Detailed guide

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The Safeguard Mechanism: The ultimate guide

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Key facts

- The Safeguard Mechanism ('SGM') is Australia's largest industrial emissions reduction policy.
- After a series of evolutions in recent years, it now operates as an emissions-intensity scheme with each facility being required to keep its emissions below individualised declining baselines. This represents a very significant departure from how the scheme operated under the LNP government.
- As a result of reforms new facilities – being those caught by the SGM for the first time after the 2023 reforms – are held to significantly higher standards than existing ones. However, most coal and gas projects currently seeking approval or under development will be treated as existing projects, often for tenuous reasons. This means that most coal and gas projects will avoid being held to more onerous emissions limits.
- The SGM doesn't cover all major emitters, or even all of their emissions. In total, around one third of Australia's net annual emissions are subject to emissions limits under the SGM. Just over half of these emissions come from coal and gas extraction, processing and transport. Most emissions from generating electricity, all land-clearing and emissions from agricultural activities are excluded from the SGM.
- The SGM relies very heavily on offsetting, primarily relying on Australian Carbon Credit Units ('ACCUs'). The federal government expects a greater share of abatement to be delivered from offsets than on-site emissions reductions until at least 2035. Most of the offsets currently being delivered are generated through ACCU methods that have substantial, unaddressed integrity issues such as landfill gas, avoided deforestation and human-induced regeneration.
- The new offset credit created under the reformed scheme, the Safeguard Mechanism Credit ('SMC'), contains several integrity issues of its own and is not meaningfully more robust than or preferable to ACCUs from an environmental integrity perspective.
- The government expects the SGM to meet its legislated goals, including those goals that constitute the so-called 'hard cap'. Due to a series of critical weaknesses in how these goals have been created, this assessment is undoubtedly correct.
- While arguments that the scheme should be expanded to cover more facilities or more sectors are common, there is likely to be very little environmental benefit to expanding the scheme. Doing so would bring significant additional downsides.

The basic operation of the Safeguard Mechanism

An Abbott-era scheme created as an afterthought

- **Original genesis.** The SGM started life as a cap on emissions at major industrial facilities under the Abbott government in 2015. This was done to secure votes in the senate – particularly those of Nick Xenophon and colleagues – to pass the bills that would repeal Australia's carbon price. The stated rationale for creating the SGM was to

ensure that abatement purchased under the LNP's Emissions Reduction Fund weren't offset by increases in emissions in other sectors of the economy.

- **A tangled reform history.** In subsequent years, the LNP repeatedly weakened the SGM to ensure that those major industrial facilities caught by the scheme could more easily avoid penalties for exceeding their emissions limits. ALP reforms to the scheme passed in 2023 have fixed some of these loopholes, though other features that might formerly have been described as loopholes have been incorporated into the SGM as design features. For example, the ability to purchase offsets in lieu of being compelled to limit on-site emissions, and the shift away from absolute emissions limits to limits on emissions intensity were both inserted as optional methods through which operators could seek to soften the impact that the SGM would have on their covered facilities. These are now core design features of the scheme.
- **Sits uneasily with other climate schemes.** The SGM is not well integrated with other Federal government climate policies. Where EPBC approvals are granted, the Environment Minister must notify the Climate Change Minister, Department Secretary and Climate Change Authority of these decisions and forward any emissions estimates that were provided in the EIS. This information is used to test whether the SGM is continuing to operate in accordance with the SGM's so-called had cap (See **FAQ #1**). There is no requirement for equivalent notifications to be made by either NOPSEMA or state and territory governments. This leaves agencies responsible for assessing whether the hard cap will be met without the necessary information to reliably make that assessment.

    - Western Australia has also used the existence of the reformed federal SGM as an excuse to refuse to regulate greenhouse gas emissions from major projects, relying on an incorrect interpretation of the Commonwealth Constitution.

The SGM doesn't apply to all major emitters, or all of their emissions

- **Only large emitters.** The SGM affects industrial facilities emitting more than 100,000 tonnes of carbon dioxide equivalent greenhouse gas (t CO_2e) per year, and covers emissions from fossil fuel consumption, industrial chemical processes, and waste. In 2023-24, 233 facilities were bound.
- **Not the land clearing or the agricultural sector.** Emissions from agricultural activities per se and land use/land clearing are not covered by the scheme at all. These activities are not considered by the laws that compel entities to report their emissions to the federal government. With the SGM being nested within that broader framework, the exclusion of the land sector from mandatory emissions reporting laws extends to exclusion from the SGM (see **FAQ #3** for more information).
- **Most electricity generation is excluded.** Electricity generators supplying power to Australia's major grids are technically covered by the scheme through a sector-wide baseline, though this is set in such a way that the sector is functionally excluded from the

scheme in its entirety (see **FAQ #2**). However, emissions from on-site electricity generation at major industrial facilities – e.g. raw gas from a gas field that is burned to provide electricity to an offshore processing facility – are covered by the scheme, as are some generators supplying minor grids.

- **The arguments for expanding the scheme beyond those facilities, or those sectors, that are currently covered are not strong.** There have been several proposals to expand the scope of the scheme, and it is one of the most commonly cited arguments for its reform. Expanding the scheme would at best provide marginal environmental benefit, while delivering very substantial downsides. Invariably, for those sectors and facilities not presently covered by the scheme, there are more effective ways to reduce emissions than introducing them to the SGM (see **FAQ #3**).
- **Only emissions released from Australia.** The SGM only regulates scope 1 emissions, being those emissions that are directly released from the operations of an industrial facility. This includes fugitive carbon dioxide and methane, and on-site energy generation. However, the emissions associated with grid-supplied electricity, end-use of products sold or embodied emissions released upstream of the facility are not considered by the scheme at all. This is a critical gap, particularly given the simple existence of the SGM is frequently used to justify approval of new coal and gas infrastructure. The SGM does not cover the most significant proportion of the emissions impact of these projects, which is ordinarily responsible for 90% or more of the total emissions. As a result, mentioning the existence of the SGM in debates about the appropriateness of approving new fossil fuel production projects is largely a non sequitur: The scheme simply does not address the share of a new fossil fuel project's emissions that advocates for change are most concerned about.

The scale of emissions covered

Not including grid-supplying electricity generators (see above), in 2023-24 the SGM covered 137 Mt CO_2e of emissions, or 31% of Australia's net total emissions. 57% of the emissions from covered facilities in that year were from facilities supplying coal and gas. Preliminary data for 2024-25 indicates that emissions were much the same, with on-site emissions being only marginally lower over the year.

- **Oil and gas production facilities** accounted for 31% of all emissions released from SGM facilities, or 43 Mt CO_2e.
- **Coal mines** accounted for 23% of covered emissions, or 32 Mt CO_2e.
- **Other fossil energy supply infrastructure**, including pipeline operators and standalone power stations supplying electricity locally, accounted for 3% of covered emissions, or 5 Mt CO_2e.
- **Other major facilities** accounted for 42% of covered emissions, or 58 Mt CO_2e.

How baselines are set

- **The basics.** The SGM is now an emissions intensity scheme, with benchmarks transitioning from each facility's own historical emissions intensity to the average emissions intensity of all Australian facilities in their sector over time.
- **Emissions intensity scheme.** The SGM has shifted from being a cap on absolute emissions to an emissions intensity scheme. This means that a facility's emissions limit (formally known as its 'baseline') increases and decreases depending on how much the facility produces every year. For example, as a result of this change a coal mine's annual emissions limit increases or decreases if the amount of coal it produces changes between years, with the final emissions allowance being determined with reference to a set number of tonnes of greenhouse gas emitted per tonne of coal produced.
- **New facility treatment.** Under the reformed scheme, new facilities will have their baselines set in accordance with international best practice, which is usually significantly more onerous than current industry-average. Frequently, the emissions allowances per unit of production (e.g. how many kilograms of greenhouse gas a facility is permitted to release per tonne of coal produced) at a new facility are less than one-fifth of the current industry average. Sometimes the allowance for new facilities is as low as 10% of current industry average. However, most coal and gas projects currently seeking approval or under development will avoid these more onerous obligations (see **FAQ #4**).
- **Baseline setting is complex by design.** Baseline calculation is frequently very complicated with some coal and gas facilities' final baselines being the sum of benchmarks across more than half a dozen or more different activities (see **FAQ #5**).
- **Baselines are now moving from site-specific to standard across an industry sector.** Historically, a facility's emissions intensity benchmarks were set with reference to that facility's own past emissions. This meant that relatively emissions-intensive facilities, like underground coal mines, were only penalised if they became more emissions-intensive than they had been in the past. Under the ALP reforms, all existing facilities will slowly transition to industry-average emissions-intensity benchmarks, though the transition for coal mines is significantly delayed.

    - The coal industry's special treatment is one among several instances of successful industry lobbying that occurred during the later stages of implementation, after the core legislation was passed, that resulted in the industry receiving more favourable treatment under the scheme (See **FAQ #6**).

- **A broken promise.** The agreement between the Greens and the ALP that was used to secure passage of the 2023 SGM reforms explicitly noted that new gas fields supplying existing LNG terminals would be treated as new facilities so that they would be held to higher standards than existing fields. This commitment was only partly met, with a likely impact of several million tonnes per year of additional emissions never being offset under the scheme once these projects come online. The relevant emissions standard for

reservoir carbon dioxide from new fields has been set at zero, meaning that this portion of emissions must be fully offset in line with the spirit of this agreement. However, no other changes have occurred to ensure more onerous treatment of new gas fields supplying existing LNG infrastructure. For example, according to its proponent the Scarborough field has negligible reservoir carbon dioxide content. Because the reforms were not implemented in their promised form, virtually all the emissions from the project will be able to avoid being held to those higher standards that it should have borne if the agreement had been followed. The net benefit to Woodside of avoiding these higher obligations will amount to tens of millions of dollars per year.

New declining baselines

ALP reforms to the SGM mean that facility baselines will slowly decline toward net zero in 2050, with trade-exposed facilities able to slow the decline rate under specific circumstances.

- **Default decline rate.** By default, facility baselines decline by 4.9% per year which places them broadly on a path to hitting net zero in 2050. This factor is applied after all major calculations made as part of the baseline setting process have occurred. In year one (2023-24), each facility's baseline was set at 95.1% of the full allowance. In year two (2024-25), it will be set at 90.2% of the total. After 2029-30, the annual decline rate will be set at 3.285% per year: a linear decline to baselines of zero in 2049-50.
- **Special treatment for trade-exposed facilities.** Trade-exposed facilities – which includes gas and coal producers – are eligible to apply for a lower annual decline rate if the cost of buying offsets rises above certain thresholds. This potentially provides a disincentive to seeking out opportunities for on-site abatement. In year one of the operation of the SGM, seventeen facilities applied for special treatment. In that year, none of these were coal and gas producers, though as the scheme progresses, it is likely that some coal and gas producers will qualify for this more-favourable treatment.

The Safeguard Mechanism relies heavily on offsets

- **Offsets are used to remedy excess emissions.** If a facility exceeds its baseline, it must purchase offsets to bridge the gap between its actual emissions and its emissions limit. These offsets can either be ACCUs – credits created under a scheme that is wracked with its own significant integrity issues – or the new Safeguard Mechanism Credits ('SMCs'), which are discussed below.
- **A cap on the price of offsets that is unlikely to be used.** The SGM has a price cap, through which the government has – at least notionally – guaranteed that the price of an offset credit will never rise above $75 per tonne (adjusted up annually for inflation). Because the government can increase the supply of offset credits by creating new kinds of offset units – consequently controlling the price of offsets – it is very unlikely that the price of credits will ever rise to this level.

- **Offsets, especially cheap offsets, blunt the incentive for on-site abatement.** Between 2022-23 and 2023-24, total emissions from the SGM facilities declined by just 1.9 Mt CO_2e, or 1.4%. Meanwhile, 8.4 Mt CO_2e worth of offset credits were purchased and surrendered by SGM facilities to meet their baselines. Official government projections indicate that offset use will outpace on-site abatement until at least 2035.

Safeguard Mechanism Credits result in perverse outcomes

- **A new offset unit.** SMCs were created as part of the ALP's SGM reforms. They are issued to facilities that are below their baseline each year, with each SMC being worth one tonne of carbon dioxide greenhouse gas – the same as an ACCU – and issued on a one-to-one basis to any unused allowances. That is, a facility with a baseline of 1 million tonnes of greenhouse gas that emits just 900,000 tonnes in that year will receive 100,000 SMCs.
- **Money for nothing.** Over the coming decade, as facilities transition from site-specific to industry-average baselines, several coal mines will receive a windfall of SMCs because these mines have always had emissions that were below industry average simply through favourable geology. Energy and Resource Insights analysis released in 2023 identified ten such coal mines that were likely to receive such a windfall this decade.
- **No regard for other legal obligations.** Unlike ACCUs – which in theory should not be granted to activities that are legally required – there is no test for additionality in issuing SMCs. This results in perverse situations like the Gorgon LNG terminal being issued with nearly 400,000 tonnes of SMCs (worth around $12m), despite record high underperformance at its legally-required CCS facility. Had the facility done now more than operate as it is already legally-required, capturing all 5.3 million tonnes of carbon dioxide of reservoir carbon dioxide from the field in that year, it would have been issued with almost $150m worth of SMCs. To be clear, that $150m worth of credit would have been passed to Chevron for doing nothing more than those activities that it is already compelled to under Western Australian laws.

Frequently Asked Questions

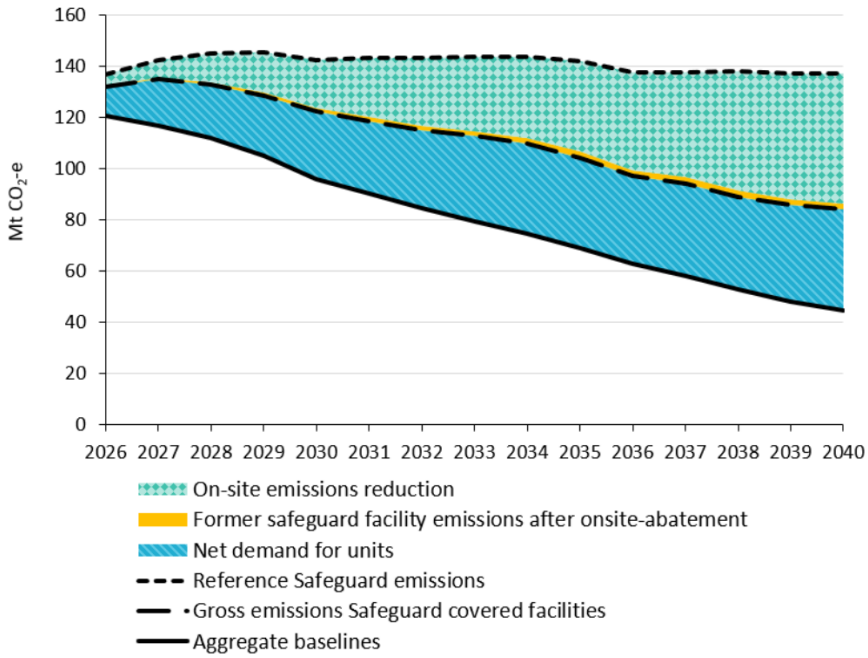
FAQ #1: What is the 'hard cap', and how does it work?

A review trigger to ensure the SGM delivers on its goals. As part of the SGM reform, crossbench senators successfully negotiated for the inclusion of the so-called hard cap in the reforms. This mechanism compels the Minister to publicly consult on whether the SGM should be reformed if he is advised by the Department Secretary or Climate Change Authority that

certain goals won't be met by the scheme under its current settings. Those goals are that (numbering taken directly from the relevant act):

> *b. total net safeguard emissions for all of the financial years between 1 July 2020 and 30 June 2030 do not exceed a total of 1,233 million tonnes of carbon dioxide equivalence;*
> *c. net safeguard emissions[1] decline to:*
> *i. no more than 100 million tonnes of carbon dioxide equivalence for the financial year beginning on 1 July 2029; and*
> *ii. zero for any financial year to begin after 30 June 2049;*
> *d. the 5-year rolling average safeguard emissions for each financial year that begins after 30 June 2024 are lower than the past 5-year rolling average safeguard emissions for that financial year;*

The government and Climate Change Authority are both currently of the opinion that these goals will be met. The Federal emissions projections – which account for a significant number of new coal and gas production projects – conclude that net emissions will decline under the current SGM as shown below:



Safeguard business-as-usual, gross emissions, on-site emissions reductions and net demand for units in the baseline scenario, 2026 to 2040, Mt CO_2e. Source: DCCEEW.

[1] Goal c includes a drafting error. Despite the use of the word "net", read strictly "net safeguard emissions" refers to emissions before offsetting. This is because "safeguard emissions" is defined elsewhere in the act as covered emissions before accounting for offsets. On this reading, the word "net" is essentially meaningless. However, given the broader context it is likely that this obvious drafting error would be remedied in favour of the clear intent to account for offsetting. This means that the 100 million tonnes in (c)(i) for example would almost certainly be read by a court as net emissions (emissions after accounting for offsets), rather than gross (emissions before accounting for offsets).

FAQ #2: How is electricity considered by the scheme?

The electricity sector is given separate treatment to all other sectors and is bound by a shared, sector-wide baseline permanently set at the highest point emissions have ever been for the sector. There is no prospect of this baseline ever being exceeded, making the baseline meaningless. Facilities supplying electricity to any of Australia's major public electricity grids are covered by a single shared sectoral baseline. This baseline cumulatively covers the sector as a whole and is set at the highest point Australia's electricity sector emissions have ever been: 198 Mt CO_2e. If cumulative emissions from the electricity sector ever rise above that point, then in the following year all facilities will be covered by their own baselines.

Given progress on renewable energy in recent decades and the retirement of several major coal power stations, there is no realistic prospect of emissions rising to this level, meaning the electricity sector is functionally permanently excluded from the scheme. In 2023-24, cumulative emissions from electricity sector facilities were 142 Mt CO_2e. Reaching 198 Mt CO_2e would require emissions from the sector to increase by an implausible 40%. For context, this is a little higher than the emissions that would occur if Australia opened ten new average-sized black coal power stations. At present there are no serious plans to open even one new coal power station in Australia.

FAQ #3: Should the number of facilities covered by the safeguard mechanism, or its sectoral coverage, be expanded?

Very little additional benefit would be gained by extending the scheme to apply to small facilities. As noted above, the SGM applies to facilities emitting more than 100,000 t CO_2e per year. A frequently cited proposal is that we should extend safeguard coverage to facilities emitting 25,000 t CO_2e per year. This lower figure is chosen because facilities over this size must already report their emissions to the Federal government under other laws.

With public data it is not possible to gain perfect insight into the number of additional facilities that would be added to the SGM by lowering the threshold. However, it is possible to demonstrate that the total additional emissions that would be covered is relatively small. Australia's corporate emissions reporting obligations apply to any corporation responsible for more than 50,000 tonnes of scope 1 emissions per year, and to any company with a single site responsible for more than 25,000 tonnes per year. Because the NGER corporate emissions reporting scheme and the SGM have the same sectoral coverage, we know that all SGM facilities – and potential SGM facilities – emitting more than 25,000 t CO_2e per year must also report their corporate group emissions under NGER.

This can be used to set an effective cap on the additional emissions that would be included in the SGM if coverage were lowered to include all facilities emitting 25,000 t CO_2e or more. In

2023-24, NGER corporate reports from entities reporting more than 25,000 t CO_2e cumulatively totalled 297 Mt CO_2e. Cumulative emissions from SGM facilities and grid-connected electricity generators totalled 278 Mt CO_2e. Recognising that a very significant share of the emissions from corporate groups emitting more than 25,000 t CO_2e per year are occurring at diffuse operations that could not reasonably be considered a single SGM facility – and so recognising that this is likely a very significant overestimate – this means that lowering the SGM threshold from 100,000 t CO_2e to 25,000 t CO_2e per year could increase the scheme's coverage by no more than 19 million tonnes, or 4% of Australia's annual emissions.

While that might sound like an eminently reasonable thing to do, and 4% of Australia's annual emissions is nonetheless a very large amount, it is worth noting that doing so would not reduce emissions by 4%. It would simply result in an additional 4% of Australia's annual emissions being added to an offsetting scheme that has very significant pre-existing issues.

Doing this is likely to add significant additional issues. For example: (1) due to their size these facilities are likely to have a greater degree of inherent variability in their annual emissions, meaning setting appropriate baselines will be more difficult and a minor flood of spuriously-generated offset credits will likely occur, (2) these facilities will be across a greater diversity of industrial sectors, meaning new standards will need to be assessed and set for each new area, (3) these facilities have never been bound to the SGM before, meaning that they would land in the scheme as new facilities bound by international best practice baselines no matter how long they have been operating, and (4) the introduction of these facilities into existing sectors will necessitate adjustment to existing industry average baselines, which they will likely to skew due to the fact that they operate with different economies of scale to larger pre-existing participants. These downsides and difficulties are not insurmountable, but they are large, and the overall detriment may well outweigh any additional benefit from including these facilities in the scheme.

As baselines from large facilities contract toward zero, one policy option that may be worth pursuing instead is a staged lowering of the 100,000 t CO_2e designated large facility threshold in increments over time. An example – taken from this Climate Council submission to an early SGM reform process – is below.

Financial year covered	Designated large facility threshold
2024 – 2029	100,000 t CO_2e
2030 – 2034	85,000 t CO_2e
2035 – 2039	70,000 t CO_2e
2040 – 2044	55,000 t CO_2e
2045 – 2049	40,000 t CO_2e
2050 onward	25,000 t CO_2e

Doing this addresses the potential for participants to fall out of the scheme over time, while avoiding, delaying or staging most of the detrimental impacts that an immediate lowering of the SGM threshold would have.

There are almost certainly better ways to deal with emissions from the land sector than by extending the SGM to that sector. As noted above, the land sector has generally been excluded from the operation of Australia's mandatory emissions reporting laws, and this exclusion extends to the SGM. This means that emissions from land clearing, land use, and agricultural activities are not required to be offset under the scheme. Due to the way the scheme is designed, in theory if an agricultural operation burned enough fuel to meet the SGM threshold of 100,000 t CO_2e per year, it would be captured, but emissions from ruminants or land clearing would not be counted toward that that total. This situation has not occurred in the history of the SGM.

The stated reason for these sectoral exclusions at the time those emissions reporting laws were created was due to the lack of reliable methodologies for estimating emissions from this sector. This argument was rather spurious back then: such methodologies did exist and while imperfect were already being used by the federal government at the national scale. Today this is simply an indefensible proposition given the government's reliance variations on those same methodologies to justify the creation of offset credits through the ACCU scheme.

That said, adding these sectors to the SGM cannot be regarded as the best – or even a particularly good – means of ensuring that emissions are reduced from these sectors. Emissions from agricultural operations and land clearing are not of-a-kind with most other emissions covered by the SGM in either their sources or their mitigation options. Introducing these sectors to the SGM would also introduce a range of near-intractable problems with the ACCU market, particularly related to additionality and the messy interface between SMCs and ACCUs.

Extending the scheme to the electricity sector would add to the cost of running high emitters, which might put additional pressure on these to close earlier, but would do nothing to drive the additional renewable energy generation necessary to replace them. As with the land sector, the arguments for excluding the electricity sector from the general operation of the SGM were unprincipled at the time the scheme was created. These arguments certainly have no basis today and should not be considered relevant to today's circumstances.

However, the complex dynamics at play when it comes to the closure of coal power are neither aided nor resolved by simply adding to their operators' costs. To begin with the SGM is structured in such a way that it delivers net zero in 2050, a time when almost all of Australia's coal-fired electricity generating fleet will already be closed. As such, the settings would need to be reconsidered for the electricity before it could be included. More meaningfully, the current problem with the closure of coal – as seen with state governments offering financial support to keep Loy Yang A and Eraring open – simply has not been a problem of strict economics. Many

commercial operators already want to close their mines for purely economic reasons, but state governments are grappling with the need to ensure that there is adequate supply to replace these power stations when they are gone. Inclusion of these generators in the SGM cannot help with that. Further the pressure to decrease emissions intensity will have little or no ability to drive on-site abatement at coal fired power stations because options to reduce emissions on-site do not meaningfully exist beyond partial or total closure of the power stations. Adding coal-fired power stations to the SGM will drive demand for offset credits, pushing up the price of offset credits and nothing more. If those credits could be relied on to represent as a source of high-integrity abatement, this may be a worthwhile goal. However, they cannot.

Across Australia, there are 42 gas-fired electricity generators emitting more than 100,000 t CO_2e per year – responsible for a cumulative 15 Mt CO_2e in 2023-24 – whose future trajectory might be altered by inclusion in the SGM. That said, as with coal generators the future of these generators will be determined to a far greater degree by the pace of renewable energy deployment and emissions-free firming alternatives than they ever will be a requirement to offset excess emissions. It is possible that the additional commercial burden that these plants feel may drive some to reduce production. However, the early closure of gas generators or reduced production from those generators is fundamentally not the primary issue that needs to be solved to hasten reduced emissions in the electricity sector. Rather, the primary concern is making space for their reduced production by ensuring that zero emissions alternatives are available. As a result, while there may be some minor benefit in including gas generators in the SGM, the problem with including these generators is much the same as it is with coal. Fundamentally, this is a solution that does not meet the problem.

FAQ #4: How and why will most new projects avoid more onerous international best practice production variables?

As noted above, the reformed SGM holds new facilities to significantly more onerous emissions standards than existing facilities. While existing facilities are held to hybrid baselines that transition from the facility's own historical emissions intensity to industry-average over time, new facilities will be held to emissions standards based on international best practice. These standards are frequently just 20% – and at times as low as 10% – of industry-average.

However, expansions to existing operators are not treated as new projects for the purposes of the SGM, and under the rules in their current form around 5-in-6 new coal and gas projects currently under development would be treated as expansions to existing operations rather than as new facilities in their own right. Under the current legislation, this could include some remarkably tenuous examples including the new Lake Vermont underground mine (likely considered an extension of an existing open cut mine) and Barossa field (likely considered part of the Darwin LNG terminal despite these being nearly 300 km apart).

FAQ #5: How are baselines set for complex, multi-faceted operations?

Each facility's baseline is essentially the sum of several emissions allowances, with each component being based on the amount of each activity being undertaken. The sum of these allowances is then adjusted downward to account for the annual decline in emissions needed to meet the goals of the scheme.

For some facilities, determining the baseline is straightforward. For example, Bengalla coal mine in the Hunter only engages in one SGM activity: the production of run-of-mine coal. In 2023-24, Bengalla produced 12 million tonnes of run-of-mine coal. Based on its historical emissions intensity and a transition to industry average variables, in that year it was permitted to emit 0.04306 t CO_2e worth of scope 1 emissions per tonne of run-of-mine coal. Multiplying its 12 million tonnes of production by 0.04306, then subtracting 4.9% for the first application of the SGM's annual decline rate, results in a total allowance of a little over 519,270 t CO_2e per year. This constitutes the emissions baseline – the total emissions allowance – Bengalla received in that year.

Other facilities are significantly more complicated. Woodside's North West Shelf LNG terminal's baseline is the sum of eight different production variables to account for the different activities it undertakes. This accounts for the different products that the LNG terminal produces, and the methods used to produce them. There are also separate production variables to account for its on-site electricity generation and its vented reservoir carbon dioxide emissions. Each emissions intensity variable is multiplied by different quantities of production, then all of these are summed together before the annual 4.9% decline rate is applied. In 2023-24, North West Shelf had a total allowance of 5,489,531 t CO_2e.

FAQ #6: A few examples of industry lobbying to weaken the Safeguard Mechanism.

Delayed coal transition to industry-average emissions standards. As discussed above, in recent years the SGM has used the average emissions intensity of each existing site to set that facility's baseline. This resulted in individual facilities being penalised if their emissions intensity increased compared to the past. However, it did not in any way consider whether an individual facility was more, or less, emissions-intensive than peers supplying the same goods or services.

The reformed scheme will slowly transition to new baselines that progressively begin to penalise those facilities that are relatively emissions-intensive over time, while rewarding those that are relatively efficient. It does this by slowly transitioning facilities away from baselines set according to each site's historical emissions intensities, and toward standards that are set according to industry averages.

For all industries other than coal, this transition will occur in full this decade, with baselines being set with exclusive reference to the average emissions intensity of that industry in the 2029-30 financial year, following the schedule below.

Parts of the coal industry successfully lobbied to ensure that their industry has a delayed transition to industry average. This dramatically lowers the penalties that will be suffered by Australia's most emissions-intensive coal mines, which emit as much as 50x more per tonne of coal compared to those that are comparably efficient. This delay has plausibly saved Australia's most emissions-intensive mines millions of dollars per year. For example, partly as a result of this change Australia's most emissions intensive coal mine – Appin – was issued with around $10m worth of free SMCs in 2023-24 because its emissions were below its baseline.

FY	2024	2025	2026	2027	2028	2029	2030
Coal mines	5:95	10:90	15:85	20:80	30:70	40:60	50:50
Facilities other than coal mines	10:90	20:80	30:70	40:60	60:40	80:20	100:0

Ratio industry-average emissions intensity and site-specific emission intensity values used in baseline setting.

Gas industry lobbying to reduce the onerousness of industry best practice emissions standards. Between the first draft of the rule amendments that set industry best practice emissions standards and the final draft, almost all emissions standards relevant to the gas export industry were made less onerous. Each of these shifts, some of which resulted in production variables being doubled, will have a very significant commercial benefit to any facility that is caught by them.

A full table is contained below:

	International best practice	Industry average
Extracted oil and gas (s 26)	0.0360 kg CO_2e per GJ (0.0101 kg CO_2e/GJ originally proposed)	0.376 kg CO_2e per GJ
Stabilised crude oil or condensate (stabilisation only) (s 27)	0.32 kg CO_2e per GJ	1.21 kg CO_2e per GJ
Stabilised crude oil (integrated extraction and stabilisation) (s 28)	0.356 kg CO_2e per GJ (0.330 kg CO_2e/GJ originally proposed)	3.84 kg CO_2e per GJ

	International best practice	Industry average
Processed natural gas (processing only) (s 29)	0.243 kg CO_2e per GJ currently proposed. (0.178 kg CO_2e per GJ originally proposed)	1.59 kg CO_2e per GJ
Processed natural gas (integrated extraction and processing) (s 30)	0.394 kg CO_2e per GJ currently proposed. (0.319 kg CO_2e per GJ originally proposed.)	2.75 kg CO_2e per GJ
Liquefied natural gas (from unprocessed natural gas) (s 31)	0.876 kg CO_2e per GJ currently proposed. (0.801 kg CO_2e per GJ originally proposed.)	4.14 kg CO_2e per GJ
Liquefied natural gas (from processed natural gas) (s 32)	0.633 kg CO_2e per GJ (0.482 kg CO_2e per GJ originally proposed)	4.01 kg CO_2e per GJ
Reservoir carbon dioxide from existing gas fields (s 35) and new fields (s 35A)	**Existing fields:** 20 kg CO_2e per tonne of reservoir carbon dioxide **New fields:** zero kg CO_2e per tonne of reservoir carbon dioxide	928 kg CO_2e per tonne of reservoir carbon dioxide
[On-site] Electricity generation (s 57)	236 kg CO2-e per MWh (177 kg CO_2e per MWh originally proposed)	539 kg CO_2e per MWh

A note on sources

Most of the analysis in this guide is directly based on provisions in the legislation and government data sources.

Where other sources are cited, these are linked from the text.

The relevant legislation is:

- National Greenhouse and Energy Reporting Act 2007
- National Greenhouse and Energy Reporting (Safeguard) Rule 2015
- National Greenhouse and Energy Reporting Regulations 2008
- National Greenhouse and Energy Reporting (Measurement) Determination 2008
- Clean Energy Regulator Act 2011

Data sources used – most of which are provided by the Clean Energy Regulator – are:

- Safeguard data
- NGER corporate emissions data and electricity sector data
- NGER table of methods used to estimate fugitive methane emissions
- Emissions intensity determination table
- Australia's emissions projections 2024