A close-up photograph of a person's hand holding a clear plastic bottle against a bright blue sky with scattered white clouds. The hand is positioned on the left side of the frame, with the fingers gripping the bottle. The person is wearing a dark-colored metal-link wristwatch. The background is a vast, clear blue sky with soft, wispy white clouds. A yellow graphic element, a trapezoidal shape, is overlaid on the right side of the image, containing text.

The decarbonisation
opportunity: Safeguard
Mechanism reforms and what
this means for your business

An EY Net Zero Centre report

In January 2023, the Albanese Government revealed planned reforms of the Safeguard Mechanism to ensure Australia meets its 43% emissions reduction target by 2030.

The Safeguard Mechanism, introduced in 2016 by the former Coalition government, imposes limits on Australia's largest greenhouse gas emitting industrial facilities - those that release at least 100,000 tonnes of carbon dioxide equivalent (tCO₂-e) of Scope 1, or direct, emissions each year. This equates to 215 facilities, or an estimated 28% of Australia's total greenhouse gas emissions.

The Australian Government proposes to reduce the limits on how much these facilities can emit each year. What does this mean for companies that operate these 215 facilities? And what are the implications for new projects in emissions-intensive industries? What will it mean for financiers and customers?



1

What do we know so far?

In January 2023, the Department of Climate Change, Energy, the Environment and Water published the Safeguard Mechanism Reforms Position Paper. This clarifies some uncertainties but leaves plenty of questions unanswered.

Here's what we do know ...



Baselines: The Safeguard Mechanism requires Australia's largest greenhouse gas emitters to keep their net emissions below an emissions limit, called a "baseline".

The reforms will introduce a "hybrid approach" with baselines to be reduced by an average decline rate of 4.9% each year to 2030. This would cover all facilities, with some exceptions which we explore below.

This "hybrid" model will be weighted towards site-specific baselines in the short term, transitioning to industry-average emissions intensities by the end of the decade.

For existing sites, baselines will be determined using actual production values to ensure they reflect changes to productivity.

The baselines of new facilities will be set based on what the Australian Government calls "international best practice emissions-intensity benchmarks", but there is no detail on what this might look like in an Australian context.

The government will take advice from the Climate Change Authority during 2026-27 and may make adjustments to the decline rates for the 2028-29 and 2029-30 compliance years.

The use of site-specific baselines won't recognise or credit companies that have already made investments to reduce emissions, but early movers will be advantaged with the transition to benchmark (industry average) emissions-intensity values.

Carbon reduction by the numbers ...

If baselines were set at the FY21 actual emissions and decline by 4.9% each year compared to the starting baseline (i.e. not cumulative), total emissions from current covered facilities would drop to just over 90 MtCO₂-e per annum, assuming no change to production.

For the Safeguard Mechanism to achieve its objective, the total emissions across covered facilities will need to be below 100 MtCO₂-e per annum by 2030. This doesn't leave much room for "Trade Exposed Baseline Adjusted" facilities, or much "reserve" for new facilities or expansions such as new gas fields, LNG plants or rare mineral mining.

The reforms paper notes that new facilities are expected to add 10 MtCO₂-e per annum by 2030. There will be several facilities that fall below the 100kt threshold for the scheme and will no longer be counted. But it is unlikely that these will be more than 3 MtCO₂-e per annum.

“

This hybrid model will be weighted towards site-specific baselines in the short term, transitioning to industry-average emissions intensities by the end of the decade.

Headroom: The baselines allowed 180 MtCO₂-e to be emitted in 2020-21. Actual emissions were 137 MtCO₂-e, representing a 34% buffer, known as "headroom".

The government proposes to eliminate the headroom by resetting site-specific emissions intensities for all facilities based on historical data from 2018-19 to 2021-22. This means high-emitting facilities will be forced to reduce covered emissions or purchase offsets. The cumulative effect of these measures to remove headroom, along with the steep emission reduction trajectory is likely to make future permits, Safeguard Mechanism Credits (SMCs) and Australian Carbon Credit Units (ACCU), scarce.

Essential, expensive and evolving

A scheme that is overly reliant on offsets rather than achieving absolute emission reductions is a major concern for critics of the proposed reforms. However, analysis by EY has found offsets will be a high cost long-term option for companies.

In 2022, EY released modelling which predicted global demand for carbon offsets would explode as companies use carbon credits to manage their emissions and move towards net zero by 2050. Reaching net zero will require a 30- to 40-fold increase in volumes of high-quality credits, the report finds. Prices for credits could rise by up to \$US150 per tCO₂-e by 2035, in 2020 dollars, compared with \$US25 per tCO₂-e today.

Carbon units: The scheme drives abatement by exposing facilities to an effective carbon price. Companies that don't cut their pollution will be required to buy either Australian Carbon Credit Units (ACCUs) or Safeguard Mechanism Credits (SMCs) equivalent to the volume of carbon emissions that exceeded their cap. A cost-containment measure would cap the price of Australian carbon credits at \$75 per tCO₂-e initially. If companies do not meet their emission reduction target and fail to buy offsets, they face fines of \$275 per tCO₂-e.

The \$75 per tCO₂-e cap is well above the current price of offsets, but below the average internal carbon price that most companies use to inform investment decisions.

Flexible compliance options: A crediting and trading scheme will allow facilities that fall under the applicable baseline to earn SMCs which can be banked or traded to other liable facilities.

To avoid double-counting and integrity issues, safeguard facilities will no longer generate ACCUs for emissions reduction of covered emissions, and future Emissions Reduction Fund projects relating to covered emissions will no longer be able to create ACCUs.

There are other compliance options such as borrowing up to 10% of an applicable baseline in a single year or applying for a five-year multi-year monitoring period to take account of emerging technologies.

EITE assistance: To ensure the international competitiveness of emissions-intensive, trade-exposed facilities (EITEs), two types of eligible facilities will have access to emissions reduction funding from the Powering Australia Fund:

- ▶ Trade-exposed, with production variables on a prescribed list.
- ▶ Trade-exposed baseline adjusted, which are facilities that can prove a carbon reduction scheme cost impact compared to revenue of 3% to 8%. Facilities that can prove this will be eligible for a differential decline rate.

Trade-exposed facilities in each of the above categories will be eligible to apply for grant funding to support on-site decarbonisation activities through the \$600 million Safeguard Transformation Stream within the Powering the Regions Fund.

Trade-exposed baseline adjusted facilities will be a subset of the business that qualified for support under the Carbon Price Mechanism, with the most significantly impacted eligible for a decline rate as low as 2%.

The proposed reforms maintain the incentive for EITEs to reduce emissions by offering most assistance outside the Safeguard Mechanism. Trade Exposed Baseline Adjusted facilities are limited to those that can demonstrate significant cost impact.

The government has also indicated, for the first time, that it would consider introducing carbon border adjustment tariffs on imports from other countries which do not have a carbon price. This would be similar to the European Union's planned CBAM, which puts a fair price on the carbon emitted during the production of carbon intensive goods that are entering the EU. This is a significant departure from previous Australian government positioning on CBAMs.

Definitions at a glance

ACCUs: Australian Carbon Credit Units are generated by activities such as reforestation, avoiding deforestation, and reducing emissions from livestock. Companies and organisations that exceed their emissions limits can purchase ACCUs to offset their emissions.

CO₂-e: Several gases heat the planet, including carbon dioxide, nitrous oxide and methane. All these greenhouse gases can be calibrated by a single measure, carbon dioxide equivalent or CO₂-e, which allows for meaningful comparisons.

EITEs: Emissions-intensive, trade-exposed industries or sectors are both energy-intensive and exposed to international competition. These industries use energy-intensive processes and they are also vulnerable to competition from overseas producers who may face fewer environmental regulations.

Production-adjusted baselines: In broad terms, these are determined by multiplying actual production from a period by an emissions intensity value.

SMCs: Safeguard Mechanism Credits are a type of carbon credit created by the Australian Government. These credits can be purchased from companies that have reduced their emissions below their baseline, or from projects that reduce emissions through activities such as renewable energy generation, energy efficiency, and carbon capture and storage.

2

What questions remain unanswered?

The Safeguard Mechanism Reforms Position Paper provides some clear guidance on the Australian Government's intended approach.

However, there are still many critical questions to be answered.

Here are four big ones that clients are asking ...

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Will the proposed reforms actually meet the 2030 target?

Some critics of production-adjusted baselines argue that they create more uncertainty around the ability to meet the 2030 target than fixed baselines.

What's more, a decline of 4.9% on average will not leave much of a reserve for new entrants. If production remains constant and the 4.9% decline applies to most facilities, the reserve will be no more than 10 MtCO₂-e. This may not be adequate to cover all of the new projects which may enter the scheme. For example one new or expanded LNG plant could add over 4 MtCO₂-e per annum.

The Australian Government proposes to retain flexible baselines to give facilities room to increase production without being penalised. But if production increases, so will the overall baseline emissions, putting the carbon budget at risk.

Q

What will happen if the legislation does not pass?

Climate Change and Energy Minister Chris Bowen has repeatedly said he wants the enabling legislation for the Safeguard Mechanism Credits passed by 31 March. However, this may be blocked by the Coalition.

The high-level implications of the Bill not passing would be no SMCs. This would remove the incentive for companies to abate below their baselines, and to create a much greater reliance on ACCUs.

The government could negotiate with the Greens, who have made clear that they will not support the use of ACCUs for coal and gas producers. In this case, the government may be forced to put a cap on the proportion of ACCUs used to meet compliance.

Failure to secure safeguard crediting would require the government to revisit other scheme design parameters.

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What is "international best practice"?

The Australian Government notes that baselines "would be set at international best practice, adapted for an Australian context". We expect this definition to be highly contested. There is currently no indication of how best practice will be identified or applied in an Australian context, and it will be complex and challenging to define best practice legally for the diverse range of production variables covered by the scheme.

Q

Will the changes drive companies to reduce emissions or will they simply purchase ACCUs?

One of the big questions is whether the supply of ACCUs will cover demand over the next seven years and beyond - especially for hard-to-abate sectors that will rely on SMCs and ACCUs for compliance. What will capping the price of the credits at \$75 per tCO₂-e mean for the price of the non-government supply of ACCUs and SMCs?

3

What are the biggest opportunities and obstacles?

Some facilities will seize the opportunities to reduce their emissions - whether that is by switching from gas or diesel to electricity, or by implementing energy efficiency measures - to stay under their baselines.

While there are sizeable opportunities to abate emissions across the covered facilities, many of the emissions reduction projects are reliant on emerging technology or will take time to implement. At EY, it is viewed that significant reliance on offsets will be required right throughout the period up to 2030.

Accessing capital for decarbonisation has been a challenge for many companies in the past. But these reforms present a new opportunity to fund structural decarbonisation.

Consider the following three sector examples ...

Hard to abate sectors

Hard-to-abate sectors - which include cement, steel, chemicals and aluminium - are known by this name for a reason. While we have many of the technological solutions to reduce Scope 1 emissions from these sectors, these solutions are costly, often require significant capital investment, and will take time to implement.

Cement, for instance, is an essential building block of our cities, but is also responsible for around 7% of global emissions. Cement production generates emissions through the chemical process of calcination, which breaks down limestone through extreme heat. Calcination creates calcium oxide and carbon dioxide, and accounts for around 50% of all emissions from cement production.

Cement manufacturers have invested in energy efficiency and are using alternative fuels, rather than coal or gas, to fuel their clinker kilns. Additional abatement opportunities may be found in increasing the use of alternative fuels. Longer-term, more costly options include replacing natural gas with renewable hydrogen; and eventually carbon capture and storage (CCS), although this is unlikely to come into play before 2030.

Coal mining

There are several options that coal mining facilities can adopt to reduce emissions.

Switching to electric or hybrid vehicles can drive down transport emissions, and the mining industry is in the early adoption of trialling this technology. However, the current price of an electric vehicle is about double that of

a conventional fuel mining truck. Hydrogen vehicles, while not yet commercially viable, are in trials. Renewables and land sequestration projects are also underway.

Fugitive emissions are harder to abate, especially in operational open-cut coal mines. Several technologies and practices are being trialled. This includes pre-drainage to optimise the amount of methane captured prior to mining, and drilling and sealing old mine workings to prevent methane leakage in the post-mining phase. Further research and feasibility studies are required to tackle the emissions once coal is exposed.

Natural gas and LNG production

Many facilities producing or processing natural gas, or converting natural gas to liquified natural gas (LNG) for export, have a range of abatement options available at a cost that is likely to be lower than the price of SMCs or ACCUs. Low-hanging fruit is still available to some facilities: adopting best-practice technologies to improve operational efficiencies, reducing fugitive emissions from venting and flaring, and electrifying gas compression, for instance.

Australian gas companies have stated that they have the technology for CCS ready. But abatement from CCS has been quoted at between \$25-\$30 per tCO₂-e, making these projects commercially unviable without a carbon price. Provided SMCs are above this price, CCS projects could sequester millions of tCO₂-e covered by the safeguard mechanism.

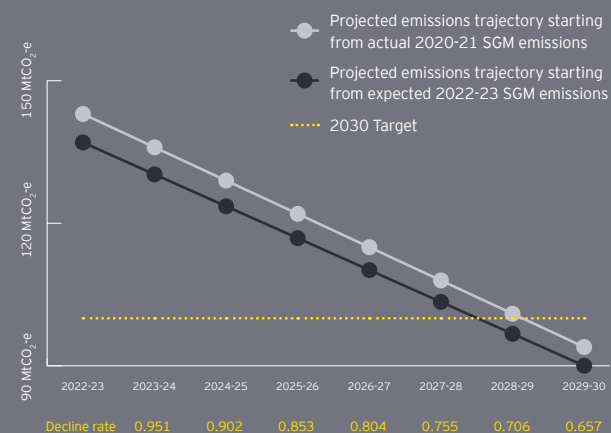
Reservoir CO₂ - which refers to pressurised carbon dioxide stored underground in geological formations such as

depleted oil and gas reservoirs - is considered easier to capture. Long-term, CCS technology could provide the solutions for the process emissions coming from hard-to-abate sectors such as cement and aluminium.

Funding decarbonisation

Many facilities will be eligible to apply for funding through the \$600m Safeguard Transformation Stream. Companies should act quickly to secure capital from this limited pool of funding.

Increasing projected emissions for 2023-24 will challenge the scheme's ability to meet the 2030 target. Assuming no change to overall current production levels, there will be little or no reserve available for differential decline rates and new facilities.



4

What are your
next steps?



1

Forecast your exposure

Companies that haven't already should be forecasting emissions for each Safeguard Mechanism facility out to 2030 and beyond.

2

Understand abatement options available

Identify abatement options to reduce direct emissions and develop a marginal abatement cost curve for each facility to assess the internal cost of reducing emissions below baselines.

3

Consider your SMC/ACCU price forecasting approach

Larger companies may consider engaging an external advisor to help develop a price forecasting model. Others might consider incorporating third-party price forecasts into their portfolio decision-making.

6

Establish governance and commercial functions

Consider commercial and contractual arrangements and ensure compliance and trading capability is effectively managed across the business.

5

Consider accounting and financial reporting implications

Ensure recognition of liabilities and valuation of any purchased SMCs or ACCUs and impacts are considered in asset valuations.

4

Develop a SMC/ACCU purchasing strategy

For facilities that can't remain under baselines through internal abatement, develop a carbon purchasing strategy including risk appetite, hedging policy, and position on SMCs versus ACCUs.

7

Build trading capability

Establish critical trading infrastructure, policies and procedures.

8

Prepare site-specific emissions intensity applications and undertake assurance

Submit an application by 30 April 2024, accompanied by an audit report.

9

Assess eligibility for EITE

Identify projects which might qualify for funding under the Powering Australia Fund or assess whether the costs of compliance will likely exceed 3% of revenue.

Roadmap of the Reformed Safeguard Mechanism Rule

24 February - June 2023	1 July 2023	31 October 2023	30 April 2024	Annual deadlines		2026-27
Preparation		Year 1: 2023-24			Subsequent years	
<p>24 February - Close of consultation period</p> <p>Companies encouraged to forecast exposure and develop a plan</p>	<p>Reformed Safeguard Mechanism Rule commences</p> <p>4.9% decline rate begins (unless a differential decline rate is awarded)</p> <p>Gov-supplied ACCU price at \$75/tCO₂-e</p>	<p>Deadline for facilities to apply for either a production-adjusted or calculated baseline under existing rules to cover 2022-23</p>	<p>All facilities must apply for a new site-specific emissions intensity, even those that just applied for a production-adjusted baseline to cover 2022-23</p>	<p>All deadlines below based follow the year in which they apply</p> <p>31 October - EITE status application due</p> <p>15 November - Multi-year monitoring period (MYMP) applications due</p> <p>28 February - Borrowing applications due</p> <p>31 March - ACCU and SMC surrender deadline</p>	<p>4.9% decline rate applies every year (unless a differential decline rate is awarded)</p> <p>Gov-supplied ACCU price at \$75/tCO₂-e + CPI + 2% annually</p>	<p>Review to be conducted to assess:</p> <ul style="list-style-type: none"> ▶ The impact of resetting and declining baselines ▶ Costs of domestic offsets and sufficiency of cost containment measure ▶ Use of international units ▶ Flexibility mechanisms such as banking and borrowing and the multi-year monitoring period.

How can EY Help?

The EY Net Zero Centre helps companies cut through the complexity, manage the uncertainty and create clear pathways to net zero emissions.

Headed by the region's leading climate change professionals, the Net Zero Centre supports EY clients to make the right decisions at the right times and set themselves on a pathway for success.

The team can help you turn disruption into opportunity.



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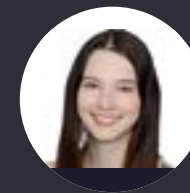
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