# Changing Gears: Australia's Carbon Market Outlook 2023

An EY Net Zero Centre report



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The information in this report does not constitute financial product advice, and consumers should contemplate procuring independent advice prior to making any financial decisions.

# Executive summary

Changing Gears: Australia's Carbon Market Outlook 2023

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Shifting

Reforms to the Safeguard Mechanism (SGM) will support cost-effective abatement, establish a visible carbon price and drive substantial growth in the demand for Australian Carbon Credit Units.

The SGM covers around 215 of Australia's largest greenhouse gas-emitting industrial facilities, including oil and gas producers, mining and heavy industry. These facilities are responsible for around 28% of Australia's emissions.

Under the previous SGM policy framework, there was little incentive for these facilities to reduce their emissions, even where costs were relatively low. However, from 1 July 2023, reforms to the SGM will motivate covered facilities to find and implement abatement opportunities.

Australia's most emissions-intensive facilities are now on a net zero trajectory.

To understand the impact of this policy on Australia's carbon credit market, the EY Net Zero Centre undertook scenario modelling and analysis. Our findings are explored within this report.

# Ready: Australia's carbon market is well positioned

- Reforms will incentivise least cost abatement for heavy industry: The reformed SGM now sets baselines, or limits, for the direct emissions allowable from each covered facility. Further, the SGM reduces baselines each year with covered facilities having a default obligation to reduce their greenhouse gas emissions by an average of 4.9% each year to 2030. Facilities that do not meet this reduction are required to buy either Safeguard Mechanism Credits (SMCs) or Australian Carbon Credit Units (ACCUs) to cover the volume of carbon emissions that exceed their baselines.
- The carbon market could grow rapidly: Australia's carbon market could deliver an additional 20 million units by 2035, up from 17 million units in 2022. We expect the ACCU market to underpin Australia's carbon policy framework and emissions reduction for large industrial emitters well beyond 2030.

## Steep: Reforms deliver significant reductions in net emissions

- Low-cost opportunities are available now, but not for long: SGM facilities could have more than 40 million tonnes of annual abatement potential available at under AU\$50 per tonne, primarily by improving efficiency and by addressing fugitive and vented emissions. By the early 2040s, we anticipate most of the lower cost abatement opportunities will be realised and options for further abatement under AU\$50 per tonne will be largely exhausted.
- Reforms will drive real abatement: Direct abatement will rise to 43 million tonnes per year by 2035, according to our central estimate, accounting for around 50% of compliance requirements under the SGM. Oil and gas projects, along with coal mines, will deliver around 90% of emissions reductions in the short-term.

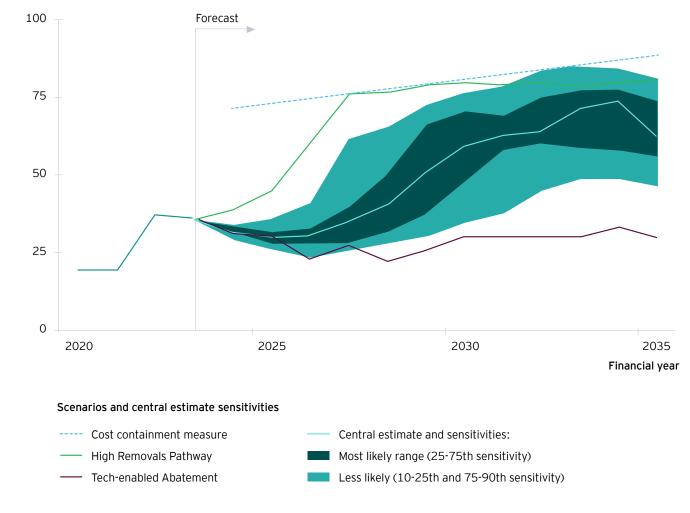
Executive summary	Ready	Steep	Shifting	Scan

## Shifting: Prices are likely to rise, while key drivers of uncertainty change over time

- Australia's carbon price is set to double: Market clearing prices for ACCUs will rise under all plausible scenarios modelled. Our central estimate sees prices doubling to around AU\$75 (in real dollars) before 2035.
- Delays would drive higher prices: While we expect the market to react and respond to SGM reforms, any delay to deliver abatement or units would drive higher short-term ACCU prices. The longer the delay or the greater volume of units, the more severe and rapid the change in price. ACCU prices could potentially exceed AU\$70 before 2030, compared to below AU\$60 in our central scenario.
- Oil and gas producers will have a big influence on market prices and volumes: ACCU prices will be heavily influenced by the investment decisions made by oil and gas facilities, which account for 35% of current total SGM emissions. New or expanded gas developments have the most potential to increase SGM covered emissions.
- A plausible range of prices beyond 2035 is very wide: Our central estimate sees relatively stable prices, sitting largely between AU\$65 and AU\$75/ tCO<sub>2</sub>e in real terms. However, EY analysis suggests prices could be much higher or lower, with our scenarios ranging from AU\$30 to AU\$125 per ACCU.

#### Exhibit ES-1: ACCU market price outlook to 2035

AU\$ (real 2023) per ACCU





#### Scan: Call to action

The shift to net zero emissions, combined with the SGM, will trigger a raft of strategic responses from businesses. Where do business leaders begin?

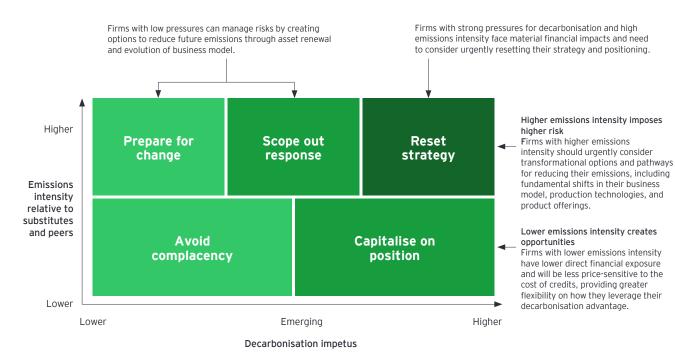
#### Set a business strategy that responds to business risks, stakeholder pressure and abatement options

The EY Net Zero Centre has developed the diagnostic framework shown in Exhibit ES-2. The five carbon postures identify a 'starting point' default emissions reduction response aligned to the context of each business.

#### 2. Consider carbon credits to support earlier and more ambitious commitments, and to smooth the net zero transition

Carbon credits can help businesses make immediate emissions reductions while implementing cost-effective direct abatement projects, and offset hard-to-abate emissions over the long term. Their value depends on the business context and strategy, but EY analysis suggests the use of offsets can support substantial cost savings.

#### Exhibit ES-2: Identifying the default strategic approach to decarbonisation for your organisation



Executive summary	Ready	Steep	Shifting	Scan

### 3. Engage early to prosper through the climate transition

The balance of forces favours the emergence of more efficient markets trading high-integrity carbon credits through a small number of exchanges that are linked to multiple registries in a coherent global framework. This is a future state of the world that business leaders must incorporate into their strategic planning.

We suggest business leaders consider five steps to prepare for disruptive change and the opportunities and challenges it will bring.

Every leader will need a clear decarbonisation strategy that acknowledges the ability of credits to create value and support thriving businesses in a rapidly changing world.

More broadly, climate change, decarbonisation drivers, and the need to disclose material impacts will continue to re-shape the operating environment, market dynamics and operational decision-making. Business leaders and organisations that plan for a net zero future will be better positioned to manage this changing landscape. Exhibit ES-3: Five key steps for businesses to action to prepare for a low carbon world

## Assess your current and future context with fresh eyes

Are you up to date? Who is scanning? What are they looking at? How have things changed in the last three years, and what might this imply?

### 2 Review your long term strategy

What are the implications of your stakeholder pressures, emissions intensity, and opportunity space for strategy and positioning? Is your strategy robust to a range of carbon credit price trajectories?

#### Identify potential tipping points for pressures and opportunities

What swift shifts or surprises could transform your context? What new technology options would move the dial?

## Articulate several distinctive value propositions for your company in 2030-35

What could be your distinctive offer? What factors would give weight to one option over another? How would these long term value propositions be implemented and delivered?

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#### Act now to create options and manage risks

What early actions would provide non-carbon benefits as well as reduce your carbon risks? Where might you gain confidence or insight through learning-by-doing? How might you gain an advantage over your peers and competitors?

# Ready Australia's carbon market is well positioned

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# The Safeguard Mechanism reforms will incentivise least cost abatement for heavy industry

Reforms to the Safeguard Mechanism (SGM) have addressed an important gap in Australia's net zero emissions policy framework, and will drive cost-effective abatement by Australia's largest industrial facilities.

The SGM now provides a key component of the Australian Government's decarbonisation policy approach, with most sources of emissions covered by abatement incentives (see Exhibit 01). The SGM was introduced in 2016 by the former Coalition government. It imposes limits on Australia's largest greenhouse gas-emitting industrial facilities – those that release at least 100,000 tonnes of Scope  $1 \text{ CO}_2$ e emissions each year. These facilities account for around 28% of national emissions.

The Albanese Government announced the detail of proposed reforms in January 2023, consistent with its pre-election commitments. The reforms were passed after negotiation with the Australian Greens and crossbench, and largely endorsed by Australia's business community. The reforms took effect on 1 July 2023. We provide an overview of the reforms and their implications in the following pages.

## Australia now has a broad-based suite of policies to incentivise abatement

With the SGM reforms in place, the vast majority of Australian emissions are subject to abatement incentives:

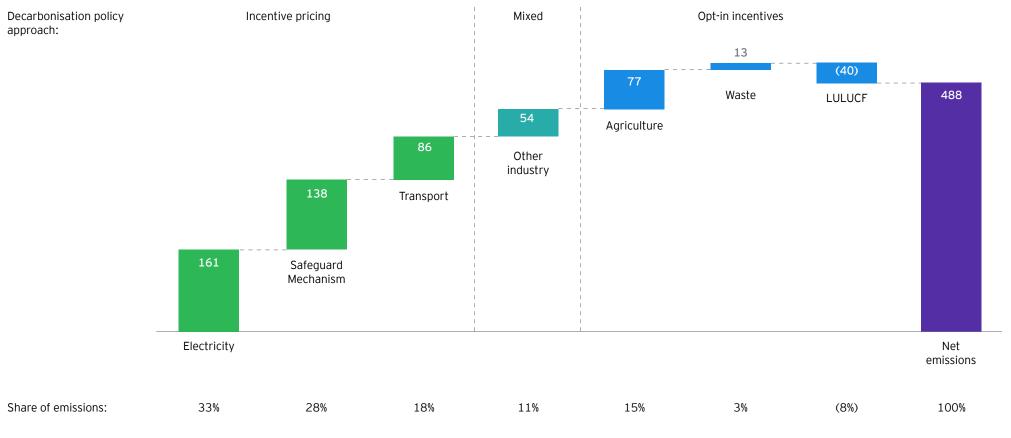
- The electricity sector is decarbonising rapidly, driven both by regulation and falling cost of renewable generation.
- Petroleum fuels used in road, rail and air transport are all subject to fuel excise, providing an incentive to reduce fossil fuel use. The government is developing a vehicles fuel efficiency standard, which is expected to support improvements in the efficiency of the light vehicle stock.
- The agriculture, land use and waste sectors have opportunities to create Australian Carbon Credit Units (ACCUs), providing incentives to reduce emissions where methods are available.





Exhibit 01. More than 80% of emissions are now covered by abatement incentives

Australian greenhouse gas emissions ( $MtCO_2e$ ) by source sector, 2021



<sup>\*</sup>Based on DCCEEW 2021 emissions and 2022 SGM list \*\*LULUCF = Land Use, Land-Use change and Forestry



# The Safeguard Mechanism covers around 215 facilities, accounting for almost a third of national emissions

The Safeguard Mechanism applies to around 215 of Australia's largest industrial facilities, including oil and gas producers, mining and heavy industry. The mechanism sets a 'baseline', or limit, for the direct emissions from each facility, and reduces this baseline each year. Facilities that do not meet this reduction are required to buy either Safeguard Mechanism Credits (SMCs) or ACCUs in each period to cover the volume of carbon emissions that exceed their baselines. The scheme covers all of Australia's most emissions intensive facilities. Electricity generation is notionally included but in practice is regulated separately. The other major exclusion is road transport, where the vast majority of emissions do not occur on-site in geographically defined facilities.

Sectors include fossil fuels, other mining and heavy industry. As shown in Exhibit 02:

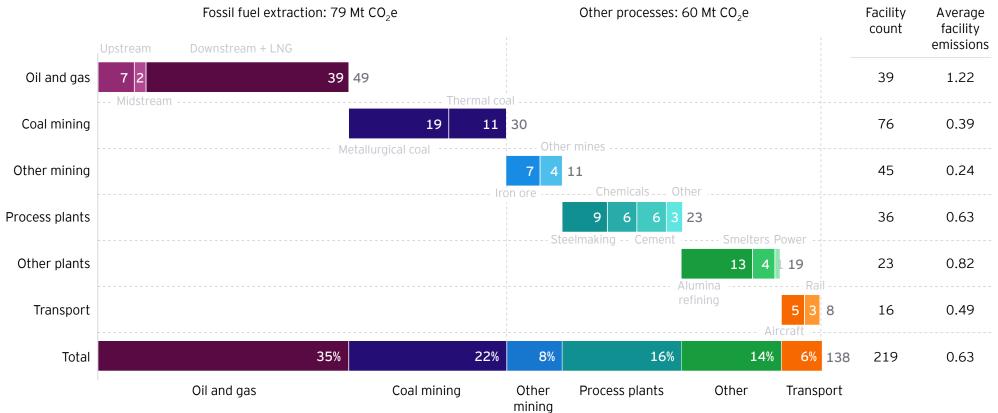
- Oil and gas accounts for 35% of current SGM emissions, arising from on-site energy use and flaring, from 18% of facilities (39 sites).
- Coal mining accounts for 22% of emissions, predominantly from fugitive methane emissions, from 35% of facilities (76 sites).
- Heavy industry accounts for 30% of emissions, including steelmaking (6%), cement (4%) and alumina refining (9%), from 27% of facilities (59 sites).

The mechanism only applies to direct Scope 1 emissions. Downstream use, such as Scope 3 emissions from the combustion of gas or coal, is not accounted for under the SGM.

Executive summary	Ready	Steep	Shifting	Scan

Exhibit 02. Fossil fuel extraction accounts for 57% of covered emissions

Covered emissions (MtCO<sub>2</sub>e) and number of facilities by sector, 2021-2022



Source: Clean Energy Regulator Emissions Reporting, 2021-22; EY PJP analysis



Safeguard Mechanism reforms require facilities to make a proportional contribution to the national emissions target

Australia's most emissions-intensive facilities are now on a net zero trajectory, with a default obligation to reduce their greenhouse gas emissions. The rate of emissions reductions is not set to reflect the abatement potential of different sectors or facilities. Instead, the reforms establish a default baseline decline calibrated to the national emissions trajectory. The SGM allows more gradual declines for facilities. The default decline rate is for baselines to fall by 4.9% each year to result in around 100Mt in net total emissions in FY2030 (see Exhibit 03).

Initial baselines are set using historical individual facility and sector-level data. For new entrants, the baselines will be set by international best practice benchmarks. New oil and gas facilities are subject to a 'zero baseline', and so need to cover all their Scope 1 emissions through SMCs and ACCUs. This contrasts with other facilities, which only need to cover the difference between their baseline and their emissions.

Facilities that reduce their emissions below their baseline can create SMCs, that may be held for future use or traded to other facilities.

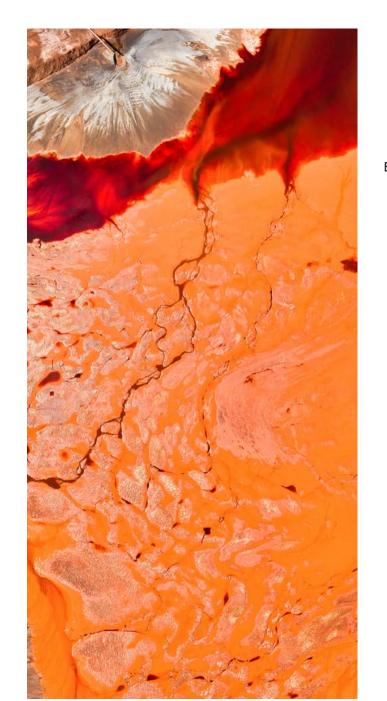
# The ACCU market now establishes a carbon price for compliance actions as well as voluntary demand

The reforms establish a default direct abatement requirement. But allowing this to be met through SMCs or ACCUs provides high integrity 'purchased abatement'.

This allows cost-effective abatement and establishes a visible carbon price, reflecting the market clearing price for SMCs and ACCUs. Expectations about future carbon prices will be a key input to decisions to invest in emissions abatement at facilities.

To reduce uncertainty, the reforms include a cost containment measure that makes ACCUs available to facilities at AU\$75 per ACCU (indexed at CPI plus 2% per year). This cost is well above the current price of credits, but below the internal carbon prices used by many companies to inform major long term investment decisions.<sup>1</sup>

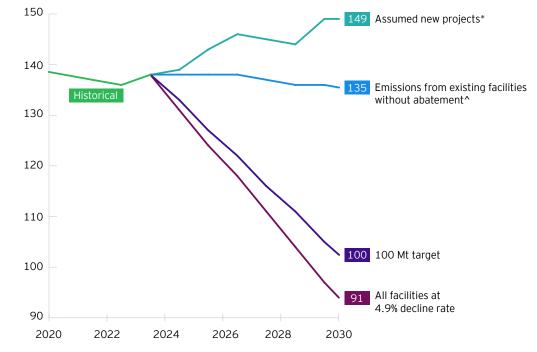
<sup>1.</sup> T. Wood, A. Reeve and E. Suckling (2022) Keep it simple: Redesigning the Safeguard Mechanism to drive emissions reductions. The Grattan Institute, Melbourne. Figure 4.2.



#### Exhibit 03. Emissions baselines are set to fall steeply to 2030

Illustrative potential aggregate baseline reductions

Million tonnes of CO<sub>2</sub>e per year



 \* Includes LNG, domestic gas, coal, lithium and iron ore projects;
^ Includes committed project closures
Source: Clean Energy Regulator Emissions Reporting, 2021-22; Australian Resource and Energy Quarterly, Major Committed Projects 2022; EY PJP analysis

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# The ACCU market is well established, and Chubb Review recommendations should improve transparency and confidence

The introduction of the Safeguard Mechanism reforms is set to drive substantial growth in the demand for ACCUs. This next phase of emissions reductions thus leverages and builds on established market rules and capacity. This could see Australia's carbon market deliver an additional 20 million units by 2035, from a market which generated 17 million units in 2022.

## ACCU arrangements deliver high integrity reductions in emissions

The ACCU market was established in 2011 under legislation to provide voluntary supply of offset credits for purchase through the Australian Government's Emissions Reduction Fund (ERF).

In July 2022, the Minister for Climate Change and Energy established an independent review of ACCUs and the integrity of Australia's carbon credit market. The review panel, chaired by Professor lan Chubb,<sup>2</sup> concluded that the ACCU scheme was "fundamentally well-designed" but could be improved "by applying knowledge gained through implementation or practical experience".<sup>3</sup> The panel made 16 recommendations, which were all accepted in principle by the Australian Government.

Implementation is likely to reinforce confidence in ACCU arrangements, particularly through improved clarity and transparency around method development, delivery of emissions reductions, and associated project co-benefits.

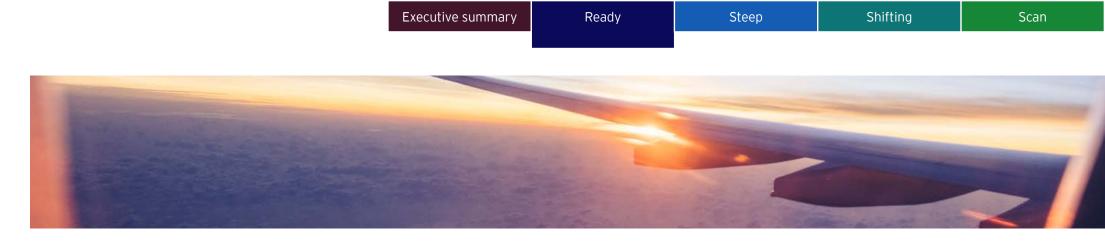
## High integrity ACCUs play a crucial role in delivering SGM emissions goals

The steep top-down SGM decline rates make ACCU supply an essential component of the SGM policy framework, which would otherwise risk compliance costs that could threaten the competitiveness of emissions intensive trade exposed (EITE) facilities.

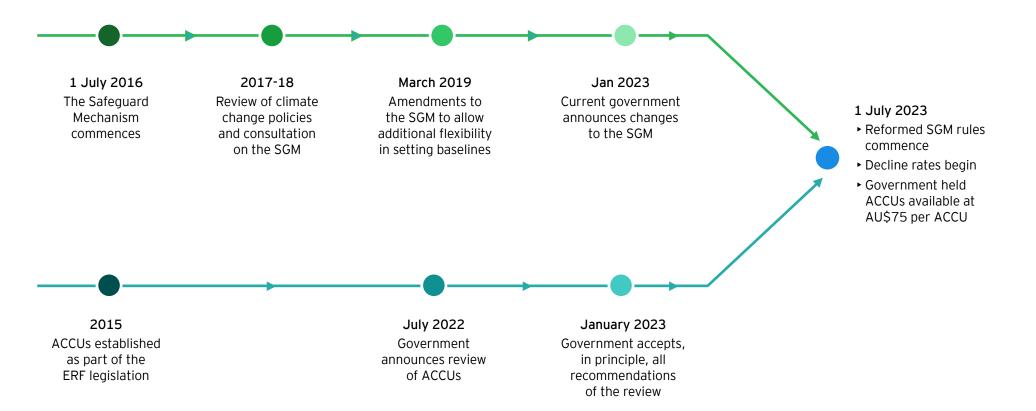
This role is likely to become more crucial as Australia's national and SGM emissions targets get closer to net zero. We therefore expect the ACCU market to underpin Australia's carbon policy framework and emission reductions for large industrial emitters well beyond 2030.

<sup>2.</sup> Dr Steve Hatfield-Dodds, co-lead author of this report, served as a panel member in a personal capacity.

<sup>3.</sup> Chubb, I., Bennett, A., Gorring, A., Hatfield-Dodds, S., 2022, Independent Review of Australian Carbon Credits, Department of Climate Change, Energy, the Environment and Water, Canberra



#### Exhibit 04. The SGM and ACCU initiatives converge



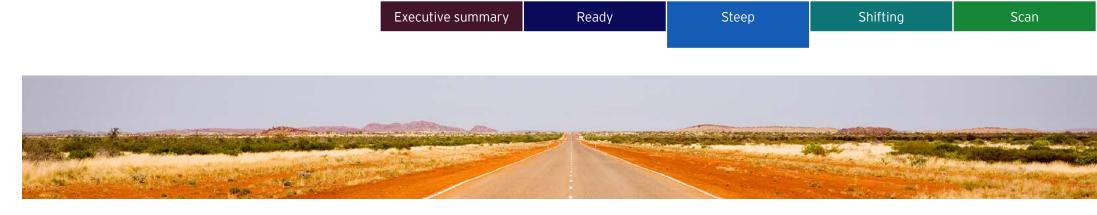




# Steep

Reforms deliver significant reductions in net emissions





# EY analysis suggests substantial abatement potential below AU\$50/tonne, which facilities have not been motivated to deliver

EY analysis finds SGM facilities have more than 40 million tonnes of annual abatement potential available at under AU\$50 per tonne. These opportunities largely involve facilities delivering on efficiency improvements and addressing fugitive and vented emissions, which typically involve operational changes rather than substantial capital investment. A further 70 million tonnes of technically implementable abatement is available at costs rising to AU\$300 per tonne and above. Under the previous SGM policy framework, there was little incentive for facilities to deliver emissions reductions, even where costs were relatively low. However, from July 2023 the SGM reforms will motivate covered facilities to seek out and implement abatement opportunities, either to create SMCs or to avoid the need to purchase ACCUs.

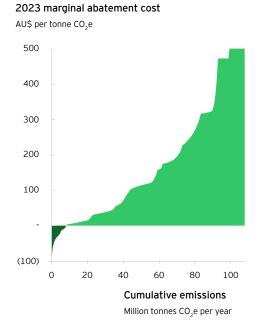
As facilities implement abatement options, and technology and energy costs evolve, the marginal abatement cost curve will shift over time as shown in Exhibit 05. Our general expectation is for marginal costs to rise as low-cost abatement options are implemented. However, our analysis indicates that even by 2030 abatement opportunities will continue to exist below AU\$50 per tonne due to lower technology and renewable energy costs. We expect continuing reductions in technology costs, particularly for electrification of processes, to 2030 and beyond. The electrification of vehicles and machinery is expected to provide significant cost-effective abatement opportunities in the mining sector, including in oil and gas.

By the early 2040s, we anticipate most of the lower cost abatement opportunities will be realised and options for further abatement under AU\$50 per tonne largely exhausted.

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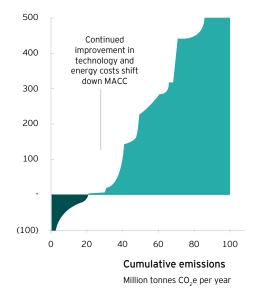


#### Exhibit 05. Low-cost internal abatement options for SGM facilities shrink over time

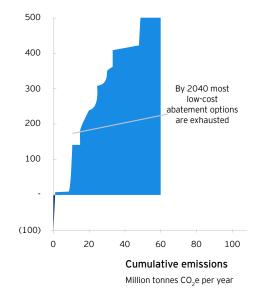


2030 marginal abatement cost

AU\$ per tonne CO<sub>2</sub>e



2040 marginal abatement cost AU\$ per tonne  $CO_2e$ 



Source: EY PJP ACCU market model; Central Estimate scenario





Reforms see real abatement from Safeguard Mechanism facilities, totalling 50% of compliance requirements

Reforms to the Safeguard Mechanism will most likely lead to genuine reductions in direct emissions from Australian heavy industry, and also increase avoided emissions and carbon removals through ACCUs.

#### Not just a carbon credits game

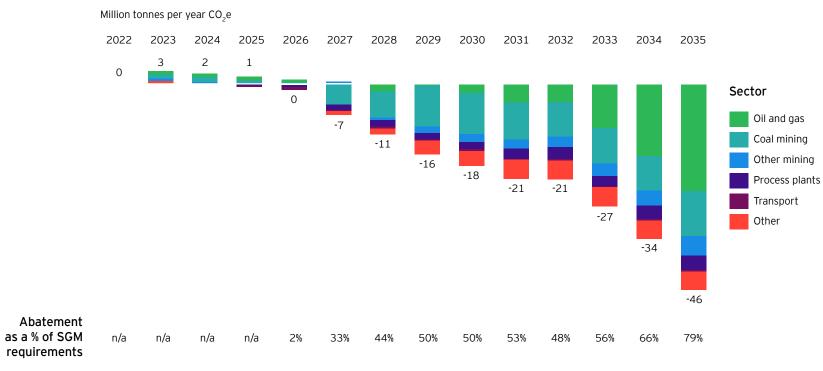
During consultation on the final design of the SGM reforms, some stakeholders expressed concerns about the use of offsets to meet compliance obligations, especially if facilities were permitted to offset 100% of their 'above baseline' emissions with ACCUs. Responding to these concerns, the final reforms require facilities to explain to the regulator if offsets account for more than 30% of efforts to meet their compliance obligations.

Steep SGM baseline reductions and expected growth in ACCU prices will more likely lead to substantial direct abatement investment in SGM facilities. Our central estimate is that direct abatement will rise to 43 million tonnes per year by 2035, accounting for around half of total emissions reductions required for existing facilities under the reforms.

Further, some stakeholders were critical that reductions in emissions intensity could be outweighed by the addition of new facilities. To address this, the legislation requires the minister to act if the existing rules are not sufficient to drive trend reductions in covered emissions.

## Oil, gas and coal projects will do much of the heavy lifting

Oil and gas projects, along with coal mines, will deliver around 90% of emissions reductions in the short-term (see Exhibit 06). Methane-intensive underground coal mines have technically mature options to reduce emissions affordably, as do upstream onshore gas projects. Exhibit 06. Oil, gas and coal facilities account for nearly 90% of the emissions reductions over the next decade Change in SGM facility gross emissions by sector from 2022 levels, central projection



\* This includes new facilities entering the SGM

Change in SGM facility gross emissions by sector from 2022 levels, central projection (MtCO<sub>2</sub>e)

Executive summary	Ready	Steep	Shifting	Scan

# The oil and gas sector is the largest supplier of SMCs and the largest purchaser of ACCUs

The oil and gas sector is the largest source of emissions among SGM facilities. Existing oil and gas facilities also have the largest low-cost abatement potential, and account for almost all the growth in new facilities and covered emissions. Existing oil, gas and coal facilities are less likely to qualify for lower EITEs baseline decline rates than other facilities. In our central estimate this combination of circumstances sees existing oil and gas facilities account for around half of ACCU compliance demand and SMCs issued between now and 2035 (see Exhibit 07).

The distribution of SMC generation across the sector will not be uniform due to differences in emissions-intensity of assets within sectors. SMCs will therefore likely be traded between oil and gas facilities, as well as being sold from the oil and gas sector to other sectors.

New oil and gas facilities enter the SGM with a zero baseline (see page 14); these facilities will be a disproportionate source of demand for SMCs and ACCUs, accounting for 11% of projected aggregate demand to 2035 and 30% to 2050.

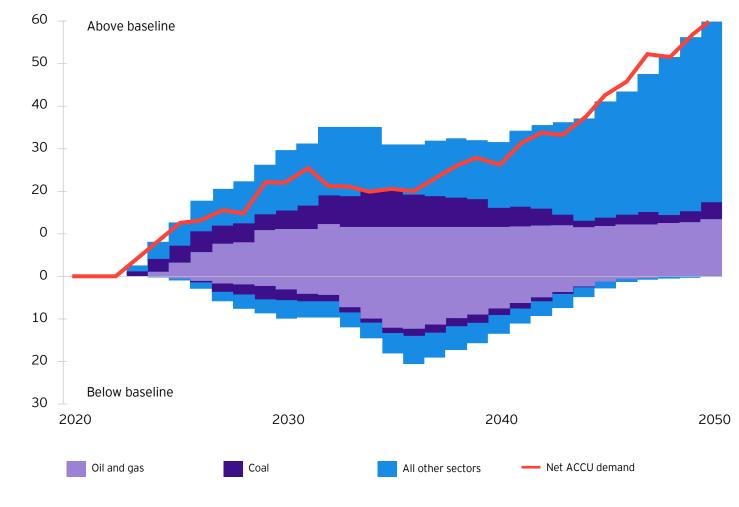
Existing and committed new facilities are likely to remain competitive, notwithstanding additional SGM compliance costs. We expect most facilities and covered emissions will avoid triggering the support measures for EITE facilities. We find projected impacts on margins are more sensitive to international gas prices than to SMC-ACCU market dynamics and related uncertainties.

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Existing and committed new facilities are likely to remain competitive. We find projected impacts on margins are more sensitive to international gas prices than to SMC-ACCU market dynamics and related uncertainties.

Executive summary	Ready	Steep	Shifting	

Exhibit 07. Fossil fuel extraction accounts for 75% of credit demand to 2035, but only 54% from 2035 to 2050 SMC supply and joint SMC and ACCU demand, central projection ( $MtCO_2e$  per year)



Source: EY PJP ACCU market model

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Executive summary	Ready	Steep	Shifting	Scan

## There is a substantial supply of high-integrity ACCUs available, however marginal costs are higher than previously contracted

Facilities covered by the SGM have established projects and methods that can meet immediate and long term compliance and voluntary demand. Australia, with its large areas of agricultural land, is unusual in its ability to supply very large volumes of costeffective high-integrity land-based removals. However, we estimate the supply of very low-cost removals is limited, and so new supply will need to transition to higher cost reforestation or afforestation options.

## Credits from established projects can meet the majority of near term demand

Most ACCU projects involve an up-front investment that enables a stream of recognised abatement credits to be delivered over time.

Existing projects can satisfy almost all near term ACCU demand, with a transition to incremental supply from newly registered projects over following years. More than half of ACCU supply in 2025 comes from projects registered before 2020. By 2035 these projects will account for 29% of ACCU supply, with 53% coming from projects that issued credits between 2020 and 2025.

# Future ACCU supply is cost-effective, but not cheap

We project that land-sector removals will continue to account for the majority of ACCU supply, but with a shift in the contribution from different methods (see Exhibit 08).

This will see an increase in the long-run marginal costs of new supply.

Most incremental supply will have a long run marginal cost above AU\$50 per ACCU, with the aggregate reforestation and afforestation ACCU supply curve suggesting there will be relatively little reforestation or afforestation credit generation potential below AU\$60 per ACCU.

#### A shift towards using ACCUs to meet voluntary commitments would raise costs significantly

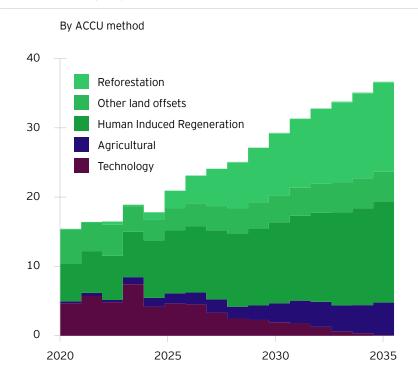
The prominence of ACCUs in meeting SGM obligations is likely to prompt stakeholder pressure to also use ACCUs to meet voluntary emissions targets and commitments.

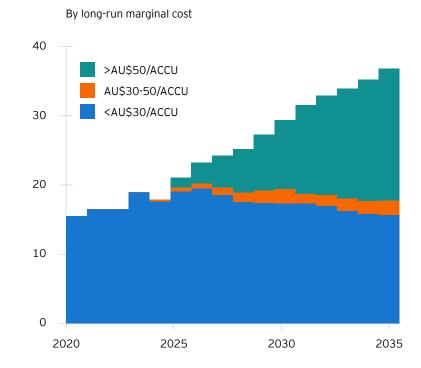
This would have very significant implications for the cost of credits. Most businesses rely almost exclusively on overseas voluntary carbon market (VCM) units, which typically cost AU\$2 to AU\$10/  $tCO_2e$ . We see the ACCU price rising to around AU\$75/ $tCO_2e$  by 2035 (in real dollars). This implies average costs per tonne would increase 15-fold for a business that uses ACCUs to meet half their commitments. A business with 100% ACCU use would see a 30-fold increase in costs.

Executive summary	Ready	Steep	Shifting	Scan

**Exhibit 08.** Land sector removals account for the majority of projected ACCU supply ACCU supply by type of method and marginal cost, central projection (MtCO<sub>2</sub>e)

#### Million ACCUs per year generated





Source: EY PJP ACCU market model

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## Incremental ACCU supply is expected to come from reforestation and afforestation projects in the medium term

The shift towards net zero will drive waves of change through the global economy, especially materials- and energyintensive sectors. Heavy industry, more than other sectors, must solve multiple problems: reducing fossil fuel use and non-combustion emissions, replacing the chemical contributions currently met by fossil fuels, and responding to growing demand for materials essential to the new energy transition. That makes the challenge for heavy industry particularly difficult – and an immense opportunity for businesses and countries who can solve it.

## Australia is distinctive in its capacity to supply high-integrity removals credits

Reforestation and afforestation projects sequester large amounts of carbon dioxide over the long term.

Australia has very large areas of agricultural land suitable for generating high-integrity removals credits through sequestering carbon in soils and vegetation. This gives Australia a distinctive opportunity relative to other advanced nations, which typically have much less potential to offset emissions in this way.

## Carbon markets can also deliver significant complementary nature benefits

Land sector removals will play a crucial role in meeting compliance and voluntary demand for high integrity ACCUs. Meeting these needs could also contribute to nature positive outcomes, as landsector ACCUs are well-positioned to have positive impacts on Australian biodiversity and nature regeneration, and other outcomes that improve natural capital.

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Land sector removals will play a crucial role in meeting compliance and voluntary demand for high integrity ACCUs.

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#### Human Induced Regeneration (HIR) provide low-cost removals but additional supply potential is uncertain

HIR is one of several carbon removal or sequestration methodologies that absorb carbon dioxide from the atmosphere and store it in vegetation.

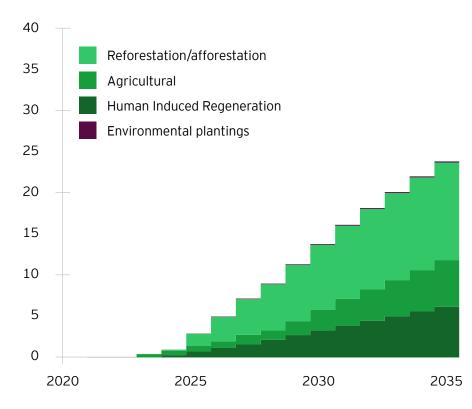
To meet the criteria of the HIR method, projects must demonstrate a history of 'suppression' of regrowth, such as through grazing pressure from feral animals or cattle, that prevent vegetation regeneration. The area of land available that meets this test is uncertain. Other land sector methods can provide significant new supply but have higher marginal costs (see Exhibit 09).

Following the independent review of the ACCU market in 2022, arrangements for issuing units through the HIR method will be tightened to assure additionality and integrity of the system. Implementation will ultimately constrain HIR issuances.

Should existing HIR projects be able to generate credits quicker and in larger volumes, we would expect lower market prices for ACCUs for substantially longer.

Exhibit 09. Higher cost reforestation projects accounting for around half of new supply Incremental ACCU supply by method, central projection ( $MtCO_2e$ )

#### Million ACCUs per year issued



Source: EY PJP ACCU market model

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# Compliance demand will outweigh voluntary purchases, accounting for more than 70% of ACCU retirements to 2035

SGM compliance purchases will likely be the dominant source of ACCU demand by 2025, and provide more than 70% of ACCU demand for the subsequent decade. Long term market outcomes after 2035 will depend on the evolution of institutional arrangements beyond the SGM, such as new domestic or international compliance markets.

## The lines between compliance and voluntary demand are blurring

In 2022, EY Net Zero Centre analysis of the outlook for the global voluntary carbon market (VCM) predicted that governments would impose more stringent mandatory abatement obligations on businesses over time, while expanding the role of offset credits. We noted that the use of voluntary offsets to meet compliance demand would discourage the current habit of thinking of carbon credits in terms of two distinct voluntary and compliance markets.

## ACCU demand from SGM facilities will drive the market

Australia will see this shift play out in the ACCU market over the next few years as it rebalances and adjusts to accommodate the SGM reforms. By 2025, we expect the market to find a new equilibrium, with compliance purchases from SGM facilities accounting for 60% to 80% of demand. The voluntary market demand is likely to trail behind, providing around 20% of ACCU demand driven primarily by Australian firms with carbon neutral commitments and interim emission reduction targets seeking to meet these with high-quality compliance credits.

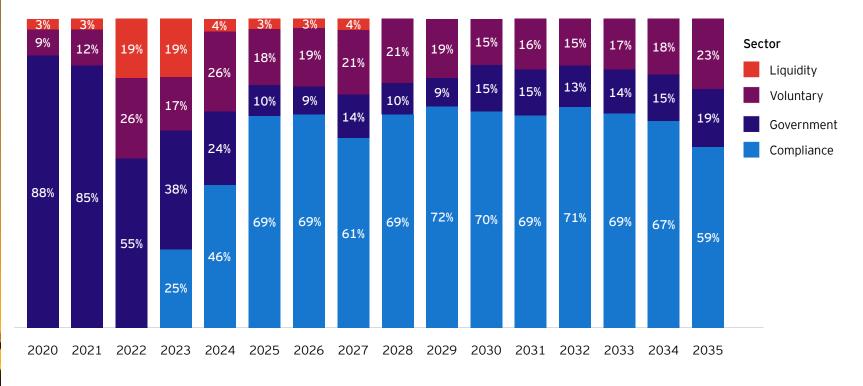
### Government and market traders play important roles, but account for a small share of net ACCU demand

By 2025, government purchases drop considerably, according to our central projection. Government will only need to purchase ACCUs for the Emissions Reduction Fund and to build an inventory to support any cost containment measures.

Market traders have purchased nearly 20% of ACCUs to date, but we expect them to have minimal impact from 2027 due to the SGM compliance requirements.

Executive summary	Ready	Steep	Shifting	Scan

Exhibit 10. We see SGM compliance demand ramp up while demand from government and market traders declines Net purchases of ACCUs by demand segment, central projection



Million ACCUs per year issued

Source: EY PJP ACCU market model



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Prices are likely to rise, while key drivers of uncertainty change over time

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Executive summary	Ready	Steep	Shifting	Scan

Our central estimate sees Australia's carbon price double to around AU\$75 over the next decade

EY analysis suggests market fundamentals will drive higher prices over the medium term, to 2030 or 2035, after which we project prices will stabilise. Near term prices are difficult to predict with any precision, as small variations in aggregate demand result in significant differences in marginal supply costs. In addition, we find volumes and prices are materially impacted by a wide range of operational and investment decisions by SGM facilities, ACCU suppliers, government and carbon market intermediaries – many with no observable track record in this emerging joint market.

## New SGM demand drives up prices, reflecting higher incremental supply costs

Market clearing prices for ACCUs are likely to rise over the medium term from current levels under all explored plausible scenarios and sensitivities.

Our central estimate sees prices holding and potentially dropping modestly from early 2023 levels, and then double to around AU\$75 (in real dollars) before 2035 (see Exhibit 11).

This rise in price is driven by the significant increase in demand flowing from new SGM compliance obligations, and the shape of the marginal abatement cost curve for ACCU supply.

In the near-term prices are strongly influenced by the extent of qualifying lower cost land sector removals – particularly from the HIR method. However, longer term demand volumes are almost certain to exceed this source of supply.

This suggests the big uncertainty is not so much the level at which the ACCU price stabilises, but how long it takes to get there.

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Our central estimate sees prices holding and potentially dropping modestly from early 2023 levels, and then double to around AU\$75 (in real dollars) before 2035

Executive summary	Ready	Steep	Shifting	Scan
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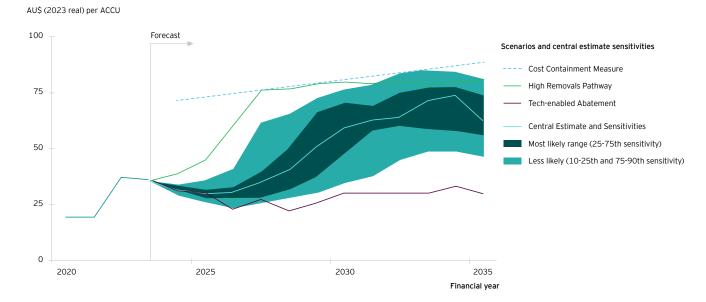
## Near term price falls moderated by expected higher future prices

2

We find significant untapped, low-cost direct abatement options and ACCU supply from existing projects is more than sufficient to meet the modest incremental abatement required in the first few years of the SGM reforms.

We expect market appetite to acquire early credits (including SMCs and ACCUs) at attractive prices which will prevent prices falling to the marginal cost of supply as facilities build their credit inventories to meet future compliance obligations.

### Exhibit 11. Meeting new SGM demand requires a shift to higher cost supply, driving prices up to be close to the cost containment measure



Note: The sensitivity range shown represents the range of outcomes created by varying central case assumptions across combinations of plausible potential values. No probabilities are assigned to these variations. Source: EY PJP ACCU market model

# The behaviour of major safeguard facilities, especially oil and gas producers, could substantially shift market prices

Prices are highly sensitive to what unfolds in the oil and gas sector, both in terms of new developments and the speed of abatement. Delays of one to two years in implementing abatement could tighten ACCU market balances and lead to significantly higher short-term pricing. Equally, a deferral or cancellation of a new oil or gas project would significantly curtail total ACCU demand, placing downward pressure on prices.

### Major facilities abatement and SMC holding decisions could significantly influence market outcomes

Significant upward ACCU pricing pressure could arise if oil and gas facilities choose to bank SMCs. Relative to our central position (30% SMCs withheld) we find the ACCU price rising to above AU\$70 before 2030, should major facilities withhold all SMC credits.

Conversely, we could see significant downward pressure on ACCU prices under a scenario of no new oil and gas developments as this would reduce demand on ACCUs to cover expected baseline requirements.

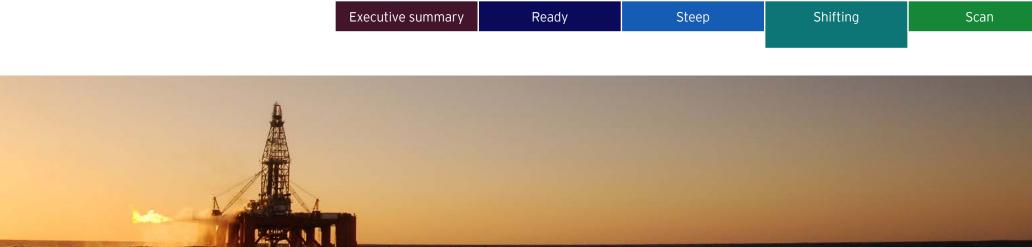
## The oil and gas sector has unique characteristics driving its impact

Oil and gas sector facility emissions are around double the average per facility, and account for 35% of current total SGM emissions. The sector has a significant impact on SGM abatement (see Exhibit 02 above) and credit demand for three core reasons:

- **1.** Existing projects are a large source of emissions with new projects also driving demand given zero baseline requirements.
- **2.** Specific operating contexts provide unique and nuanced abatement options.
- **3.** Each project has differentiated financial decision logic which can make apparently similar abatement investments attractive or unattractive.

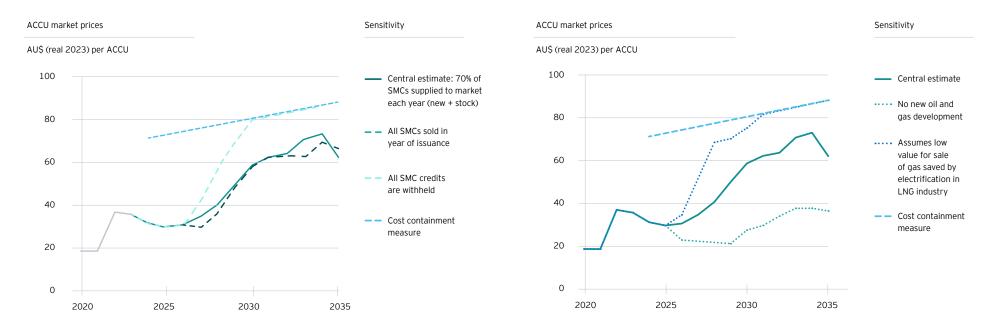
In addition, new gas developments are the overwhelming source of expected new or expanded SGM facilities.

Near term market outcomes are extremely sensitive to the timing of these new entries. Exhibit 12 shows market clearing prices for different development trajectories, along with our central estimate. EY has assumed that projects accounting for 75% of total new emissions come on stream as projected by the Australian Government's Office of the Chief Economist.



#### Exhibit 12. ACCU price will be heavily influenced by the investment decisions made by oil and gas facilities

Price levels for sensitivity analysis to Central Estimate scenario AU\$ (real 2023) per ACCU



Source: EY PJP ACCU market model

Shifting

## The market will take time to adjust, and volumes and prices will be shaped by a myriad of business decisions

The exact evolution of market prices and volumes is hard to predict, particularly in the short-term while the balance of supply and demand is tight. While we expect the market to react and respond to SGM reforms, SGM facilities that delay abatement or withhold SMCs could drive higher short- term ACCU prices. The longer the delay, the more severe and rapid the change in price given the markets supply and demand dynamics.

Businesses will need to consider multiple complex factors and develop unique strategies to effectively create, hold and retire SMCs and ACCUs, and reduce emissions.

### There is no observed history for many aspects of market-shaping behaviour

The ACCU market is relatively young and the reforms are new. Market participants and observers therefore have no history to use to guide expectations and forecasts. The market's evolution and future dynamics will depend on project outcomes, demand patterns, policy developments, and the pace and pattern of technology costs and options.

### Near term carbon prices will be sensitive to small changes in volumes

Our modelling suggests near term prices are highly responsive to small changes in ACCU volumes. This arises from a tight supply-demand balance in early years, reflecting the compliance requirements on covered facilities and continuing market drivers for non-SGM businesses to purchase ACCUs as part of achieving emissions reductions and carbon neutrality commitments.



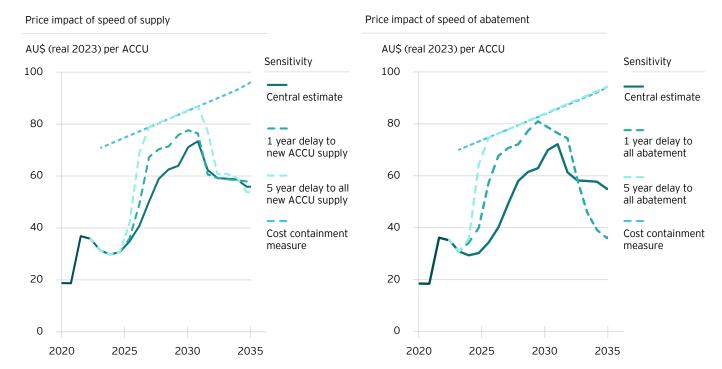


Delays in committing to, or implementing, abatement in SGM facilities will place upward pressure on prices through an increase in demand, as facilities must purchase a larger share of their baseline ACCUs to cover their abatement shortfall.

SMC credits issuance is likely to be concentrated at facilities that implement 'step-change' emission reduction that positions the facility well below its baseline. We expect these facilities will eventually trade most SMCs, thereby reducing net demand for ACCUs. However, should most SMCs be withheld for future compliance periods rather than sold, near term market prices would be materially higher.

Plausible delays in implementing abatement could see the ACCU price exceeding AU\$70 before 2030 compared to below AU\$60 in our central scenario.

Exhibit 13. Near term carbon prices are sensitive to the speed of abatement and ACCU supply implementation Price impact by supply and abatement pathways, AU\$(real 2023)/ACCU



# Future government policies are the major uncertainty in relation to market outcomes past 2035

Our analysis finds the dominant drivers of market uncertainty will shift. Near term uncertainties around the decisions and strategies of SGM facilities and market participants will be resolved, while longer term uncertainties will be dominated by future government policy settings. We consider there are a wide range of plausible post-2035 policy stances that could see - across different contexts either very high future carbon prices (above AU\$125 / tCO\_e) and relatively moderate prices (between AU\$30-40 real). While EY analysis finds technology developments could be significant, we consider policy choices are likely to have larger potential consequences to 2050 than technology effects.

## We assess multiple carbon market scenarios to 2050

We have defined and modelled a range of future scenarios to assess 'what you would need to believe' to quantify upside and downside risks for different types of market participants.

Exhibit 13 shows the high-level price and volume outcomes for these scenarios in the context of our central estimate.

These scenarios include:

High Removals Pathway where relatively high direct abatement costs globally tilts the balance towards use of removals credits. This scenario imagines the competitiveness of trade exposed heavy industry is maintained through a Carbon Border Adjustment Mechanism (CBAM) rather than lower SGM decline rates. From 2035, ACCUs can be exported to other countries (such as in the EU Emissions Trading Scheme (EU ETS)), and the cost containment measure does not continue.

**Tech-enabled Abatement** where faster reductions in technology costs tilts the balance towards direct abatement rather than offsets. Policy responds by imposing faster baseline decline rates, moderating effects on carbon market volumes and prices.

Low Cost High Volume Offsets where domestic supply costs are lower and policy allows SGM facilities to meet part of their obligations using credits imported from Indo-Pacific countries from 2035, reflecting the regional foreign policy advantages of allowing imported units.

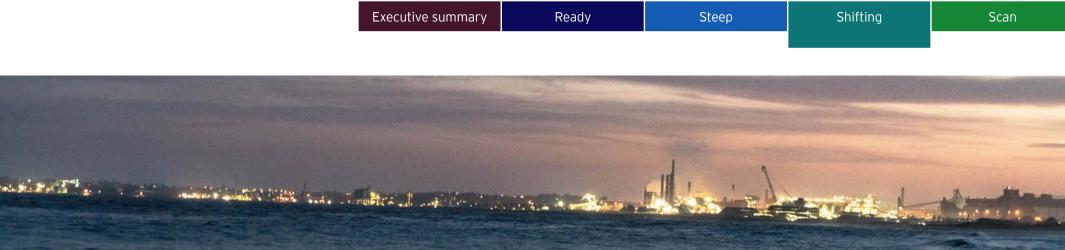
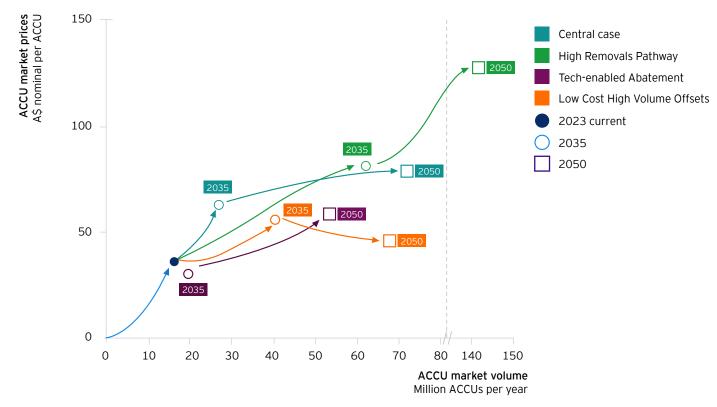


Exhibit 14. We use scenario analysis to explore the dynamics and implications of different potential pathways

ACCU price and volume outcomes, 2023, 2035 and 2050; selected scenarios



# We see plausible scenarios with real long term prices ranging from AU\$30 to AU\$125 per ACCU

EY analysis finds the plausible range of prices beyond 2035 is very wide. While our central estimate sees relatively stable prices, sitting largely between AU\$65 and AU\$75/tCO<sub>2</sub>e in real terms, we find prices could be much higher or lower. At the upper end, Australia could benefit from exporting high integrity removals credits, generating much higher returns than traditional agricultural activities. This outcome is most likely with more ambitious global emissions reductions and a more rapid global transition to low emissions heavy industry (such as a shift to green iron and steel).

## Our central estimate sees prices relatively stable around AU\$70 from 2035

Our central estimate assumes a well-functioning carbon market, with ample globally cost-competitive supply of high integrity removals, and well-informed abatement decisions by SGM facilities.

The central estimate assumes 75% of new gas developments come on stream in line with projections. This central estimate has relatively conservative assumptions about the volume of very low-cost land sector removals (HIR). Faster or more extensive gas development would put upward pressure on prices. Larger supply of HIR credits would put downward pressure on prices.

We consider higher prices are more likely than lower prices relative to our central estimate, both before 2035 and over the longer term to 2050.

## Exporting high integrity credits could see higher ACCU prices, and higher returns

Our central estimate assumes no cross-border trade in ACCUs or credits, consistent with current policies.

Our High Removals Pathway imagines a more connected international approach, consistent with a orderly global high ambition scenario. This sees a coordinated approach to support the transition of emissions intensive industries and position Australia as a supplier of premium quality land sector removals credits. Real prices rise to around  $AU$125/tCO_2e$ shortly after this policy shift (assumed to take effect in 2035) and remain there to 2050.



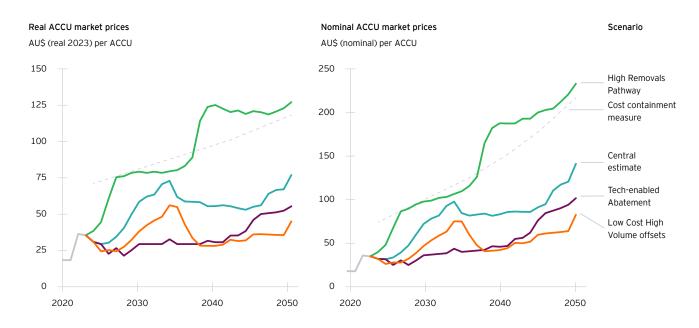
Ready

## EY analysis suggests an effective lower bound on the carbon price around AU\$30/ tCO<sub>2</sub>e

An alternative path combines multiple assumptions that put downward pressure on the Australian carbon price. These include allowing the use of low cost imported units to meet part of SGM compliance obligations, and higher volumes of HIR supply. This sees real prices between AU\$30 and AU\$40/tCO<sub>2</sub>e from 2035.

#### Exhibit 15. We see a wide range of potential carbon prices around our central estimate

ACCU market clearing price for selected scenarios



Source: EY PJP ACCU market model



## Scan Call to action

Set a strategy that responds to business risks, stakeholder pressures and abatement options

The shift to net zero emissions, combined with the SGM, will trigger a raft of strategic responses from businesses. All business leaders are responsible for ensuring they have an appropriate strategy in place to manage emerging risks and take advantages of potential opportunities. The best strategy will respond to the unique context of each business, and seek to shape and re-shape that context. As we have set out previously,<sup>3</sup> the best strategy will give close attention to relative emissions intensity, stakeholder pressures, and abatement costs and options.

## Safeguard Mechanism reforms will raise expectations, and present new opportunities and challenges

SGM reforms signal a renewed commitment to national emissions reductions, placing significant responsibility with heavy industry.

The introduction of new and stringent compliance obligations will increase attention on emissions reductions across covered facilities, and raise the bar for businesses with voluntary or additional emissions commitments. In some cases, the incentives provided through SGM reforms will create major new opportunities for transformational change, either within existing business niches or in new or emerging new markets.



<sup>3.</sup> EY Net Zero Centre, "Essential, expensive and evolving: The outlook for carbon credits and offsets" (June, 2022)



### Strategic posture is shaped by the interplay of emissions intensity and stakeholder pressures

Exhibit 16 sets out our primary diagnostic framework to identify the most appropriate emissions reduction posture for any business. This is based on two core attributes of your business and its context:

- Emissions intensity, or emissions per dollar of revenue, relative to direct competitors in the same sector and relative to potential substitutes (including from other sectors).
- Decarbonisation impetus, or stakeholder pressures, that can affect the ability to attract and access customers, workers, finance and investment capital.

The interactions between these attributes give rise to five stylised carbon postures, as shown on the following page.

### Implementation strategy will be shaped by abatement costs and options

Leaders will need to consider not only the cost of their abatement options relative to carbon credits, but also to what extent those credits meet their business needs in relation to compliance requirements (if a covered facility) and stakeholder expectations.

As business leaders seek to identify the types and sources of emissions that are most salient to stakeholders (including Scope 3 emissions) they may ask several questions: How well does our company's asset lifecycle align with desired timeframes? To what extent do technology solutions exist? Where does our organisation sit relative to its sector?

#### Climate change will continue to re-shape the landscape

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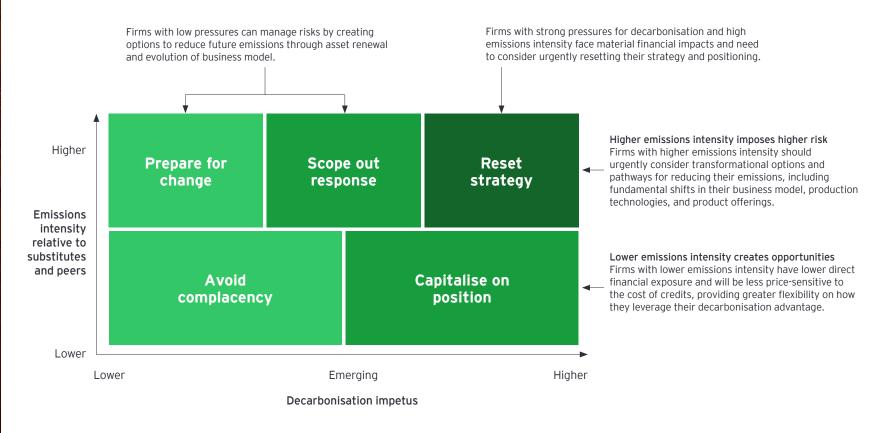
More broadly, climate change, decarbonisation drivers, and the need to disclose material impacts will continue to re-shape the operating environment, market dynamics and operational decision-making.

Business leaders and organisations that plan for a net zero future will be better positioned to manage this changing landscape.

Executive summary Ready	Steep	Shifting	Scan
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Exhibit 16. The strategic context of emissions reductions is shaped by emissions intensity and stakeholder pressure

Framework to identify the default strategic approach to decarbonisation for your organisation.



Source: EY Net Zero Centre 2022

# Consider carbon credits to support earlier and more ambitious commitments, and to smooth the net zero transition

Carbon credits are an essential part of the decarbonisation toolkit, but their most valuable role depends on the business context and decarbonisation strategy. We expect stakeholders to pressure firms with voluntary commitments to move towards greater use of ACCUs in place of international alternatives. This suggests dramatic increases in unit costs and will sharpen the incentive for direct abatement by these businesses.

## Carbon credits have two complementary roles in supporting abatement

Credits allow organisations to offset their emissions now through credits, while implementing cost-effective direct abatement actions to reduce future emissions through asset turnover and the evolution of their business models. This enables organisations to support immediate beneficial climate action through credits, while internal abatement options are being implemented.

In the longer term, credits play an essential role in offsetting hard-to-abate emissions from products that lack ready low or zero emissions options.

In both cases, credits must be of high quality to deliver genuine reductions in emissions, either by avoiding emissions that would otherwise occur, or by removing emissions from the atmosphere.

## High integrity credits are still essential for cost-effective abatement

Consistent with previous analysis by the EY Net Zero Centre, the use of offsets supports substantial cost savings. Not using ACCUs would result in total system-wide abatement costs being around twice as high in 2035.

This cost advantage increases over time as hard-to-abate emissions account for a larger share of the remaining abatement tasks. Therefore, all facilities opting to only use direct abatement would cost over four times as much as a strategy that includes ACCUs over the period from 2035 to 2050.

However, the value proposition of purchasing or creating and supplying ACCUs and SMCs will vary across businesses. Some firms may find that they can achieve their desired emissions trajectory cost-effectively through internal abatement. Others may find that the market risk involved in relying on ACCUs outweighs the potential cost savings, and so may prefer a strategy that does not involve the use of ACCUs.

Executive summary	Ready	Steep	Shifting	Scan
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#### Exhibit 17. Carbon credits can ease the transition and balance out hard-to-abate emissions

#### Two primary uses of carbon credits

	Ease transi	ition timing to net zero	Balance ou	t hard to abate emissions	
Primary use			Long term role to balance out emissions from products that currently lack low or zero emissions technologies or substitutes		
zamples	Compliance	: SGM facilities can bring forward investment, and may generate revenue from SMCs where this overachieves baseline requirements	Compliance	E Low margin trade-exposed SGM facilities such as steel or cement can align major abatement investments to facility asset lifecycles	
	Voluntary:	Transport company reaching net zero before fossil fuel-based assets reach end of life	Voluntary:	Balancing out methane emissions from meat producing cattle	

Transition role is likely to diminish over time

Hard-to-abate emissions are likely to account for an increasing share of carbon credits (or offsets) over time

Source: Adapted from EY Net Zero Centre 2022

# Engage early to prosper through the climate transition

The balance of forces favours the emergence of more efficient markets trading high-integrity carbon credits through a small number of exchanges that are linked to multiple registries in a coherent global framework. This is a future state of the world that business leaders must incorporate into their strategic planning. Government policies, stakeholder expectations, competitive pressures and carbon management options are all evolving rapidly.

## Australia is swimming with the global current

The EY Net Zero Centre has previously argued that carbon credits are an essential part of the business toolkit, will be scarce and increasingly expensive, and that carbon market arrangements will continue to evolve.

Australia's SGM reforms and the implications for ACCUs and the Australian carbon market are in many ways a specific national example of these trends.

The outlook for Australia's carbon markets also illustrates our view that more stringent regulatory obligations will drive increasing demand for (more expensive) removals-based credits, including by allowing the use of voluntarily created credits to meet compliance requirements.



Scan

Executive summary	Ready	Steep	Shifting	Scan

## SGM reforms provide new incentives for leaders to act, and to do so now

Regardless of whether your business is an SGM facility, increasing stakeholder pressures and climate considerations are reinforcing the urgent need for business leaders to engage with, and plan for, the low-carbon transition.

Climate change, decarbonisation drivers, and the need to disclose material impacts will continue to re-shape the operating environment, market dynamics and operational decision-making.

## Every business will be expected to make a positive contribution to the defining challenge of our generation.

And every leader will need a clear decarbonisation strategy that acknowledges the ability of credits to create value (whether that is to comply with regulation, to voluntarily offset emissions, or to supply ACCUs to the market) and support thriving businesses in a rapidly changing world.

Business leaders and organisations that plan for a net zero future will be better positioned to manage this changing landscape. Exhibit 18. Five key steps for businesses to action to prepare for a low carbon world

## Assess your current and future context with fresh eyes

Are you up to date? Who is scanning? What are they looking at? How have things changed in the last three years, and what might this imply?

## Review your long term strategy

What are the implications of your stakeholder pressures, emissions intensity, and opportunity space for strategy and positioning? Is your strategy robust to a range of carbon credit price trajectories?

03

#### Identify potential tipping points for pressures and opportunities

What swift shifts or surprises could transform your context? What new technology options would move the dial?

## O4 Articulate several distinctive value propositions for your company in 2030-35

What could be your distinctive offer? What factors would give weight to one option over another? How would these long term value propositions be implemented and delivered?

#### **JD** Act now to create options and manage risks

What early actions would provide non-carbon benefits as well as reduce your carbon risks? Where might you gain confidence or insight through learning-by-doing? How might you gain an advantage over your peers and competitors?

Source: EY Net Zero Centre 2022

## Technical appendix

Overview of The EY CARBON-VIEW (AUS) model and the scenarios used in this report

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#### Scan

## The EY CARBON-VIEW (AUS) model represents interacting SGM and ACCU supply and demand

The CARBON-VIEW model has been developed by EY teams to explore and assess a wide variety of future carbon market scenarios. The AUS version of CARBON-VIEW represents SGM abatement, and supply and use of SMCs and ACCUs. It draws on facility marginal abatement cost curve estimates and ACCU method incentive prices to develop ACCU supply and demand curves. Finding the market equilibrium between credit supply and demand determines ACCU price movements over the short, medium, and long term.

## Our 'demand curve' is derived through bottom-up cost analysis of covered facilities and voluntary demand

The demand for ACCUs is grounded on the individual needs of facilities, and their abatement investment decisions. The decision ultimately requires the comparison of their emissions and their baseline requirements, combined with their marginal abatement costs versus the ACCU market.

To generate a facilities marginal abatement cost curve, we consider all factors including primary energy costs, product process intensity, capital recovery and energy emissions intensity. These factors allow us to account for changes in cost of energy, efficiency of energy use, capital expenditure from abatement, and revenue from the product amongst other key facets.

Net demand for ACCUs from SGM facilities accounts for aggregate creation of SMCs where facilities find it cost-effective to outperform their baseline. SMCs can be held for own use or supplied to the market.

We also consider demand from voluntary corporate buyers to meet their stated abatement targets as well as ongoing demand from government through the Emission Reduction Fund.

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Exhibit 19. Supply side abatement evaluation is based on a bottom-up cost assessment for each source of emissions within SGM facilities

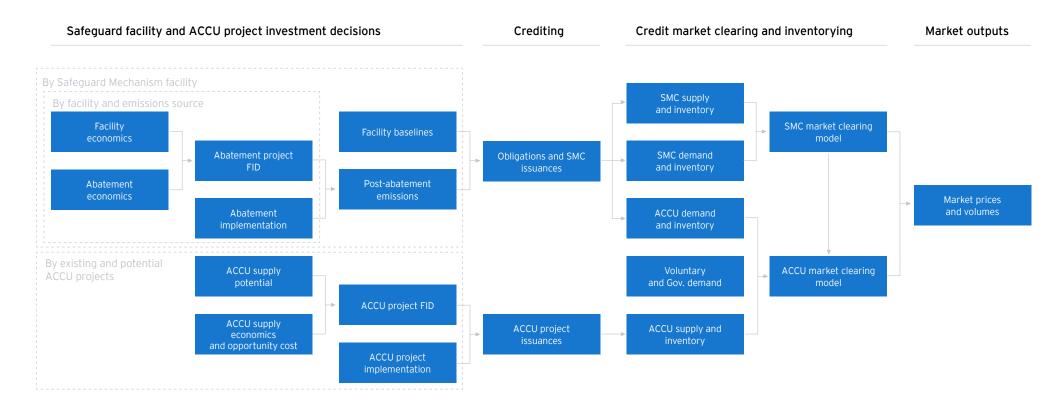




## Our 'supply curve' is developed through consideration of ACCU method projects and their cost of delivery

Our ACCU supply model is a compilation of projections of existing issuing and registered projects, as well as new supply potential for each current and likely future ACCU method. To compile a supply curve, incentive prices are estimated for each method based on long-run marginal cost of new supply and available capacity to be supplied. Methods considered include landfill gas, HIR, soil carbon, afforestation and reforestation, and other minor methods.

#### Exhibit 20. Our CARBON-VIEW model is comprised of multiple bespoke models that are linked to arrive at a projected market price equilibrium



Scan

Shifting

# Four potential future states of the world have been created to support the modelling and deliver insights

The analysis for this report draws on a central case and three alternative narrative scenarios. Taken as a set these scenarios illustrate a range of potential market evolutions that show the range of market outcomes we consider plausible. The pathways chosen are selected to demonstrate different dynamics over time and range in how they flex with certain changes to policy, facility abatement actions and offsetting activity. They have been designed in such a way to explore what must happen for specific market outcomes to eventuate across the range of price and volume potentials.

These scenarios are complemented by multiple sensitivity analyses, which isolate the implications of varying specific assumptions, such as supply potential of a particular ACCU method (eg HIR), or the speed of abatement decisions and implementation.

The diagram highlights the key differences between the scenario pathways, noting the discussion in the report refers to the Central Estimate unless otherwise specified.

Executive summary	Ready	Steep	Shifting	Scan
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Exhibit 21. Each of the pathways explored flexes a selection of variables to drive relative price volume outcomes

	<b>Central Estimate</b> Investments: well-informed	<b>High Removals</b> <b>Pathway</b> Decarbonisation costs: high	Tech-enabled Abatement Decarbonisation costs: low	Low Cost High Volume Offsets More supply available
Increases market size Standard assumption Decreases market size	Australian industry achieves net zero with a combination of affordable industrial decarbonisation and active use of offsetting	Carbon offsets play a critical role in industry achieving net zero given a complex and costly pathway to decarbonisation of Australian industry	Proactive decarbonisation by Australian industry and changes to ACCU market design limit its scope and scale	Limits on high-effort land-use change lead to existing methods seeing wider use with sustained low-prices despite increased demand
Global carbon market trade	No change	Aus allows ACCU exports to EU	No change	Aus imports from emerging markets
Safeguard Mechanism decline rates	No change	Less restrictive	No change	No change
Facility abatement investment hurdle	No change	No change	No change	No change
Facility abatement implementation time	No change	Slower implementation	Faster implementation	No change
Facility abatement costs	No change	High-cost SGM abatement	Low-cost SGM abatement	No change
ACCU project supply availability	No change		No change	Lower threshold on low-cost methods

## Glossary

ACCUs: Australian Carbon Credit Units established under legislation, which are generated by activities such as reforestation, avoiding deforestation, and reducing emissions from livestock. Companies and organisations, including SGM facilities, can purchase ACCUs to offset their emissions.

Additionality: This assesses whether a project creates 'additional' emissions reductions that would not have occurred in the absence of the carbon project.

Afforestation: The process of establishing forests on land with no previous tree cover.

Avoidance credits: Carbon credits based on a reduction in emissions relative to a base case.

 $CO_2$ -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  $CO_2$ -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.

**HIR:** Human induced regeneration, a specific ACCU method for creating land based removal credits.

**Reforestation:** The restoration or replanting of trees in a forested area that has experienced deforestation or significant tree loss.

**Removals credits:** Carbon credits based on removing carbon (or other greenhouse gasses) from the atmosphere and storing it securely.

**SGM:** 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  $100,000 \text{ tCO}_2$ -e of Scope 1, or direct, emissions each year. This equates to around 215 facilities, or an estimated 28% of Australia's total greenhouse gas emissions.

**SMCs:** Safeguard Mechanism Credits are a type of carbon credit created by the Australian Government. These credits can be purchased from SGM facilities that have reduced their emissions below their baseline.

**Suppression:** Historical processes, such as grazing pressure from livestock, fauna, or pests, that have prevented the regrowth of vegetation so it does not establish 'forest' as defined in terms of vegetation class and canopy cover for the HIR method.

## 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 strategists, the Net Zero Centre supports EY clients to make the right decisions at the right times and set themselves on a pathway for success.

We can help you turn disruption into opportunity.



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