ACCR

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Safeguard mechanism

An opportunity to drive industrial decarbonisation in Australia

A response to the DCCEEW Consultation paper, 2022

ABOUT ACCR

The Australasian Centre for Corporate Responsibility (ACCR) is a not-for-profit, philanthropically-funded research organisation, based in Australia. ACCR monitors the environmental, social and governance (ESG) practices and performance of Australian-listed companies, including climate change, human rights, and labour rights. We undertake research and highlight emerging areas of business risk through private and public engagement. For more information, follow ACCR on Facebook, Twitter and LinkedIn.

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Executive Summary

The Safeguard Mechanism (SGM) is the primary climate policy to address Australia's industrial emissions. Although it was intended by the previous government to cap emissions, rather than reduce them, emissions covered by the SGM have increased since it was introduced in 2016. Nonetheless, with the right combination of refinements, it could reduce emissions in a way that is fair, effective and efficient.

The government's pre-election platform is based on modelling that assumes industrial emissions are reduced by 5 $MtCO_2$-e pa. This equates to an absolute reduction of just 7.2% by FY31 from 2005 levels,[1] or 13% on a net emissions basis. Recent analysis[2] funded by some of Australia's largest industrial emitters, identified technically feasible options to reduce absolute emissions by 88%. Greater ambition that drives real world reductions in industrial emissions is clearly feasible. ACCR recommends that the SGM be calibrated so that industry delivers its proportionate share of Australia's current and future national emissions reduction targets. For the 43% reduction target by 2030, this equates to 10 $MtCO_2$-e pa, or 7.3% pa.

The use of land based carbon credits to offset emissions is conceptually flawed and Australia's carbon market has been branded an "environmental and taxpayer fraud".[3] Risks associated with the use of land based carbon credits meant that the use of Australian Carbon Credit Units under the Gillard government's carbon price was limited to 5% of a facility's carbon liability. This 5% limit should be reinstated for the SGM.

Provided that the baseline headroom is removed and they decline in line with the national target, Safeguard Mechanism Credits (SMC) will be high integrity. In this scenario, SMCs should be issued and used by facilities to meet SGM obligations without limit, along with being traded with other facilities to meet their obligations.

Emissions intensive trade exposed (EITE) industries should not receive preferential treatment, particularly those industries that are not compatible with a net zero pathway. International and Australian experience shows that fears of carbon leakage are often overstated. Despite Australian industry mocking previous EITE shielding provided to LNG as being like 'lipstick on a pig', Australia became the world's largest LNG exporter due to decisions made whilst carbon pricing was in force or under development. Even in a scenario where the baselines in the SGM reflect a 7.3% pa decline as recommended in this submission, moderately emissions intensive industries such as LNG will receive more shielding than they received under the previous carbon price until FY32. Providing preferential EITE treatment will however increase the burden placed on non-EITE industries, and if designed poorly could result in perverse outcomes that lead to increases in global emissions.

Recommendations

1. Increase the ambition of the Safeguard Mechanism so the industrial sector delivers a 43% emissions reduction between 2005 and 2030.
2. All facilities should immediately move to baselines that use industry average emissions intensities.
3. Implement the benchmark baselines for new facilities as per the existing SGM Rule. Benchmark emissions intensities should be based on the most efficient decile of Australian facilities and updated regularly.

[1] The Paris Agreement base year

[2] AIETI, media release, June 22, https://www.energy-transitions.org/publications/australian-industry-eti-phase-2-report/

[3] Macintosh et al, 2022, 'Fixing the Integrity Problems with Australia's Carbon Market', ANU, https://law.anu.edu.au/sites/all/files/short_-_erf_reform_june_2022_final.pdf

4. Administrative options that allow facilities to avoid or delay reducing emissions or purchasing offsets should be removed.
5. As long as headroom is removed and there is a hard cap on industrial emissions, facilities should have unlimited ability to create, bank and use SMCs. There should be no borrowing.
6. A review should be scheduled for two years after SMCs are introduced to ensure the market is operating as intended.
7. Facilities' use of offsets should be capped at 5% of their emissions.
8. International offsets should not be allowed to be used under the Safeguard Mechanism.
9. Do not provide preferential treatment to EITE facilities.
10. If EITE assistance is provided, it should protect incentives to reduce emissions and not perversely support industries that increase emissions outside of Australia.
11. Multi year monitoring periods should no longer be allowed.
12. Baselines should decline linearly by at least 7.3% per year.
13. The decline rate should automatically increase to counteract the risk of intensity baselines allowing additional emissions due to increased production in any given year.
14. Consider the impact of electrification and emissions 'leaking' into the electricity sector, if any, when reviewing the scheme.
15. Reduce the threshold for facilities to be included in the SGM by 7.3% pa.

What is the safeguard mechanism?

The Safeguard Mechanism (SGM), introduced in July 2016, is the main policy covering Australia's industrial emissions. The Australian Government has committed to reforming the SGM, with a view to help Australia achieve net zero emissions by 2050.

Under the Gillard government's carbon price, which was legislated via the Clean Energy Act, industrial emitters and electricity generators faced a price incentive for each tonne of greenhouse gases that they emitted. Australia's covered emissions reduced whilst this was in force from 359.5 $MtCO_2$-e in FY12 to 349.4 $MtCO_2$-e.[4]

The Abbott government repealed the Clean Energy Act, replacing it with the Direct Action Plan, which had three main elements[5]:

1. **Crediting:** Crediting emissions reduction activities with offsets under the Carbon Farming Initiative
2. **Purchase**: The government would purchase these offsets using the Emissions Reduction Fund
3. **Safeguard**: Ensure that these purchased emissions weren't negated elsewhere in the economy by capping industrial emissions with the SGM

The SGM limits the level of greenhouse gases (GHGs) which industrial facilities in Australia can emit. The SGM applies to facilities that emit more than 100 $ktCO_2$-e pa of emissions. Each facility needs to keep its Scope 1 net emissions below a 'baseline', and report annually to the Clean Energy Regulator, to demonstrate compliance. If a facility's emissions exceed its baseline, it can purchase Australian Carbon Credit Units (ACCUs) so that its net emissions do not exceed its baseline.

Although the SGM technically applies to electricity generators, grid-connected electricity generators are covered by a single, sectoral baseline, which effectively excludes these generators from the scheme.[6]

In 2020 the SGM Rule was amended so facilities could choose baselines that were annually adjusted based on production using an emissions intensity.[7] This meant that facilities which incrementally increased their production could have this reflected in a higher baseline.

The 2020 King Review[8] was established by former Minister for Emissions Reduction Angus Taylor to explore incentives for low cost abatement opportunities across the economy. It recommended that facilities should be able to create safeguard mechanism credits (SMCs) where their emissions are below baseline, and they can demonstrate that they have implemented specific technology. This was supported by the previous government and consulted on, but was not implemented.

[4] Covered sectors taken as electricity, stationary energy excluding electricity, fugitive emissions and industrial processes from Australian National Greenhouse Accounts, https://www.dcceew.gov.au/sites/default/files/documents/nggi-quarterly-update-june-2014.pdf and https://www.dcceew.gov.au/sites/default/files/documents/quarterly-update-nggi-2012-june.pdf
[5] Parliament of Australia, The government's direct action plan, Chapter 5, https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Direct_Action_Plan/Report/c05
[6] DCCEEW, Safeguard Mechanism Reforms, Consultation paper, p8
[7] National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015, March 2020, https://www.legislation.gov.au/Details/F2020C00167
[8] King, et al, Report of the Expert Panel examining additional sources of low cost abatement, 2020, p11, https://www.industry.gov.au/sites/default/files/2020-05/expert-panel-report-examining-additional-sources-of-low-cost-abatement.pdf

What impact has the safeguard mechanism had to date?

The SGM has failed to reduce Australia's industrial emissions. It has also failed to meet its intended objective of stopping emissions reductions purchased by the Direct Action Plan from being offset with increases in industrial emissions.[9] In FY17, the first year of reporting, the approximately 200 covered facilities emitted 131MtCO_2-e. In the latest reported year, FY21, the 212 covered facilities emitted 137 MtCO_2-e.[10]

One of the reasons that the SGM has failed is that it has provided facility operators with considerable flexibility in determining their own baselines. Operators have been able to choose how to determine their baselines in a range of ways - such as based on peak historical emissions, or estimated future emissions. This meant nearly all facilities enjoyed at least some 'headroom'[11], where their baselines were higher than their expected emissions, so they could have increased their emissions without penalty. In FY21, the baselines for facilities covered by the safeguard totalled 178 MtCO2e, 32% above the actual emissions.[12] Meanwhile there were 0.3 MtCO_2-e of ACCUs used by facilities to meet their baseline, representing 0.2% of emissions.

The headroom is evident when looking at some of Australia's largest, listed emitters:

Table 1: SGM data for selected Australian emitters in FY21

	Baseline (tCO_2-e)	**Emissions (tCO_2-e)**	**Headroom (tCO_2-e)**	**ACCUs surrendered (tCO_2-e)**
Woodside	8,843,669	9,083,330	0	0
BHP	4,316,582	3,524,943	801,232	0
Rio Tinto	6,417,459	5,803,019	662,962	48,522
Santos	7,518,566	6,743,004	814,107	0
Total	**27,096,276**	**25,154,296**	**2,278,301**	**48,522**

Table 1 shows that BHP, Rio Tinto and Santos each have headroom across their portfolios and could increase emissions by more than 2.2 MtCO_2-e without cost. In contrast, Woodside facilities have exceeded their baselines by a total of 240 ktCO_2-e. Despite this, Woodside has not had to purchase any ACCUs due to a range of measures that can be applied by companies to avoid or delay the purchasing of carbon offsets where facilities have emitted more than their baseline (see *Setting baselines to achieve an equitable distribution of costs and benefits*, below). This flexibility has allowed facilities to avoid reducing emissions, or purchasing

[9] Allens, 'Safety net' or 'trampoline'? Emissions safeguard mechanism draft rules released', https://www.allens.com.au/insights-news/insights/2015/09/safety-net-or-trampoline-emissions-safeguard-mechanism-draft/
[10] Clean Energy Regulator, 'Safeguard facility reported emissions 2020-21', https://www.cleanenergyregulator.gov.au/NGER/The-safeguard-mechanism/safeguard-data/safeguard-facility-reported-emissions/safeguard-facility-reported-emissions-2020-21
[11] For example, in FY21 only 9 facilities needed to use offsets to meet their baseline - see Clean Energy Regulator, 'Safeguard facility reported emissions 2020-21', https://www.cleanenergyregulator.gov.au/NGER/The-safeguard-mechanism/safeguard-data/safeguard-facility-reported-emissions/safeguard-facility-reported-emissions-2020-21
[12] Clean Energy Regulator, 'Safeguard facility reported emissions 2020-21', https://www.cleanenergyregulator.gov.au/NGER/The-safeguard-mechanism/safeguard-data/safeguard-facility-reported-emissions/safeguard-facility-reported-emissions-2020-21

offsets, through administrative measures. BHP and Santos have also used this mechanism to avoid purchasing ACCUs for some of their facilities.

Labor's pre-election modelling showed that emissions covered by the SGM would increase further to 150 $MtCO_2$-e without regulatory change.[13] With electricity emissions firmly declining, the industrial sector could become Australia's largest source of emissions from 2023.

What is being proposed by Labor?

Labor's *Powering Australia* plan, which is now reflected in Australia's commitment under the Paris Agreement, aims to achieve a 43% emissions reduction on 2005 levels by 2030.[14]

To this end, it intends to reduce emission baselines for facilities covered by the SGM 'predictably and gradually over time'[15] — a recommendation of the Business Council of Australia (BCA).[16]

Labor also intends to give emissions-intensive trade-exposed industries (EITEs) 'tailored treatment', to '(ensure) that exporters remain competitive, and that emissions do not 'leak' overseas'. [17]

Labor's ability to achieve its 43% target is premised on the following:[18]

- Net emissions will decline across the sector by 5$MtCO_2$-e pa
- Facilities could create SMCs where their emissions are below baselines, without a requirement to explain why emissions were below baseline.
- Both SMCs and ACCUs could be used to reduce a facility's net emissions number.
- The changes would apply from 1 July 2023 i.e. FY24.

Since the election, the Minister for Climate Change has said that the government hopes:

- The Clean Energy Regulator will be able to ask each facility how much they can reduce emissions and tailor baselines appropriately.[19] Allowing industry to have excessive influence in setting baselines is the primary reason the SGM has been so ineffective to date, it is difficult to see how this comment is consistent with the government meeting its targets.
- The ACCU market will be subject to a six month review to 'make sure it remains a strong and credible scheme'.[20] This review is progressing in parallel to the SGM reforms.

This framing introduces a range of challenges to establishing an effective policy that can contribute to Australia's emissions targets:

- It suggests industry will have excessive influence over their facilities' baselines, which could hamper the ambition and/or the efficiency of the scheme.

[13] Reputex, 'The economic impact of the ALP's powering Australia plan', December 2021, p8, https://keystone-alp.s3-ap-southeast-2.amazonaws.com/prod/61a966013f3c53001f975016-REPUTEX_The%20economic%20impact%20of%20the%20ALP%27s%20Powering%20Australia%20Plan_Summary%20Report.pdf
[14] Labor, 'Powering Australia', 2021, https://keystone-alp.s3-ap-southeast-2.amazonaws.com/prod/61a9693a3f3c53001f975017-PoweringAustralia.pdf
[15] Ibid. p5
[16] Business Council of Australia, 'Achieving a net zero economy', 2021, p43 https://d3n8a8pro7vhmx.cloudfront.net/bca/pages/6612/attachments/original/1633693581/BCA_Achieving_a_net_zero_economy_-_9_October_2021.pdf?1633693581
[17] Labor, 'Powering Australia', 2021, p31
[18] Reputex, 'The economic impact of the ALP's Powering Australia plan', December 2021, p22
[19] Minister for Climate Change and Energy, Responses to questions at the at IGCC Conference, June 2022
[20] Minister for Climate Change and Energy, 'Independent Review of ACCUs', 2022, https://minister.dcceew.gov.au/bowen/media-releases/independent-review-accus

- There does not appear to have been sufficient consideration of how much of Australia's national emissions reduction task should be delivered by the industrial sector.
- The industrial sector may be able to avoid structural decarbonisation and lock in future emissions by relying on land sector offsets.

Policy issues to consider

Policy objectives

The consultation paper proposes four policy objectives to maximise benefits and minimise costs[21]:

- Effective: reduces emissions consistent with Australia's greenhouse gas emissions reduction targets.
- Equitable: baselines are set on a consistent and transparent basis and achieve an equitable distribution of the costs and benefits.
- Efficient: allows the market to find the lowest cost abatement wherever it occurs, and encourages production where it is least emissions-intensive.
- Simple: makes baseline setting arrangements, and administrative and reporting arrangements, as simple and low cost as possible.

ACCR supports the objectives of being equitable, efficient and simple, but also believes that Australia's greenhouse gas emission reduction targets are not ambitious enough. Australia is one of the world's largest fossil fuel exporters, and yet its exported emissions are not included in Australia's greenhouse gas emission reduction targets. Considering these exported emissions when reforming the SGM, such as when deciding whether or how to provide any EITE assistance, could avoid perverse outcomes that reduce Australia's emissions despite increasing global emissions.

The Safeguard Mechanism's share of the national abatement task

Assuming the proposed scheme starts 2023, 5MtCO_2-e of annual reductions would reduce industrial emissions to 107 MtCO_2-e by 2030. This would be 26% below FY21 emissions, but only 13% below 2005, which is the reference year for Australia's 2030 target.

Modelling of Labor's target estimated that 19% of the reductions in industrial net emissions to 2050 will come from domestic offsets from the Australian carbon farming industry.[22] This suggests **the industrial sector may reduce emissions by just 7.2% between 2005 and FY31**.[23] This is just a fraction of the 43% reduction required across Australia's economy, suggesting the industrial sector is being carried by the rest of Australia's economy. The land sector and electricity are carrying a much greater share of the burden.

> **Recommendation: Increase the ambition of the Safeguard Mechanism so the industrial sector delivers a 43% emissions reduction between 2005 and 2030.**

The current NDC is also not aligned with the goal of the Paris Agreement, or a 1.5°C outcome, which would require an economywide reduction of 50% by 2030.[24] As such, ACCR would also recommend that the national abatement task be increased, which would require a consequential increase in the reductions required by the SGM. This could be considered when the SGM is reviewed.

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[21] DCCEEW, 'Safeguard Mechanism Reform: Consultation Paper', 2022, p7.
[22] Reputex, 'The economic impact of the ALP's powering Australia plan', p24, https://keystone-alp.s3-ap-southeast-2.amazonaws.com/prod/61a966013f3c53001f975016-REPUTEX_The%20economic%20impact%20of%20the%20ALP%27s%20Powering%20Australia%20Plan_Summary%20Report.pdf
[23] The difference between calendar and financial years is due to available data.
[24] Climate Analytics, 'Australian election 2022 political party and independent climate goals: analysis', https://climateanalytics.org/publications/2022/australian-election-2022-political-party-and-independent-climate-goals-analysis/

Setting baselines to achieve an equitable distribution of costs and benefits

The baseline setting options under the SGM are overly generous. This has created sizable gaps between actual emissions and baselines, which is referred to as headroom. Whilst facility baselines have headroom, incremental decreases in baselines will not decrease actual emissions. As such, it is important to remove this headroom.

The changes introduced to the SGM in 2020 which introduce annually adjusting baselines provide the architecture to do this. These establish a set of emissions intensities, *default emission intensities*, (and corresponding *prescribed production variables*) that represent industry average emissions intensities. Moving every existing facility to default emissions intensities will remove this headroom, since baselines will then be determined by apportioning actual emissions between facilities.

> **Recommendation: All facilities should immediately move to baselines that use industry average emissions intensities.**

New facilities should receive smaller baselines since they have cost effective access to more efficient technology. The existing SGM policy mechanism seems appropriate to manage this, where new facilities are issued a *benchmark emissions intensity baseline*. These could use the same definition of production as normal baselines, but lower emissions intensities. Benchmark emissions intensities could be based on the top quartile, or top decile emissions intensity of the industry. Benchmark emission intensities would need to be updated as technology and operating practices improve.

> **Recommendation: Implement the benchmark baselines for new facilities as per the existing SGM Rule. Benchmark emissions intensities should be based on the most efficient decile of Australian facilities and updated regularly.**

The current SGM Rule allows facilities to avoid reducing emissions or purchasing offsets even where their emissions are above their baseline. These include where they have reduced their emissions intensity or where their feedstock has changed. Each of these administrative options reduces the ability for the SGM to reduce emissions, so should be removed.

> **Recommendation: Administrative options that allow facilities to avoid or delay reducing emissions or purchasing offsets should be removed.**

Crediting and trading, domestic offsets and international units

Safeguard Mechanism Credits

Several ACCU methods are available for industrial facilities to generate ACCUs, but relatively few ACCUs have been generated by SGM facilities. The King Review recommended a system for issuing Safeguard Mechanism Credits (SMCs) to facilities that were below their baseline and could demonstrate that they had implemented low emissions technology.[25] The requirement to demonstrate that low emissions technology had been implemented was necessary since baselines were, and still are, well above business as usual levels. Issuing SMCs to facilities where they did not need to take any action would have meant SMCs could be created for zero cost whilst there would have been minimal demand. If the headroom is removed from the baselines then

[25] DISER, 'Report of the Expert Panel examining additional sources of low cost abatement', 2020, p11, https://www.dcceew.gov.au/sites/default/files/documents/expert-panel-report-examining-additional-sources-of-low-cost-abatement.pdf.

the necessity to demonstrate the application of low emission technologies becomes less important. Reputex modelling seems to have accepted this since it has assumed that "tradable SMCs are issued where an entity 'beats' its emissions baseline".[26] Although not stated explicitly, Reputex modelling seems to assume that the baseline headroom is removed, since the emissions projections decrease from as soon as the new policies are implemented in 2023.

Where headroom is removed, baselines are declining and SGM emissions have a firm limit, SMCs will have high integrity. That is - if an SMC was removed from circulation, this would necessarily result in one less tonne of GHG being emitted. Conversely, if an extra SMC was created, this would result in one more tonne of GHG being emitted.

ACCR does not support facilities being allowed to 'borrow' SMCs. The rationale for this is addressed in the discussion of multi year monitoring periods below.

SMCs will be a new carbon unit in Australia created using different rules to ACCUs. Although we have not identified any significant risks, there are likely to be some unintended consequences. As such a review could be held to ensure that the creation and use of SMCs is not having negative, unintended consequences.

> **Recommendation: As long as headroom is removed and there is a hard cap on industrial emissions, facilities should have unlimited ability to create, bank and use SMCs. There should be no borrowing.**
>
> **Recommendation: A review should be scheduled for two years after SMCs are introduced to ensure the market is operating as intended.**

Australian Carbon Credit Units

Offset use was always intended to be restricted

ACCUs are issued under the Carbon Farming Initiative Act. This legislation was passed alongside the Clean Energy Act (CEA) to allow the land sector to voluntarily participate in the carbon pricing mechanism. Companies could meet up to 5% of their carbon price liability using ACCUs.[27]

The rationale for this was that methods for calculating emissions from the land sector were immature and that if emissions could be reliably assessed then the whole land sector should face a carbon price. Excessive use of the land sector would crowd out actual emissions reductions in the covered sectors. This view was articulated clearly in the Garnaut review 2011 Update[28] that provided the framework for the CEA (emphasis added):

> *Full coverage of the land sectors from the beginning of a scheme is impractical and in the circumstances undesirable, as described in Update Paper four (Transforming rural land use). The Review suggests that ahead of coverage, the sector should be provided with incentives to reduce emissions through an offset program.*

[26] Reputex, 'The economic impact of the ALP's powering Australia plan', December 2021, p22, https://keystone-alp.s3-ap-southeast-2.amazonaws.com/prod/61a966013f3c53001f975016-REPUTEX_The%20economic%20impact%20of%20the%20ALP%27s%20Powering%20Australia%20Plan_Summary%20Report.pdf
[27] s128 Clean Energy Act 2011, https://www.legislation.gov.au/Details/C2012C00579
[28] Garnaut Climate Change Review, 'Carbon pricing and reducing Australia's emissions', 2011, pp24-25, https://web.archive.org.au/awa/20190509030830mp_/http://www.garnautreview.org.au/update-2011/update-papers/up6-key-points.html

> *… A limit to both interactions [purchase by i. Liable entities and ii. The Government], especially in the fixed price period is desirable for budget neutrality purposes and to ease anxieties about the undermining of the abatement effort.*
>
> *… A limit of 4 per cent in 2012, rising by 0.75 percentage points per cent [sic] a year to 10 percent in 2020 is suggested for permits used by liable entities to acquit their responsibilities through the use of Kyoto – compliant offsets.*
>
> *… limits on both Kyoto and non-Kyoto credits would be removed upon full coverage of land-based activity under the scheme*

As noted by the Productivity Commission, the European Commission made the decision to exclude sinks as eligible offsets in the EU ETS, since they *'do not bring technology transfer, they are inherently temporary and reversible, and uncertainty remains about the effects of emission removal by carbon sinks'* (European Commission 2003, p. 2).[29]

Whilst updating its 2030 climate targets the European Parliament recently "reaffirmed its position that natural carbon sinks are fragile and volatile".[30]

Land sector abatement is needed to reduce land sector and agricultural emissions

As alluded to by the Garnaut Climate Change Review's 2011 update (quote above), the land sector should be covered by a policy to reduce its emissions. The creation of ACCUs was intended to allow voluntary emissions reduction whilst a mandatory scheme was developed.

Agricultural emissions are roughly 15% of Australia's emissions[31] and these emissions will need to be mitigated if Australia is to achieve its net zero target. The current proposal of unfettered use of ACCUs in the SGM scheme would create a situation where emissions reductions occur in the land sector *or* the industrial sector, whereas emissions reductions are required in *both*.

The use of credits as offsets is conceptually flawed

The measurement challenges in the land sector that gave rise to limited ACCU use do not appear to have been resolved, with Australia's carbon market recently being described as an "environmental and taxpayer fraud".[32] This is due to ACCUs being issued for abatement that has not happened (i.e. non-real), or would have happened anyway (i.e. non-additional).

A key aspect of Australia's ACCU system is that ACCUs are created independently of the national accounts. Where an ACCU is created for abatement that has not happened, there will be no impact on the national accounts. Where a non-real, or non-additional ACCU is used by a facility that does not reduce actual emissions, this shifts the emission reduction burden onto the rest of the economy, effectively subsidising the industrial sector.

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[29] Productivity Commission, 'What Role for Policies to Supplement an Emissions Trading Scheme?', Submission to the Garnaut Climate Change Review, 2008, p50, https://www.pc.gov.au/research/supporting/garnaut-emission-trading/garnaut.pdf
[30] European Parliament, 'Fit for 55: Parliament agrees to higher EU carbon sink ambitions by 2030', 2022, https://www.europarl.europa.eu/news/en/press-room/20220603IPR32133/fit-for-55-parliament-agrees-to-higher-eu-carbon-sink-ambitions-by-2030#:~:text=LULUCF%20is%20part%20of%20the,with%20the%20European%20Climate%20Law
[31] Australia's National Greenhouse Accounts, Paris Agreement inventory, https://ageis.climatechange.gov.au/
[32] Macintosh et al, 'Fixing the Integrity Problems with Australia's Carbon Market', ANU, 2022 https://law.anu.edu.au/sites/all/files/short_-_erf_reform_june_2022_final.pdf

Many ACCUs are generated by storing carbon in biological sinks. Using these as an offset for fossil fuel emissions is premised on a false equivalence between fossil and biological carbon.[33] Biological sequestration may be stable for years or decades, but will remain exposed to risks such as climate change making landscapes vulnerable to degradation.[34]

Although there are methods to generate ACCUs that are not from the land sector, uptake has been limited and most ACCUs generated to date are from the land sector.

Industry confirms emissions can be substantially reduced

Although the government's policy is only targeting an absolute reduction of 7.2% (excluding ACCU use) in industrial emissions between 2005 and 2030, Australia's industrial facilities can substantially reduce their emissions. The Australian Industry Energy Transitions Initiative (AIETI) report identified that "an 88% cut to heavy industry emissions is possible and would set up key regions for the net zero transition".[35] This initiative is supported by many of Australia's largest industrial emitters including Woodside, BHP and Rio Tinto, their industry associations such as the Australian Industry Greenhouse Network, and investors such as AustralianSuper and the Clean Energy Finance Corporation.

Since deep reductions in absolute emissions are possible, the use of land based offsets is unnecessary.

Access to offsets facilitates decisions that lock in future emissions

With ongoing access to offsets, facilities are able to make decisions that lock in future emissions. As one example, Woodside recently made its final investment decision for the Pluto 2 LNG facility. Despite electrically powered technology being available, Woodside instead opted for a gas powered facility.[36] E-drive technology allows for facilities to use renewable energy, and even if that is not available today, it can be changed at a future date. The gas powered facility however relies on the use of fossil fuels as a direct input, making retrofitting more difficult. Woodside's 2021 climate report clearly showed that its strategy to manage emissions to 2030 is to use offsets,[37] and its choice of technology for Pluto 2 shows this is a long term approach, not just a transition.

> **Recommendation: Facilities' use of offsets should be capped at 5% of their emissions.**

International offsets

International offsets carry all of the challenges of ACCUs, but are not subject to Australian regulation, which introduces additional governance and integrity risks.

> **Recommendation: International offsets should not be allowed to be used under the Safeguard Mechanism.**

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[33] Carton et al, 'Undoing equivalence: Rethinking Carbon Accounting for Just Carbon Removal', *Frontiers in Climate*, 2021, vol 3, https://www.frontiersin.org/articles/10.3389/fclim.2021.664130/full
[34] Mackey et al, 'Untangling the confusion around land carbon science and climate change mitigation policy', *Nature Climate Change,* 2013, https://www.nature.com/articles/nclimate1804
[35] AIETI, media release, June 22, https://www.energy-transitions.org/publications/australian-industry-eti-phase-2-report/
[36] Woodside, Scarborough teleconference and investor presentation, p7, https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02455596-6A1064105?access_token=83ff96335c2d45a094df02a206a39ff4
[37] Woodside, 2021 Climate Report, p16, https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02487816-6A1077559?access_token=83ff96335c2d45a094df02a206a39ff4

Tailored treatment for emissions-intensive, trade-exposed businesses

Emissions Intensive Trade Exposed (EITE) industries should not get preferential treatment.

The theoretical argument for giving preferential treatment to EITE is that they may face higher costs to reduce emissions, and may be 'less able to manage those costs because the price of its products are set in global markets.' (i.e. are trade exposed).[38] Further, it has been suggested that if production is shifted overseas, the overseas producers may cause more emissions than if production occurred within Australia ('carbon leakage').[39]

International experience suggests carbon leakage fears are overstated

However, global evidence suggests that carbon leakage fears are often overstated. In fact, Australia became the world's largest LNG exporter based on decisions made whilst a carbon price was in place.

Although much of the literature on carbon leakage uses predictive economic models, analysis of functioning carbon pricing mechanisms often shows that leakage has not occured, or has been less than first envisioned. The EU Parliament, for example concluded that "Ex-ante predictions by simulation models indicate that direct leakage is indeed likely", but "emission pricing in the EU ETS, so far, is mostly not found to cause direct carbon leakage".[40] Sato and Dechezlepretre also concluded that fears of carbon leakage are often overstated and "although energy price differences have some impact on trade, the magnitude of this effect is small, in particular when compared to other factors affecting trade relationships".[41]

Australia's previous carbon price did not result in carbon leakage

In 2008, industry argued aggressively against the original Carbon Pollution Reduction Scheme (CPRS) as well as the Clean Energy Act (CEA), on the basis of EITE risks. During the negotiations around the CPRS, the then CEO of Woodside, Don Volte claimed that the CPRS would make it impossible for business to invest, saying:

> *'The emissions trading scheme will knock planned projects with relatively high (carbon) emissions right off the block... You can start with (Chevron's) Gorgon (project) and (Woodside's) Browse (project) and keep going.'*[42]

It is notable that Gorgon reached Final Investment Decision (FID) the next year[43]. Carbon pricing was still under active discussion through 2009, so it appears that the risk of carbon pricing did not make LNG investment 'impossible' for Gorgon.

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[38] DCCEEW, 2021, 'Safeguard Mechanism reform consultation factsheet - Emissions-intensive, trade-exposed facilities', https://storage.googleapis.com/converlens-au-industry/industry/p/prj2135e8da0cf17d76c70fc/public_assets/DCCEEW-Fact-sheet-EITEs.pdf

[39] DCCEEW, 2021, 'Safeguard Mechanism reform consultation factsheet - Emissions-intensive, trade-exposed facilities', https://storage.googleapis.com/converlens-au-industry/industry/p/prj2135e8da0cf17d76c70fc/public_assets/DCCEEW-Fact-sheet-EITEs.pdf

[40] European Parliament, Economic assessment of Carbon Leakage and Carbon Border Adjustment, 2020, p2, https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/603501/EXPO_BRI(2020)603501_EN.pdf

[41] Sato and Dechelzepretre, Centre for Climate Change Economics and Policy Working Paper No. 202 Grantham Research Institute on Climate Change and the Environment Working Paper No. 178, 2015, p5 https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/603501/EXPO_BRI(2020)603501_EN.pdf

[42] Sky News Online, Wayne Swan Plays down LNG threat, 2008, https://webarchive.nla.gov.au/awa/20080719095847/http://www.skynews.com.au/politics/article.aspx?id=250531

[43] S&P Global, Gorgon LNG Project Awarded Final Investment Decision in Australia, 2009, https://ihsmarkit.com/country-industry-forecasting.html?id=106595086

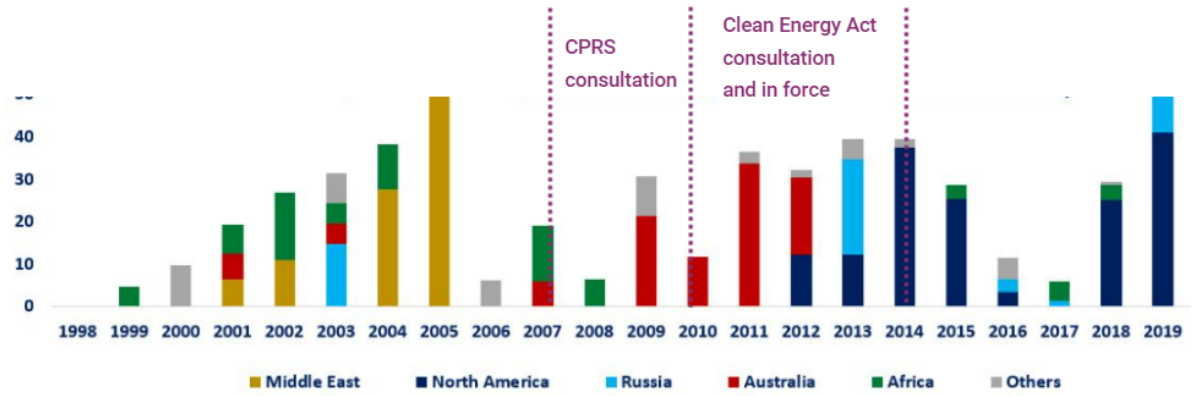
Don Volte further said that changes that would result in free permits being gifted to EITE companies were like "putting lipstick on a pig".[44] This suggests Volte saw this assistance as inadequate to prevent carbon leakage in Australia's LNG industry. This mechanism was similar to what was enacted in the CEA.

Industry associations also lobbied strongly against the CEA. For example, the Australian Industry Greenhouse Network argued that:

> '...for trade-exposed industry, the Jobs and Competitiveness Program (JCP) introduces a range of new uncertainties that may restrict investment in abatement and new production'.[45,46]

Despite industry's protestations about carbon leakage and inadequate protection, carbon pricing did not discourage investment by EITE sectors in Australia. Figure 1 shows that whilst carbon price legislation was in force or under development, Australia's LNG sector continued to invest. In fact, **Australia became the world's largest LNG exporter[47] due to decisions made whilst carbon pricing was in force or under development**.

Figure 1: Global LNG investment decisions (bcm)[48]



High levels of taxation in other resource rich nations has not scared off investment

Whilst the SGM is not a tax, it has the potential to impose costs to industry in a similar way to some taxation mechanisms. The global fossil fuel industry has made comparable arguments around taxation scaring off investment. One of the countries that has implemented more onerous taxation regimes is Norway. The former prime minister of Norway and NATO Secretary General, Jens Stontelberg, pointed out that despite being onerous, their oil and gas taxation regime has not stifled investment:

[44] Gas Today Australia, Industry comment on revised CPRS, 2009, https://webarchive.nla.gov.au/awa/20120323203614/http://www.gas-today.com.au/news/industry_comment_on_revised_cprs/000573/
[45] AIGN, AIGN Response to the Exposure Draft of the Clean Energy Future Legislation, 2011, p3, https://web.archive.org.au/awa/20120319083357mp_/http://www.climatechange.gov.au/government/submissions/closed-consultations/clean-energy-legislative-package/~/media/government/submissions/cel/public/CEL-Submission-AustralianIndustryGreenhouseNetwork-20110822-PDF.pdf
[46] The JCP issued free carbon permits to EITE companies to shield them against international competitiveness issues
[47] Institute for Energy Research, Australia Outpaces Qatar as the World's Largest LNG Exporter, 2020, https://www.instituteforenergyresearch.org/international-issues/australia-outpaces-qatar-as-the-worlds-largest-lng-exporter/
[48] Global LNG Hub, A dry year for LNG FIDs, 2020, https://globallnghub.com/a-dry-year-for-lng-fids.html

> *We tax them quite heavily. It's 78% tax rate. And they told us that was impossible. But they come; and invest. And we tax them and they stay, because they earn money even with a tax rate of 78%.*[49]

If even a 78% tax does not impact oil and gas developers, the likely cost impacts of a firmer SGM seems unlikely to lead to a lack of investment, or carbon leakage.

The Safeguard Mechanism is already a trade protection mechanism

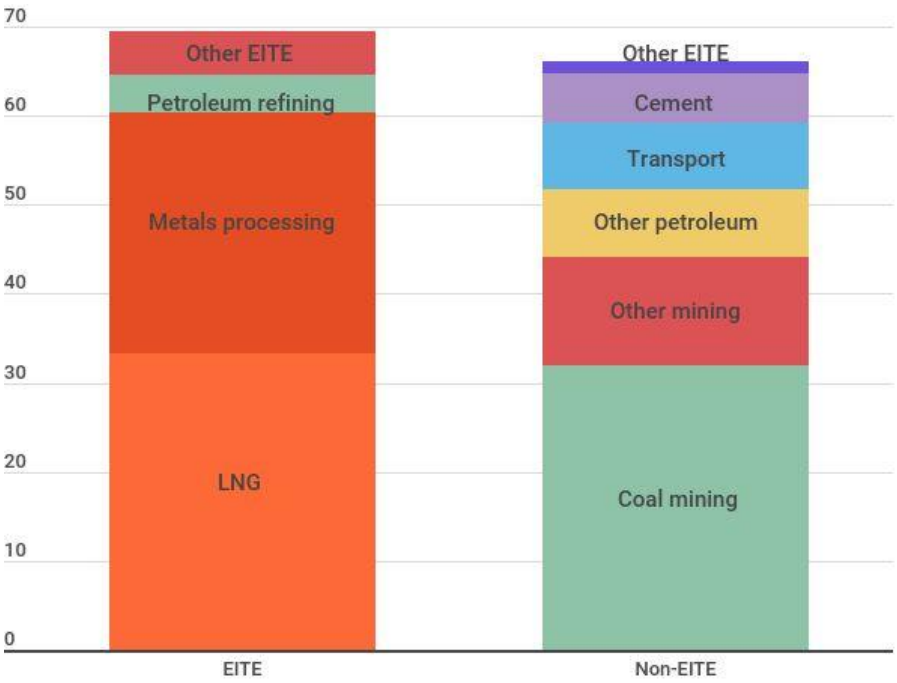
Despite Woodside describing the trade protection mechanism in the Clean Energy Act as 'lipstick on a pig', carbon leakage does not appear to have occurred. This previous mechanism shielded 'moderately emissions-intensive activities' such as LNG from 66% of their carbon liability by issuing them with free permits. The ratio decreased by 1.3% per year.[50] A SGM that transitions to industry average baselines that decline by 7.3% pa from FY24, will still provide more shielding for a moderately EITE (e.g. an LNG facility) than was provided under the previous carbon price until FY32. If a slower decline rate is applied, the SGM will provide more shielding for a longer period. In either case, additional shielding is not necessary.

EITE protection would unfairly concentrate the cost burden on a subset of SGM facilities

Using the EITE definition that is in place in the Renewable Energy Target legislation, the majority of emissions currently covered by the SGM are EITE (Figure 2).

Attempting to achieve a sector wide target whilst exempting more than half the sector will concentrate the required emissions reductions on few facilities, increasing costs for them.

Figure 2 Emissions for EITE and non-EITE sectors ($MtCO_2$-e)[51]



[49] Jens Stoltenberg, Avoiding the Oil Curse: The Case of Norway, speech to Harvard Institute of Politics, 2013, https://www.youtube.com/watch?v=8f6geiVdwpk
[50] s 907 Clean Energy Act Regulations 2011, https://www.legislation.gov.au/Details/F2014C01341/Download
[51] ACCR analysis of FY21 SGM data

Industry has voiced support for declining baselines

Woodside's CEO Meg O'Neill has also started that Woodside is not just comfortable with declining baselines, but sees them as a way to level the playing field:

> *I think one thing that is helpful about the safeguard mechanism is that it applies the same methodology to all industrial proponents in Australia, and so if there were changes to be made to reduce the baseline, that would actually keep the playing field level for all of the players.*[52]

Recommendation: Do not provide preferential treatment to EITE facilities.

Form of EITE protection and definition of EITE

In ACCR's view, **EITE protection is not required at all and should not be granted.** However, if EITE assistance is provided, it should be structured to avoid perverse incentives.

EITE assistance should be restricted to industries that have a sustained and material role in a low carbon future. This would exclude legacy industries such as fossil fuel extraction and processing. It would include industries that are not yet material emitters in Australia, such as lithium hydroxide processing. Providing ongoing support for legacy industries could delay transitioning to zero emission technologies and/or prop up industries that increase global emissions.

Assistance should not reward historic decisions that have increased today's emissions, such as where a facility has chosen to install inefficient equipment. Using EITE definitions based on current emissions or emissions intensity would increase this risk, whilst industry average intensities would reduce the risk.

If assistance is to be provided using credits, then these should not dilute the incentive to reduce emissions. The proposal for the government to obtain SMCs through a reserve that collects a fraction of all SMCs generated[53] would dilute this incentive, by effectively taxing the emissions reduction that create SMCs. An emissions reserve created by increasing the overall decline rate would avoid this risk.

An alternative approach could be to allow EITE facilities greater use of ACCUs. This would not alleviate the problems associated with ACCUs, so should not be unfettered, but could reduce the impost on EITE facilities without burdening others.

The provision of assistance from outside the mechanism using government funding would also preserve the integrity of the SGM.

Basing assistance on compliance costs would weaken the incentive to reduce compliance costs, and hence also weaken the incentive to reduce emissions. As such, assistance should instead be based on a measure of typical emissions intensity, or production.

A Carbon Border Adjustment (CBA) is being developed for the European Emissions Trading Scheme[54] and is also being discussed for Australia.[55] A CBA, if properly designed, could mitigate the perceived risk of carbon leakage, but it would need to be designed in a way that encourages Australia's to develop clean export

[52] ABC, 'WA industries are big polluters, and Labor's 2030 emissions target could hit them hard', May 2022, https://www.abc.net.au/news/2022-05-26/wa-oil-gas-producers-to-bear-brunt-of-alp-emissions-policy/101097954
[53] DCCEEW, 'Safeguard Mechanism Reform: Consultation Paper', 2022, p22
[54] European Parliament, 'EU carbon border adjustment mechanism: Implications for climate and competitiveness', 2022, https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2022)698889
[55] The Australia Institute, 'Carbon Border Adjustments', https://australiainstitute.org.au/report/carbon-border-adjustments/

industries and transition away from its dependence on fossil fuel exports. Implementing a CBA is also a multi-year project. Reducing emissions is an urgent priority, so consideration of a CBA should not be allowed to interfere with the current SGM reform process.

Recommendation: If EITE assistance is provided, it should protect incentives to reduce emissions and not perversely support industries that increase emissions outside of Australia

Taking account of available and emerging technologies

As mentioned above, the use of flexibility mechanisms, including the MYMP, has prevented emissions reduction across the SGM. When considering the MYMPs that have been completed to date, the facilities' emissions exceeded their baselines by a cumulative 6.3 $MtCO_2$-e, but only 0.2 MtCO2-e of offsets were surrendered,[56] meaning MYMPs have allowed facilities to avoid mitigating 97% of the emissions above baselines.

A MYMP, as presented in the consultation paper, introduces risks that facilities may not deliver on their emission reduction commitments. If a hard cap is not in place, there would also be a risk of shifting the burden to other parts of the economy. If a facility fails to comply with a MYMP, it will fall to other facilities or other sectors to ensure that Australia meets its emissions reduction targets.

One of the key changes being proposed that will allow much greater flexibility for facilities to meet their baselines is the introduction of SMCs. SMCs provide for both 'interfacility' and limited 'intertemporal' flexibility. The interfacility flexibility is created by the act of one facility having emissions below its baseline and selling the associated SMCs to another facility. The intertemporal flexibility will be created if the SMCs are allowed to be banked. The ongoing, if limited, use of ACCUs provide an additional form of flexibility.

If MYMPs are allowed then they should require the implementation of new technologies. Allowing facilities to meet their MYMP obligations through purchasing ACCUs or SMCs is a way for a facility to manage its cash flow by delaying expenses. This is not the purpose of the SGM and facilities should not be permitted to do it.

Recommendation: Multi year monitoring periods should no longer be allowed.

Indicative baseline decline rates

Large industrial facilities should deliver their proportionate share of Australia's NDC. This requires a 43% reduction between 2005 and 2030, which equates to a 10 $MtCO_z$-e annual reduction from FY24. If production remained constant, this would equate to 7.3% of FY21 SGM emissions.

Recommendation: Baselines should decline linearly by at least 7.3% per year.

With production adjusting baselines, aggregate SGM emissions will be a function of the default intensities, the decline rate and the total production. Since production is not fixed, there is a risk that aggregate emissions will increase, or at least fail to decline fast enough.

To manage this risk, a mechanism should be introduced to increase the decline rate in any year that production increases. This could be an automatic administrative task based on each year's NGER inventory. The Small-scale technology Certificate (STC) obligation on electricity retailers that is calibrated each year[57]

[56] ACCR analysis of 2020-21 Safeguard facility data
[57] Clean Energy Regulator, The small-scale technology percentage, 2022, https://www.cleanenergyregulator.gov.au/RET/Scheme-participants-and-industry/the-small-scale-technology-percentage

may offer useful lessons in how this could be constructed. Since this would only ever increase the decline rate, this would mean that the policy would then act as a floor, rather than a ceiling on climate ambition.

> **Recommendation: The decline rate should automatically increase to counteract the risk of intensity baselines allowing additional emissions due to increased production in any given year.**

Other policy issues

Fossil and electricity substitutability

The current design of the SGM provides unacknowledged incentives to electrify facilities.

Facility baselines will be determined by multiplying the specific 'production variables', by the emissions intensity of each production variable. Electricity production is one of the production variables.[58]

There are instances where production can use either stationary energy, or electricity, such as LNG liquefaction. LNG facilities can be either 'direct drive' or 'electric drive'. Direct drive facilities burn gas in gas turbines to power the liquefaction compressors. Electric drive facilities use electric motors to power the liquefaction compressors.

To demonstrate the incentives this introduces, consider a 10 mtpa direct drive LNG facility, where the emissions intensity of LNG is 0.3 tCO_2-e/t_{LNG} and the emissions intensity of electricity is 0.539 tCO_2-e/MWh. An electric drive version of this facility could require 4 TWh of electricity, which is generated using the same gas that would have powered the compressors at the first facility.

A direct drive version of this facility would produce 10 mtpa of LNG and no electricity. Its baseline would therefore be 3 $MtCO_2$-e (10 x 0.3). An electric drive version of this facility would produce 10 mpta of LNG and 4 TWh of electricity. It would therefore have a baseline of 5.2 $MtCO_2$-e (10 x 0.3 + 4 x 0.539). So for no change in useful economic output, the electric drive facility would have a 70% larger baseline. Since both facilities use the same amount of gas, they have the same amount of emissions. The electric drive facility would therefore be able to sell over 2 million SMCs a year.

Subject to location, the electric drive facility could also choose to purchase electricity from a grid-connected electricity generator. If the generator produced electricity at the grid's average emissions intensity, its baseline would decrease by the same amount as its emissions. This would therefore have the same impact, at the facility level, as if it generated its own electricity. At the sectoral level though, this would shift emissions from the SGM into the electricity sector, reducing the requirement for the industrial sector to reduce emissions.

Similar logic will apply anywhere that fossil fuels are used in a process that could be electrified.

Adjusting the SGM to account for this would be a significant regulatory change. There are also emissions benefits to electrification, such as the ability to use renewable energy. Nonetheless, the regulator should be aware of the issue and, as a minimum, monitor whether it eventuates and consider any implications.

> **Recommendation: Consider the impact of electrification and emissions 'leaking' into the electricity sector, if any, when reviewing the scheme.**

[58] S 57 National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015, https://www.legislation.gov.au/Details/F2021C01027

Threshold for triggering SGM obligations should reduce over time

The current emissions threshold for a facility being subject to the SGM is 100ktCO_2-e in a year. This should be lowered.

With baselines declining, it is likely that some facilities will reduce their emissions and drop below the threshold, meaning that they fall out of the purview of the scheme. As Australia's emissions decrease, those industrial facilities that are below the threshold will represent an increasing share of national emissions[59], so their lack of inclusion will place a progressively larger burden on those facilities (and other sectors) that are covered. Reducing the threshold will alleviate these issues.

There are logistical issues with reducing the threshold, such as the requirement to establish new production variables for types of facilities that are not currently covered by the SGM. This could be managed by reducing the threshold gradually but predictably. Linking the decline in thresholds to the decline of the baselines would mean that facilities that decarbonise at the same rate as the broader sector would not 'drop out' of the SGM.

Recommendation: Reduce the threshold for facilities to be included in the SGM by 7.3% pa.

[59] ACCR analysis of FY21 SGM data suggests this is currently approx 5% of national emissions.