs and risks—because there is no need to assess the ‘additionality’ of abatement at the project level.

To ensure covered facilities retain an incentive to reduce emissions when they are operating close to the coverage threshold, it could be desirable for facilities to continue to be able to receive SMCs when their annual emissions fall below 100,000 tonnes. This could be achieved by allowing these facilities to report relevant information through the National Greenhouse and Energy Reporting Scheme (NGERS) to enable them to be credited.

Legislation to give effect to crediting and trading will be required. It is envisaged that crediting and trading could commence on 1 July 2023 with other Safeguard reforms, subject to passage of legislative amendments through the Parliament and decisions made on other design elements, such as baseline setting and the removal of headroom.

Are there any other issues to consider with the proposal to allow the Clean Energy Regulator to automatically issue tradable credits to Safeguard facilities whose emissions are below their baseline, with crediting and trading commencing on 1 July 2023 subject to baseline setting arrangements that remove aggregate headroom?

⁹ That is, their Safeguard Mechanism compliance baseline. A separate baseline would not be needed for crediting purposes.

Inter-temporal flexibility

Climate impacts are linked to cumulative greenhouse gas concentrations rather than emissions in any particular year. This means facilities can have some flexibility (within reason) around the timing of their abatement activities without jeopardising environmental outcomes. Providing flexibility around when emissions reductions take place (inter-temporal flexibility) can help facilities manage costs, especially those with abatement technology that is ‘lumpy’.

The Safeguard Mechanism currently provides inter-temporal flexibility through multi-year monitoring periods (MYMPs), which allow facilities to exceed their baseline in one year, so long as average emissions over 2 or 3 years remain at or below the facility’s average baseline for that period.

An alternative to multi-year monitoring periods could be to provide inter-temporal flexibility through:

- **banking**: where SMCs created in the current year can be used for compliance in future years; and
- **borrowing**: where a facility’s liability is reduced in a particular year, but increases by a corresponding amount in a future year.

Full banking of SMCs could be provided within phases:

- Phase 1 (2023-24 and 2024-25) operates for two years.
- Phase 2 (2025-26 to 2029-30) operates for five years.

Phase 1 represents a transitional period when Government can work with participants to smooth out operational issues. Depending on how baseline declines are calibrated, some headroom may remain under either of the possible baseline setting approaches. This means abatement (and the SMC price) in phase 1 could be low. Restricting banking between phases so credits cannot be carried over from phase 1 to phase 2 could manage this issue, but could lead to price volatility at the end of phase 1.

Borrowing could be implemented by allowing a Safeguard facility to increase their baseline in a particular year but decrease it in the following year. To manage risks to the 2030 emissions target, the baseline increase would need to be limited—for example, the adjusted baseline could be no more than 5 per cent higher than its previous level—and borrowing beyond 2030 would not be allowed. An ongoing role for MYMPs is discussed further in section 6.

Should banking and borrowing arrangements be implemented for Safeguard Mechanism Credits?

4.2 Offsets

Australia has a mature and liquid carbon market. To date, the Government has been the primary purchaser of offsets, but declining baselines will make Safeguard Mechanism facilities a significant source of demand. The aggregate abatement task is estimated to be around 170 million tonnes to 2030. The portion of this amount that comes from ACCUs will depend on their relative price compared with the cost of on-site abatement at Safeguard facilities.

Recent pilot changes to Emissions Reduction Fund (ERF) contract arrangements have allowed businesses to pay exit fees during specified delivery windows rather than deliver ACCUs to the Government. This has helped ACCU supply, but may mean that some ACCUs purchased by Safeguard

facilities could otherwise have been delivered to the Government under contract. We will further consider these arrangements in light of the Safeguard Mechanism design and the Chubb Review of ACCUs.

We are confident the market for ACCUs can respond to additional demand from Safeguard facilities at reasonable prices and, combined with other design features in this paper, there may not be a need at this stage for further price stability measures. To enhance transparency in the market, the Australian National Registry of Emissions Units Act could be amended to require the publication of unit holding for ACCUs, as previously recommended by the Climate Change Authority and agreed to by the previous Government.

There are strong reasons to retain the flexibility for Safeguard facilities to use ACCUs to meet their compliance obligations. This is expected to provide incentives for new offsets projects to be registered and, over time, replace the need for support from Government contracting.

However, there would be concerns if Safeguard Mechanism facilities could continue to register projects and generate ACCUs from projects that reduce their direct emissions, as this would amount to double counting. The declining baseline framework means that emission reductions at Safeguard facilities might no longer be considered additional—overall emissions are constrained, so the emissions reductions would have occurred anyway (whether at that particular facility, or elsewhere in the economy). Instead, facilities that beat their baseline could generate SMCs, which can be sold to other Safeguard facilities, retaining the incentive for facilities to cut emissions below baselines.

It is proposed that Safeguard Mechanism facilities with existing projects could continue to generate ACCUs, but no new projects would be registered. Existing double counting provisions would be retained, so any ACCUs generated from existing projects would be added back onto the facility's net emissions number¹⁰. This would prevent double counting of ACCUs and prevent Safeguard facilities with registered ERF projects from generating both ACCUs and SMCs.

As raised previously by the Climate Change Authority, consideration needs to be given to whether 'deemed surrender' provisions for ERF contracts at Safeguard facilities should be retained¹¹. The deemed surrender provisions only apply to ACCUs that are sold back to the Government under contract. They allow a facility to reduce their emissions—helping to meet their Safeguard compliance obligations—and generate and sell the resulting ACCUs to the Government. Reconsideration of the deemed surrender provisions is appropriate given an equivalent financial incentive is now provided by declining baselines. Two options could be considered for the treatment of deemed surrender:

- Removing deemed surrender provisions for existing ERF contracts held by Safeguard facilities, and facilities that become covered by the Safeguard Mechanism, and establishing no new deemed surrender arrangements; or

¹⁰ Double counting provisions mean that, in any year that a Safeguard facility creates ACCUs from an ERF project, the volume of ACCUs will be added onto the facility's net emissions number.

¹¹ Deemed surrender provisions mean that, if a Safeguard Mechanism facility creates ACCUs from an ERF project and sells them back to the Government under contract, the volume of ACCUs sold will be subtracted from the facility's net emissions number. This was considered in the Climate Change Authority's review of the NGER Act.

- Continuing existing deemed surrender arrangements for facilities with an ERF contract, for the duration of their existing contract (a grandfathering approach). Deemed surrender would not be available under any new ERF contracts entered into after the release of this consultation paper. The approach would be implemented through primary Act and subordinate legislative changes.

In theory, Safeguard Mechanism facilities could continue to generate ACCUs for reducing their electricity use, as indirect (or scope 2) emissions from electricity use are not covered by the Safeguard Mechanism. We would welcome views on whether Safeguard facilities could continue to participate in scope 2 ERF projects.

Should Safeguard facilities no longer be able to generate ACCUs for reducing direct (scope 1) emissions unless they have an existing registered ERF project? Further, should no new ERF projects be able to be registered at Safeguard facilities? Additional feedback is sought on:

- allowing existing ERF projects at Safeguard facilities to continue to generate credits and retaining double counting provisions to prevent a facility from generating ACCUs and SMCs;
- options for the treatment of deemed surrender;
- continuing to allow Safeguard facilities to participate in ERF projects that reduce emissions from electricity use (scope 2) emissions; and
- mechanisms to promote the transparency of the ACCU market, such as publishing unit holdings, to assist with market decision making, supply and cost effectiveness.

4.3 International offsets

The Government's *Powering Australia* policy is focused on reducing Australia's domestic greenhouse gas emissions, delivering jobs and enhancing Australia's international competitiveness as the world moves to net zero emissions. The Safeguard Mechanism is expected to drive transformation of the sectors covered by the policy. Allowing the use of Australian carbon credit units supports domestic emission reductions in sectors beyond the Safeguard policy.

We acknowledge that some stakeholders see international offsets as another opportunity for lowering or limiting the costs to Australian businesses of meeting Australia's climate targets.

However, we would only consider international offsets in the Safeguard Mechanism if the units are of high integrity and the mitigation outcome can be formally transferred to count towards Australia's Paris Agreement commitments. Limits on the use of such international offsets may also be appropriate, so they do not become a mechanism to avoid transforming our domestic economy.

The NGER Act allows for the possibility of using international offsets, but focuses on Kyoto units and is now outdated. These Kyoto units are generally not relevant to our Paris Agreement Commitments and the Paris Agreement rule book agreed in Glasgow. If international offsets are to be relevant to the Safeguard Mechanism, the NGER Act would need to be amended to ensure that only units that contribute to our Paris Agreement targets and meet relevant accounting rules could be included in the scheme.

The details of the rules and accounting issues for cross-border transfers are still being developed. The market for international offsets is also still developing and will be different to other international units currently used in voluntary carbon markets. The Government is also working with our neighbours on developing regional carbon markets through the Indo-Pacific Carbon Offsets Scheme.

Given the state of market development and focus on domestic benefits, both for Safeguard facilities and the Australian carbon market, international offsets are not proposed to be part of the initial enhanced Safeguard Mechanism. However, there may be benefit in amending Safeguard legislation before the revised scheme commences to allow for the possibility that relevant and high integrity international units could be used for compliance purposes at some point in the future.

Should international units be able to be used for compliance under the Safeguard Mechanism at a future time, noting that any decision would depend on the rules for international trading?

5 Tailored treatment for emissions-intensive, trade-exposed businesses

The Government is considering the most appropriate options for tailored treatment for emissions-intensive, trade-exposed (EITEs) industries. This will be based on the principle of comparative impact—ensuring Australian businesses are not competitively disadvantaged relative to international competitors, and that emissions do not ‘leak’ overseas. This is considered in the context of an increasingly decarbonised world, where competitiveness will increasingly depend on being a low emissions producer.

This section considers how EITEs activities will be defined (section 5.1) and explores possible forms of tailored treatment (section 5.2).

5.1 Defining emissions-intensive, trade-exposed facilities

The phrase EITEs comprises two distinct concepts: emissions-intensity *and* trade-exposure—a facility can be emissions-intensive but not trade-exposed and vice versa.

There is an established methodology for defining EITEs used for the Renewable Energy Target (RET). A published list of activities that are both emissions-intensive and trade-exposed is used to provide concessional treatment. It combines:

- **Trade exposure:** assessed as a trade share¹² greater than 10 per cent or a demonstrated lack of capacity to pass through costs due to the potential for international competition.
- **Emissions-intensity:** assessed at the industry level to determine the relative impact of costs on a facility’s operations (measured relative to profits or value add).

A similar approach could be considered for the Safeguard Mechanism. This would have the benefit of being relatively simple and using an established process. The list of EITEs activities would need to be adjusted to remove electricity (scope 2) emissions, which are covered under the RET, but not the Safeguard Mechanism.

However, emissions-intensity *at the industry level* may not be a good indicator of cost impacts at the facility level under the Safeguard Mechanism. Compliance costs vary across facilities, reflecting their individual performance, relative to their individual baselines. Further, not all facilities will face compliance costs—some will generate revenue through the sale of credits. In contrast, costs under the RET are distributed uniformly across facilities in proportion to their emissions.

¹² Ratio of value of imports and exports to value of domestic production.

A comparative impact assessment that targets estimated cost impacts could be implemented *at the facility level*. It could build on the established process by adapting the RET tests as follows:

- **Trade exposure:** the trade exposure assessment would not change. Most Safeguard Mechanism activities would likely satisfy these tests, particularly tradable commodities. The exception would be domestic services.
- **Emissions-intensity:** a similar test could apply, but would relate to cost intensity—that is cost per unit of revenue or value added at the facility level—rather than emissions.
 - For example, a threshold where costs exceed a certain percent of revenue could be used.

In calculating a facility's costs, it would be important to avoid creating an incentive to *increase* emissions intensity in order to qualify as emissions-intensive. Historical emissions intensity could be used to set a ceiling to what can be used within the scheme moving forward. The prevailing ACCU cost could be used as a proxy for compliance costs, noting they could be lower if a facility has cheaper on-site abatement options.

Due to the dynamic nature of revenue, costs and facility baselines, any designation of a facility as being eligible for tailored treatment would need to be time-limited with that designation reviewed periodically. Conversely, facilities that hadn't previously met the criteria could apply for tailored treatment, if circumstances change.

Should a facility-specific comparative impact assessment that builds on existing EITEs definitions be used rather than a sector wide designation?

Carbon costs of competing international businesses

Eligibility for EITEs assistance could also consider whether global competitors face similar carbon costs—the rationale for providing concessional treatment dissipates if they do. However, this assessment is likely to be complex as competition will come from a range of countries with different forms of carbon constraints. At this time, it is not proposed to integrate this element into scheme design, but this could be reassessed in the future.

5.2 Assistance measures for emissions-intensive, trade-exposed facilities

The following is a non-exhaustive list of potential tailored treatments. Each may be more or less appropriate depending on other decisions on the broader scheme design, in particular it will depend on how baselines are set.

Low emissions technology funding

One approach is to financially assist facilities to reduce emissions and meet their obligations, rather than providing concessions within the Safeguard system (such as providing less stringent baseline decline rates) that would make achieving the overall abatement task and national emission targets more difficult.

Potential assistance includes grants from the new Powering the Regions Fund (see Box 5.1) and finance from the National Reconstruction Fund. Arrangements specifically tailored to allow Safeguard facilities to adapt to declining baselines could be considered in the context of these funding arrangements.

Box 5.1: Powering the Regions Fund

The Government acknowledges that while the private sector must take the lead in funding industry transition, there are some heavy industry sectors where the technologies required to decarbonise are not yet commercially available or viable.

The Powering the Regions Fund will help covered facilities meet their new baselines, and assist with the deployment of low-emissions technology across industry more broadly.

The Powering the Regions Fund has four priorities, including supporting industry with its decarbonisation priorities, the development of new clean energy industries, workforce development, and continuing to purchase ACCUs on behalf of the Commonwealth. The Government anticipates industry decarbonisation priorities may include energy efficiency improvements and fuel switching (e.g. hydrogen or electrification).

Safeguard facilities may also be able to access support through existing sources of funding or finance such as the Australian Renewable Energy Agency (ARENA), the Clean Energy Finance Corporation (CEFC), Export Finance Australia or the Northern Australia Infrastructure Facility (NAIF).

All sources of funding or financing facilities would need to meet the requirements of that particular facility (including competitive processes for grant funding).

Would additional funding opportunities effectively assist EITE facilities to adapt to declining Safeguard baselines?

What kinds of funding, finance or other arrangements and measures would best support EITE Safeguard facilities to reduce their emissions?

In particular, what potential design features of the Powering the Regions Fund would support covered facilities with their decarbonisation priorities?

Direct provision of Safeguard Mechanism Credits to emissions-intensive, trade-exposed facilities

Another way to assist EITE facilities is to provide direct assistance with the cost of meeting their liability. This could take a number of forms; this section examines the direct provision of Safeguard Mechanism Credits (SMCs) that would be used to acquit against a facility's Safeguard liability.

To ensure that the direct provision of SMCs does not undermine abatement achieved by the scheme, the SMCs could be obtained by the Government through a mechanism that reserves a percentage of all SMCs credited under the scheme in a Government holding account. This would have the effect of slightly reducing the number of credits that would be received by facilities under their baselines.

To ensure the provision of SMCs does not undermine the incentive for EITE facilities to reduce their emissions:

- Provision of SMCs should not make impacted facilities better off than facilities that do not qualify. This means provision of SMCs should only bring a facility's costs down to the threshold that designates them as significantly impacted.

- Credits could be provided for a percentage of the costs that exceed the concessional treatment threshold. This ensures facilities still have an incentive to improve their emissions intensity, but the costs associated with declining baselines would be reduced.

If this option was pursued, care would need to be taken in the design to ensure sufficient SMCs were obtained to meet the credits provided.

Is the direct provision of SMCs an appropriate way to mitigate cost impacts for EITE facilities?

Differentiated baseline decline rates

Differentiated decline rates for EITE facilities could be considered to directly reduce the impacts of declining baselines. It may be more relevant if baselines are initially set to site-specific emissions-intensity values where initial baseline exceedances are lower and costs are then largely determined by baseline decline rates.

Differentiated baseline decline rates could reduce environmental effectiveness (if slower decline rates for EITEs leads to a slower aggregate emission reduction), or reduce fairness (if slower decline rates for EITEs results in faster decline rates for others, while holding total abatement fixed).

Are differential decline rates an appropriate way to reduce the impact on EITE facilities?

How could differential decline rates be structured so that emissions reduction and fairness outcomes are maintained?

6 Taking account of available and emerging technologies

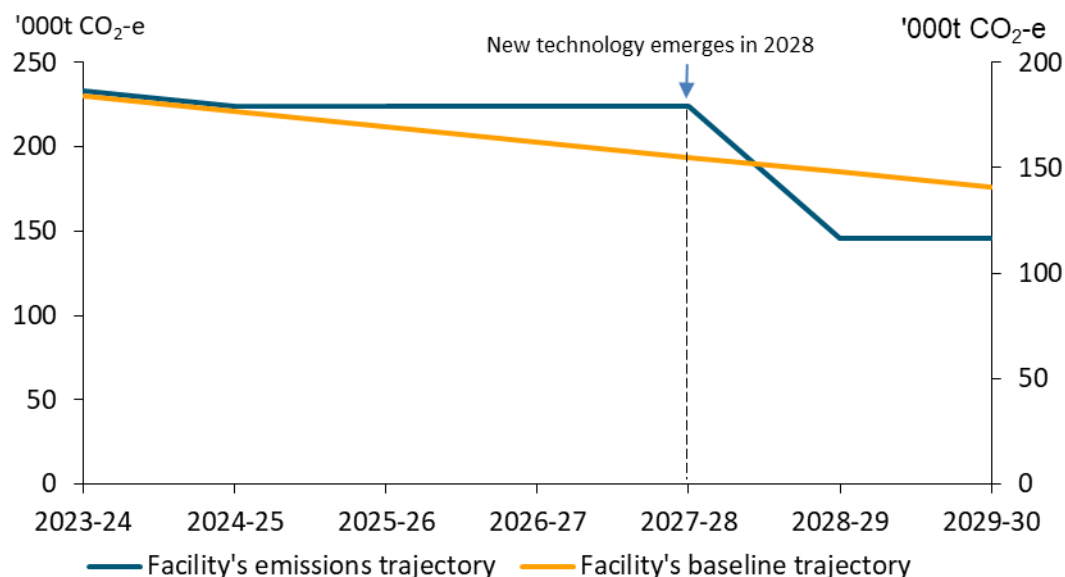
The Government understands that some facilities may face delays in accessing cost effective abatement technologies. Multi-year monitoring periods (MYMPs) are a feature of the current Safeguard Mechanism and provide facilities with time to implement emissions reduction projects, acquire ACCUs, or average out peaks and troughs in emissions. These are currently available over two or three year periods.

Inter-temporal flexibility may become more important when baselines decline. For example, a number of industries are pointing to technologies that may become commercial in the near to medium term, and emissions reducing projects that take a number of years to design and commission.

Section 4 seeks feedback on other inter-temporal flexibility arrangements, such as banking and borrowing of SMCs. MYMPs potentially result in risks to achieving the 2030 target because the current arrangements could result in a significant number of facilities delaying reductions in their net emissions until after 2030.

As such, it is proposed that access to MYMPs would be reduced so that they are only available in certain circumstances. Some facilities would still be able to access MYMPs, and the period for which a facility could apply for a MYMP could be extended—potentially up to five years—but only where a facility reasonably anticipates that it will be able to reduce its emissions within this period (see Figure 6.1).

Figure 6.1: Extended multi-year monitoring to accommodate emerging technologies



Extended MYMP arrangements could be established on application on a facility-by-facility basis, and be based on an assessment of available and emerging technologies in a sector or at a facility. The extension of the MYMP mechanism is consistent with the Government's commitment to recognise available and emerging technologies in each sector without compromising the abatement task of the revised Safeguard Mechanism. It would give facilities the flexibility to determine a baseline trajectory within the multi-year compliance period that matches available and emerging technologies.

It is important to note that the Safeguard Mechanism does not require a facility to reduce its own emissions to meet its baseline. Facilities can use ACCUs and SMCs to reduce their net emissions, so abatement can occur where it is cheapest. In the context of an MYMP, this means a facility where a technology does not emerge as anticipated, would still be able to purchase certificates to reduce its net emissions. However, there are risks to allowing facilities to defer action, including to Australia's targets if pre-2030 action can be deferred until after 2030. As such, it is proposed that MYMP could not extend beyond 2030.

Should multi-year monitoring periods be extended to allow facilities with limited near-term abatement opportunities to manage their own abatement path?

7 Indicative baseline decline rates

Understanding baseline decline rates will help businesses assess the costs and impacts of Safeguard Mechanism reforms. While final decline rates cannot be settled until other policy settings have been finalised, indicative decline rates are expected to be between 3.5 and 6 percent each year. This range reflects design options and other factors, including:

- fixed (absolute) or production-adjusted (intensity) framework:** emissions covered by the Safeguard Mechanism are expected to grow by around 0.5 per cent each year to 2030, so decline rates are slightly higher under a production-adjusted framework. This emissions growth forecast is also a key determinant in the baseline decline rate—higher expected growth would result in a steeper decline.

- **presence of a reserve:** for a production-adjusted framework, a ‘reserve’ could be used to accommodate higher than expected growth and new entrants (discussed in Box 3.2). This would mean baseline decline rates would be slightly higher, but they would not need to be reviewed or adjusted in the period to 2030.
- **the starting point:** how baselines are set will determine the starting point for baseline decline. Decline rates will be higher if headroom remains.
- **linear decline or a ‘soft start’:** decline rates could be lower in phase 1 to ease the transition. This would result in higher decline rates in phase 2 to achieve the 2030 target.
- **treatment of emissions-intensive, trade-exposed activities:** slower decline rates for particular facilities or activities, such as EITEs, would require faster decline rates for other facilities, to deliver the same overall emissions reductions.

Post-2030 decline rates could be set in 5 year blocks, with the process for setting them aligned with updates to Australia’s Nationally Determined Contribution (NDC) under the Paris Agreement. For example, decline rates for 2030 to 2035 could be the subject of consultation in 2026 following Australia’s NDC update in 2025.

What are the appropriate characteristics for the decline trajectory to 2030 that can deliver the Safeguard Mechanism’s share of Australia’s climate targets, and the process for setting baselines post-2030?

8 Other policy issues

The above sections set out a high level framework for reforming the Safeguard Mechanism, focussing on arrangements that apply universally to all facilities. However, legacy baseline setting arrangements mean there are a number of bespoke arrangements that apply to a subset of facilities. This section considers the appropriate treatment of these arrangements.

8.1 Treatment of site-specific production variables

Section 3 sets out the option to retain the production-adjusted baseline setting framework. This section discusses treatment of baselines that are fixed because they use site-specific production variables. Note, this section relates to production variables, not emissions-intensity values.

During the transition to the production-adjusted framework, facilities could choose to use either site-specific or Government-defined production variables (outputs) when having their baseline set by the Clean Energy Regulator. Government-defined production variables are published in Schedule 2 of the Safeguard Mechanism rule.

- Baselines set using Government-defined outputs adjust each year for production.
- Baselines set using site-specific outputs remain fixed.
- Facilities can also use a mix. In these cases, the Government-defined component of the baseline is annually adjusted, while the site-specific component remains fixed.

Should all facilities use Government-defined production variables and have production-adjusted baselines, this would ensure a level playing field when baselines begin to decline. The use of annually-adjusting site-specific production variables, which can be based on inputs and not outputs

at a facility, risks creating an incentive for facilities to increase the use of inputs instead of improving the emissions intensity of production of their final outputs. It can also mean the full range of abatement opportunities across the production process at a facility is not incentivised, and could weaken the incentive for production of outputs from facilities to occur where it is most emissions efficient.

If Government-defined production variables are used, all facilities would report their production and emissions against common outputs, ensuring a consistent and transparent framework. This will become increasingly important to the credibility and integrity of the scheme moving forward. It would also simplify the legislative framework by removing the need for baseline setting rules where there is both a fixed and production-adjusting component. Only a handful of facilities currently use a mix.

There is merit in the principle that baselines should only be annually production-adjusted if they use Government-defined production variables listed in Schedule 2 of the Safeguard Mechanism Rule, and their use could be made mandatory from phase 1 or 2.

We would be interested to hear from businesses using bespoke production variables to understand whether there are circumstances where they should be retained temporarily as a transitional measure. It may, for example, be possible to allow businesses to continue to use them in phase 1 (2023-24 to 2024-25), though those facilities could not generate Safeguard Mechanism Credits.

What transitional or other arrangements should be in place for site-specific production variables, including:

- whether the use of Government-defined production variables (prescribed in Schedule 2 of the Safeguard Mechanism Rule) should be mandatory from the start of Phase 1;
- whether transitional arrangements for facilities using bespoke, site specific production variables should be considered for phase 1; and
- the proposal that only Schedule 2 production variables could generate Safeguard Mechanism Credits (SMCs)?

8.2 Treatment of fixed (schedule 3) production variables

The Safeguard Mechanism accommodates the very limited circumstances where an appropriate output production variable cannot be defined. In these cases, a proxy—such as an input—is used and published in Schedule 3 of the Safeguard Mechanism Rule. Schedule 3 production variables do not adjust annually with production.

To date, only oil refineries have Schedule 3 production variables. Multiple outputs and a complex refining process make apportioning emissions at oil refineries difficult, so they use a single input—petroleum feedstock—and their baselines are fixed.

There are two options for oil refineries moving forward:

- **move to Schedule 2:** their baselines would adjust annually for production and they could generate SMCs; or
- **remain in Schedule 3:** their baselines would remain fixed and they could not generate SMCs.

Under both options oil refineries will be subject to the same decline rate as other facilities.

Ideally input-based production variables should not be able to adjust annually for production, because they dilute the incentive for low emissions production. However, the risks to the overall efficiency of the scheme are low—almost all production variables have been made and oil refining is the only production variable that is based on an input.

In addition, making all production variables ‘production adjusted’ could provide an opportunity to simplify baseline setting arrangements under the Safeguard Rule, which currently provides for the possibility of fixed, production-adjusted and mixed baselines. Having to accommodate three different possibilities significantly adds to scheme complexity.

Remaining in Schedule 3 is also a viable option. There would be a small reduction in scheme efficiency because oil refineries could not generate SMCs, so would not have an incentive to reduce their emissions below their baseline.

Should oil refinery production variables:

- remain fixed (in Schedule 3) and not generate SMCs; or
- become production-adjusted (move to Schedule 2) and be eligible to generate SMCs?

Under either approach, oil refinery baselines would decline at the same rate as other facilities.

8.3 Role of Government-defined production variables

Government-defined production variables are well suited for baselines that adjust annually with production. However, they were developed when the Safeguard Mechanism was not used to reduce emissions at least cost.

Production variables should ideally be based on outputs to ensure the Safeguard Mechanism is incentivising production to occur in an emissions efficient way that is consistent with national targets. For the Safeguard Mechanism to reduce emissions at least cost, production variables that are not based on outputs would be less appropriate. If production variables are not output based, situations could arise where facilities with higher emissions per unit of output are at a competitive advantage compared to facilities with lower emissions per unit of output. Furthermore, incentives could be less effective at encouraging reductions in emissions per unit of output.

As such, it could be appropriate for some definitions of Government-defined production variables to be revisited so that they are more suitable for driving least cost emissions reductions and crediting. Consultation on these production variables could also ensure that they are suitable for facilities that currently use site-specific production variables.

In order to provide time to consult on any changes to Government-defined production variables and for businesses to adjust to any changes, it is proposed that these production variables remain the same during Phase 1, and any changes are implemented in Phase 2.

Are existing Government-defined production variables suitable for the Safeguard Mechanism to drive least cost emissions reductions?

8.4 Inherent emissions variability

The Safeguard Mechanism was originally designed to set baselines to keep pace with business-as-usual emissions. To achieve this, mining, oil and gas facilities could reset their site-specific emissions-intensity value once before 1 July 2025 using an ‘inherent emissions variability’ calculated baseline application.

This recognised that the emissions-intensity of mining, oil and gas operations could increase as a result of the natural variability of the resource, for example, when an oil and gas reservoir loses pressure over time and more compression is needed to move the natural gas through a pipeline.

The objective of the Safeguard Mechanism has changed. Baselines are no longer designed to track business-as-usual emissions. Instead, the Safeguard Mechanism aims to deliver on Australia’s climate goals at lowest cost and maintain international competitiveness by encouraging businesses to decrease emissions over time. Increasing emissions-intensity values to accommodate high emissions production would run counter to these goals. As such, the Government seeks views on removing the option for mining, oil and gas facilities to reset their site-specific emissions-intensity value.

Should the inherent emissions variability calculated baseline approach be removed?

8.5 Landfills

Landfills are currently covered by the Safeguard Mechanism but they have different coverage and baseline setting arrangements to other facilities. This is because landfills do not produce a clear output; instead they generate emissions from the receipt of waste. Further, landfills generate methane emissions as waste breaks down over time, so waste received now results in emissions being generated in later compliance periods (and emissions generated now arise from waste deposited in the past).

To avoid the retrospective application of compliance obligations on activities that were undertaken before the Safeguard Mechanism commenced, only emissions from waste deposited after scheme commencement on 1 July 2016 (known as non-legacy waste emissions) are counted under the scheme. So far (up to 2020-21) only one landfill has been covered by the scheme. A small number of additional landfills are expected to be covered over the coming years as their non-legacy waste emissions reach 100,000 t CO₂-e.

The calculation of landfill baselines is based on the emissions of non-legacy landfill gas before any of the landfill gas is captured, and on a ‘capture efficiency rate’ that is set at 37.2 per cent. Landfills currently will not exceed their baseline if they capture more than 37.2 of the landfill gas generated at the landfill. Most large landfills capture much more than 37.2 per cent of landfill gas generated, with many capturing over 70 per cent.

In contrast to other industrial sectors covered by the Safeguard Mechanism, many landfills have established ERF projects. As of August 2022, there are around 80 ERF projects that reduce emissions by capturing landfill gas.

Safeguard crediting may not be suitable for landfills because it does not cover legacy emissions. As such, one option is that landfills not generate Safeguard Mechanism Credits during phase 1. Long term arrangements for landfills covered by the Safeguard Mechanism could be considered prior to phase 2. This would provide time to consult with the sector and take account of any lessons learned from landfills that begin to be covered by the Safeguard Mechanism. In the meantime, existing ERF

projects could be able to continue at Safeguard facilities, as per the proposed arrangements for ERF projects at Safeguard facilities in other sectors.

To prevent the abatement from ERF projects at Safeguard facilities from being counted twice, subparagraph 22XK (4) of the NGER Act adds ACCUs issued in relation to the ERF project back on to the net emissions of the facility. The current operation of this provision could result in too many ACCUs being added back on, because some of these ACCUs would be associated with legacy waste emissions not covered by the Safeguard. To address this, this provision could be amended so that the Safeguard Rule can adjust the amount of abatement added back on to the net emissions of Safeguard facilities.

How should landfills be treated, including:

- should landfill baselines decline at the same rate as other facilities;
- should landfills be able to generate SMCs in phase 1; and
- should long-term arrangements for landfills be considered prior to phase 2?

9 Glossary and acronyms

Australian carbon credit unit (ACCU) - A unit that represents one tonne of carbon dioxide equivalent (t CO₂-e) stored or avoided by an Emissions Reduction Fund (ERF) project.

ARENA - The Australian Renewable Energy Agency

Calculated baseline - A type of fixed Safeguard baseline that is calculated by the sum of 'production' multiplied by the 'emissions-intensity of production' for each relevant production variable nominated by the facility. It can be calculated using either prescribed production variables and default emissions intensities or facility-specific production variables and estimated emissions intensity values, or a combination.

Carbon dioxide equivalent (CO₂-e) - A standard unit of emissions used to compare the emissions from different greenhouse gases on the basis of their global warming potential.

CEFC - Clean Energy Finance Corporation

Domestic offset – Refers to an Australian carbon credit unit.

EITE – Emissions-intensive, trade-exposed

Emissions Reduction Fund (ERF) - Refers to a set of mechanisms designed to help Australia reduce its emissions. The ERF credits abatement delivered through projects undertaken in accordance with approved abatement calculation methods.

Headroom - The gap between baseline values and lower reported emissions. The term can be used both at a facility level and at an aggregated level.

Multi-year monitoring period - Safeguard facilities that exceed their baseline can apply for a multi-year monitoring period. Under a multi-year monitoring period, a facility can exceed its baseline in one year, so long as average net-emissions over a 2 or 3 year period remain below the facility's average baseline over that period.

National Reconstruction Fund (NRF) - Policy announced in June 2022 to provide up to \$3 billion investment to support renewables manufacturing and low emissions technologies.

Nationally Determined Contribution (NDC) - Emissions reduction commitments required to be submitted under the Paris Agreement, a legally binding international treaty on climate change.

Net emissions number - The number of tonnes of carbon dioxide equivalence of the total amount of covered emissions of greenhouse gases from the operation of the facility during a specified period.

Net zero – Where emissions are close to zero, with any remaining emissions re-absorbed from the atmosphere through additional actions.

NGER scheme - The *National Greenhouse and Energy Reporting Scheme* is a single national framework for reporting and disseminating company information about greenhouse gas emissions, energy production, energy consumption and other information specified under the NGER legislation.

Powering the Regions Fund (PRF) - Policy announced in June 2022 to support the development of new clean energy industries and the decarbonisation priorities of existing industry.

Production-adjusted baseline - A type of Safeguard baseline that is determined based on actual production levels. A production adjusted baseline can either be a fixed baseline based on the highest year of production during the calculated or benchmark baseline period, or annually adjusting based on actual production for each year.

Responsible Emitter - The person who has operational control of a Safeguard facility and is responsible for compliance under the Safeguard Mechanism.

Safeguard Mechanism Credit (SMC) - Credits proposed to be given to Safeguard facilities where that facility's emissions are below its baseline. These credits would be used to meet Safeguard obligations or be purchased by the Government or private entities.

Safeguard Mechanism Rule - The *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015*.

Scope 1 emissions - The emissions released to the atmosphere as a direct result of an activity, or series of activities at a facility level, sometimes called direct emissions.

Scope 2 emissions - The emissions released to the atmosphere from the indirect consumption of an energy commodity, such as from the use of electricity produced by the burning of a fossil fuel in another facility, sometimes called indirect emission.