

Safeguarding fossil fuels

How loopholes in the Australian Government's climate policy will safeguard a future for fossil fuels at the expense of Australian businesses, consumers, and the climate



**AUSTRALIAN
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1. Executive summary

This study demonstrates how the proposed design of the Australian Government's Safeguard Mechanism (SGM) includes loopholes that will enable and effectively subsidise highly polluting new fossil fuel projects, placing Australia's emission reduction targets at risk while transferring billions of dollars of additional costs to other Australian businesses, consumers, and taxpayers.

The report examines ten proposed new resource projects recently approved or assessed by the Western Australian Government, including Woodside's controversial Scarborough and Browse LNG projects. Implications of these projects for the SGM and Australia's emissions reduction goals are presented.

The new projects reveal significant flaws or loopholes in the design of the SGM, which are proposed to be carried over from the former federal Coalition Government. These include the allocation of free emissions permits (or 'baselines') to new entrants, the adjustment of baselines to allow for expansions and extensions to existing projects without penalty, and the unlimited use of offsets to avoid actual reductions in emissions from facilities under the SGM.

Analysis of the new WA projects is presented, demonstrating how these loopholes act to enable new fossil fuel projects that are not consistent with Australia's emissions reduction goals, and to transfer the responsibility and cost of abating domestic emissions from these projects to other parts of the economy.

Despite approved plans and corporate commitments for each of the new projects to achieve net zero emissions by 2050, total lifetime emissions from these projects (including Scope 3) will exceed the entire annual emissions of the United States. Together they will generate over 7.6 billion tonnes of carbon pollution over their lifetimes, with around 600 million tonnes released in Australia and approximately 7 billion tonnes released as Scope 3 emissions overseas. The majority of this (or 5.8 billion tonnes) will result from Woodside's proposed gas projects.

While other sectors of the Australian economy have stabilised or reduced emissions since 2005, emissions from the Australian oil and gas sector have grown several times higher than 2005 levels, undermining the gains that have been made in other sectors. The loopholes in the SGM will enable this trend to continue.

If the loopholes in the SGM are not addressed, the cost of abating at least 220 million tonnes of residual unabated domestic emissions from the new projects (around \$9 billion at current carbon prices) will be borne by other Australian businesses, and ultimately passed on to Australian consumers. Woodside will be the primary beneficiary of this effective subsidy, with a cost of abating the direct residual emissions from its new projects totalling around \$7.6 billion passed on to other Australian industry.

This will introduce a major new economic inefficiency and barrier to decarbonisation, as under this arrangement, the abatement cost for continuing growth in Australia's most polluting industries will be borne by cleaner industries, many of which have already contributed emissions reductions since 2005. In addition, the new projects will generate a very large requirement for offsets, which will further increase the cost of meeting Australia's overall emissions reduction target by making these offsets unavailable for use by other sectors.

1.1 Summary of implications from proposed new Western Australian resource projects

- Despite commitments to achieve net zero emissions by 2050, the projects will together generate over 7.6 billion tonnes of additional aggregate carbon pollution over their lifetimes (including Scope 3 emissions). This includes more than 600 million tonnes of direct emissions released here in Australia and over 7 billion tonnes of indirect pollution that will be released in other countries. Total emissions from these projects will equal over 18 years of annual emissions from the whole of Australia, or 1.5 years' worth of emissions from all of the United States.

- New fossil gas production projects including Woodside's Scarborough to Pluto and Browse Basin to North West Shelf projects account for the vast majority of these emissions. The fossil gas projects alone will generate over 5.8 billion tonnes of emissions in total, with 5.3 billion tonnes of Scope 3 emissions and around 474 million tonnes of direct (Scope 1 and 2 emissions).
- None of the emissions reduction goals or abatement plans for these projects are aligned with Australia's 2030 national emission reduction targets, or globally agreed temperature goals. Approved emissions reduction plans will deliver less than 6% reduction in total net emissions over the life of the projects, with the overwhelming majority of this (around 90%) to come from offsets.
- The projects will generate a significant demand for offsets of between 386 and 600 million tonnes over the life of the projects. This represents a new demand for Australian Carbon Credit Units (ACCUs) equivalent to the entire annual abatement delivered by the Australian Government's Emissions Reduction Fund (ERF) every year for 23 to 35 years.

1.2 Summary of policy recommendations to address the SGM loopholes

In order to address the issues highlighted in this study, the following changes should be legislated, or at minimum regulated, under the SGM:

Treatment of new entrants and allocation of baselines under the Safeguard Mechanism

1. New entrants to the Safeguard Mechanism should not be allocated new baselines. Instead, they should be required to buy SGM credits to cover all of their emissions.
2. Baselines for existing LNG production facilities should be reduced on a pathway that reflects the decline of current reserves.
3. Expansions and extensions to existing fossil fuel projects that involve the development of new reserves (such as the Scarborough and Browse and Barossa gas basins) must be treated as new entrants, and baselines must not be allocated for such projects.

Use of offsets under the Safeguard Mechanism

4. The use of offsets (ACCUs) by SGM entities should either be prevented or restricted to a maximum of 5% of total abatement, with only high integrity Australian offsets used.
5. The limited use of offsets under the SGM should be reserved for activities with hard-to-abate emissions that provide essential services or contribute to overall decarbonisation efforts, rather than new fossil fuel projects.

Assessment of new high-emissions projects

6. In addition to regulation under the SGM, new projects (including expansions and extensions) should be subject to Commonwealth Government assessment according to a new climate trigger as part of the reformed Environment Protection and Biodiversity Conservation (EPBC) Act or similar statutory instrument. At a minimum, such assessment must include:
 - a) assessment of compatibility with Australia's emissions reduction goals;
 - b) assessment of compatibility with global temperature goals, including Scope 3 emissions;
 - c) and, requirements for projects to have enforceable net zero plans that comply with the new United Nations and International Organization for Standardization (ISO) standards for net zero.

2. Introduction

The Australian Government is proposing to reform the Safeguard Mechanism (SGM) as the primary policy instrument to reduce carbon emissions from industry in line with the updated Australian economy-wide emissions reduction target.

The SGM was introduced under the Coalition Government, and it has been criticised for allowing total emissions from covered facilities to rise, due to the allocation of generous baselines for these facilities that created no requirement or incentive to reduce emissions. Other design features that have received less attention, but have been an equally significant driver for growth in emissions under the SGM, are the treatment of new projects or 'entrants' and the use of offsets. Under the proposed reforms to the SGM, facility baselines will be reduced over time to meet overall emissions reduction targets, however it is proposed that allocation of free emissions permits or baselines for new projects, and the use of unlimited offsets, be retained.

As the original SGM did not include an overall cap on pollution or reduction targets for covered facilities, the allocation of additional emissions permits or baselines for new projects simply resulted in increased overall emissions under the SGM, with no penalty for other covered facilities. The imposition of a cap and reduction target under the proposed reforms will mean that maintaining free permit allocation to new entrants will now result in a transfer of abatement cost to the other SGM facilities. In this way, the proposed reforms will address one problem with the SGM while maintaining and creating another problem that results in an effective subsidy to new highly polluting fossil fuel projects.

This arrangement will result in significant increases in the overall amount of emissions that must be abated under the SGM, and will threaten Australia's overall emissions reduction goals. Maintaining the current method of allocating free emissions permits in the form of baselines to new projects will unfairly transfer costs to other Australian businesses, while allowing new projects unlimited use of offsets will undermine the integrity of the SGM, allowing total emissions to grow and further increasing the cost of abatement for other sectors.

This study examines ten new project proposals that have received environmental approval or are recommended for approval by the Western Australian Government, applying emissions data for these projects to demonstrate how these proposed loopholes in the SGM will operate to enable and subsidise these projects. Using emissions projections provided by proponents as part of state environmental assessments, the analysis quantifies the impact of these projects on Australia's overall emissions reduction goals, availability of offsets, and cost borne by other Australian businesses covered by the SGM.

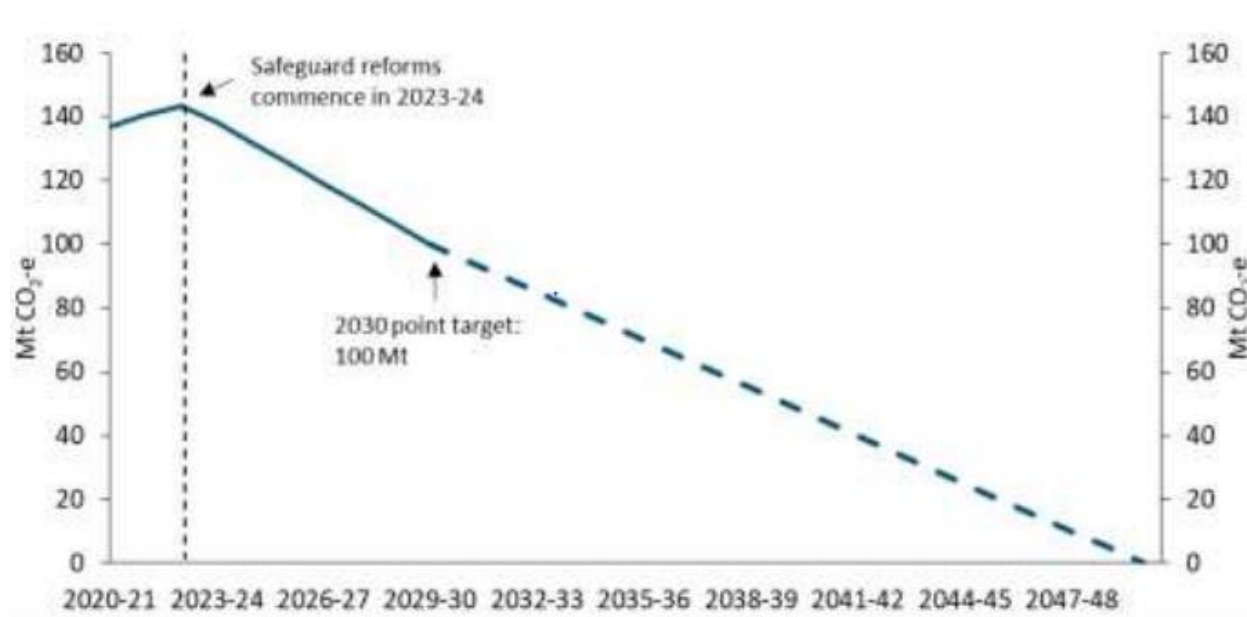
Policy recommendations are made that would address the loopholes in the SGM and preserve the integrity of the SGM and Australia's national emissions reduction efforts, while protecting Australian businesses from bearing billions of dollars in additional costs as a result of these projects.

3. The proposed Safeguard Mechanism

The Safeguard Mechanism (SGM) is the principal Commonwealth Government policy instrument to reduce emissions from Australian industry, and all projects examined in this study fall under the SGM.

It is proposed that the SGM will deliver a reduction of overall aggregate emissions from covered facilities by an amount that is proportional to the legislated Australian economy-wide emissions reduction target, which was 28% in 2020-21.

Accordingly, the Australian Government has presented an 'indicative emissions decline trajectory to net zero by 2050' for entities covered by the SGM.¹



Emissions baselines under the SGM

Emissions 'baselines' under the SGM represent the amount of annual emissions that can be released without penalty by facilities covered by the mechanism. As they are allocated to industry for free, rather than sold, they can be described as 'free pollution baselines'. Under the Coalition Government, baselines were allocated at, or higher than the actual reported emissions for most facilities, so no abatement was achieved by the SGM overall.

Under the proposed reforms to the SGM, the free pollution baselines will be gradually reduced over time to reflect the overall emissions reduction goal for the SGM. Facilities that exceed their baselines will be able to purchase 'SGM credits' generated by other facilities under the SGM that have successfully reduced emissions below their baselines. Alternatively, offsets can be purchased in the form of ACCUs generated by projects outside the SGM.

New entrants and expansions

Allocating free pollution baselines to existing industry and then reducing these baselines over time is an effective way to reduce overall emissions from Australian industry under the SGM. However, this system will quickly become compromised if baselines for existing projects are increased or extended, or if

¹ [Department of Climate Change, Energy, the Environment and Water, Position Paper on Safeguard Mechanism Reforms, January 2023](#)

additional free pollution baselines are allocated to new facilities (or ‘new entrants’) resulting in more pollution being added to the system.

The Australian Government acknowledges that the overall abatement task for facilities under the SGM will increase due to new entrants and expansions:

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

If the integrity of the SGM emissions targets and carbon budget is to be retained, then every tonne of additional emissions from new entrants and expansions will have to be abated elsewhere under the SGM. This can only be achieved through tougher baselines for the other covered facilities than would otherwise have occurred if the new projects and expansions did not need to be accommodated.

At the time the SGM discussion paper was released in August 2022, the expected cumulative abatement task was 170 million tonnes to 2030, with annual emissions (reducing from 137 million tonnes to a point target of 99 million tonnes by 2030). By January 2023 this abatement task had already been revised upwards to 205 million tonnes, in order to accommodate greater anticipated emissions growth.

The January 2023 Position Paper states:

‘With new entrants included at unconstrained levels, the projection of emissions from Safeguard facilities grows [...] and has higher emissions in the early years, contributing to the upwards revision to the cumulative abatement task.’³

The revised abatement task of 205 million tonnes compares with an abatement task of 166 million tonnes from existing facilities only. This demonstrates clearly the effect of new entrants and expansions on the overall abatement task that will be borne by SGM facilities.

3.1 Loopholes in the SGM

The following loopholes reflect SGM design features that are proposed to be carried over from the original scheme introduced by the previous Coalition Government. These policy features act to undermine the current Australian Government’s emissions reduction and climate policies. Together they act to enable new fossil fuel projects and increase emissions. Under the reformed SGM, these loopholes will also result in the transfer of significant costs to other Australian businesses and consumers, as cleaner industries will bear the cost of abating hundreds of millions of tonnes of pollution from new and expanding fossil fuel projects.

Loophole 1 – Free pollution permits for new projects

The first loophole under the proposed SGM design relates to the allocation of free pollution baselines to new projects in a way that forces other industry, and therefore Australian consumers, to pay for this pollution.

² [Department of Climate Change, Energy, the Environment and Water, *Safeguard Mechanism Reforms: Consultation paper*, August 2022.](#)

³ [Department of Climate Change, Energy, the Environment and Water, *Position Paper on Safeguard Mechanism Reforms*, January 2023](#)

Under the proposed SGM rules, pollution permits or emissions ‘baselines’ will be ‘allocated’ to new projects (termed ‘new entrants’) for free, according to either best practice standards or industry averages.

For every new tonne of additional pollution that is emitted by a new entrant, an equivalent amount of abatement or reduction must be delivered elsewhere under the SGM. If this does not occur, total emissions under the SGM will rise and the SGM will fail to meet its emissions reduction targets.

If new facilities are allocated free pollution permits or baselines, the additional abatement required to accommodate the new projects must be delivered by other facilities covered under the SGM. To facilitate this, the Australian Government proposes to build a ‘reserve’ into decline rates, to accommodate higher than expected growth and new entrants. The January 2023 Position Paper on Safeguard Mechanism Reforms explains that ‘a reserve would be built into the overall emissions constraint—and applied equally to all facilities—to ensure the 2030 target will be met’.⁴ This will inevitably result in the imposition of tougher baselines for other facilities covered by the SGM.

Effect of this loophole

If new entrants are allocated free pollution permits or baselines as currently proposed, then the cost of abating almost all of the emissions they generate will be transferred to other Australian businesses and consumers. This will result in an effective subsidy to new entrants at the expense of other Australian businesses.

Not only does this subsidy enable and support new fossil fuel projects, but it will create other distortions to the economy and place a brake on the growth of low carbon industries that will provide jobs and economic growth in the future. If this pollution subsidy is provided to highly polluting industries such as the gas sector, cleaner industries under the SGM will be forced to pay for pollution from higher emitting industries that generate fewer jobs and provide fewer overall benefits to the Australian economy. This creates a disincentive to the growth of clean industries, as they will have to shoulder the burden of gas sector emissions, effectively subsidising the growth of this emissions intensive industry.

How the new WA projects will exploit this loophole

At a carbon price of \$40 per tonne, this would represent an effective subsidy of around \$8.8 billion to the new WA projects that would be borne almost entirely by Australian industry with lower emissions. Woodside would be the single largest beneficiary of this subsidy, benefiting from a cost transfer of around \$7.36 billion to other industries and consumers for the 184 million tonnes of net unabated pollution from its projects.

Loophole 2 – Free pollution permits for expansions and extensions

The proposed design of the SGM also enables and subsidises existing projects to expand and extend their operations in the same way that it enables new projects. This will enable immense new gas reserves to be developed and brought online by expanding and extending the operation of existing gas processing and export facilities. Similar to new entrants, the proposed SGM rules will see free pollution permits (in the form of baselines) allocated to accommodate significant increases in the overall emissions that will be generated by the facilities.

The Woodside Pluto Train 2 and North West Shelf extension projects illustrate this. The Pluto project involves doubling the size of the existing Pluto LNG facility to process new gas from the Scarborough field, and extending the life of the expanded facility by several decades. The North West Shelf extension will not increase annual production from the facility, but will extend its operation by several decades. This will

⁴ [Department of Climate Change, Energy, the Environment and Water, Position Paper on Safeguard Mechanism Reforms, January 2023](#)

enable large undeveloped gas fields to be brought into production for export, including the Browse Basin, Canning Basin, and Perth Basin.

It is the total volume of emissions released into the atmosphere over time that impacts the climate and Australia's emissions budget, rather than the amount of emissions released in any given year. Simply comparing new annual pollution baselines with current annual emissions from these facilities will not provide an accurate picture of the overall pollution (and cost transfer) impact because it will hide the effect of extending the lifetime of the facilities. Instead, we must calculate and compare the total amount of new pollution that will result from extensions and expansions over the life of the projects with the amount of pollution that would have occurred if the expansion and extension projects did not proceed.

Without the extension and expansion projects, emissions from Australian LNG export projects would decline over time as existing gas fields are depleted. This would result in reduction of gas exports consistent with what the International Energy Agency (IEA) and Intergovernmental Panel on Climate Change (IPCC) say is required in order to meet global temperature goals. Extending and expanding these projects undermines global action by generating billions of tonnes of additional direct and Scope 3 carbon pollution.

Effect of this loophole

Allocating free pollution permits or baselines for fossil fuel extensions and expansions has the same effect as for new entrants – that is, the costs of abating the addition pollution is transferred to other Australian industry and consumers.

How the new WA projects will exploit this loophole

Together, the Woodside expansion and extension, including the Scarborough project and the North West Shelf extension projects, will generate over 5.7 billion tonnes of additional pollution, compared to a scenario where the projects did not proceed. This will include approximately 514 million tonnes of direct emissions in Australia. Assuming all of Woodside's offsetting commitments are delivered, approximately 184 million tonnes of residual unabated emissions will be released in Australia. It is likely that Woodside will seek free pollution baselines under the SGM to cover all its domestic emissions, despite its commitments to offset some of them. Even if Woodside is only allocated baselines to cover its residual unabated emissions, at a carbon price of \$40 per tonne this will represent an additional cost of around \$7.36 billion that will be borne by other Australian industry and consumers.

Loophole 3 – Unlimited use of offsets to enable expanded fossil fuel production

Another significant loophole in the proposed rules of the SGM is the unlimited use of offsets from outside of the SGM to avoid actual reductions in emissions. It is proposed that SGM facilities will be able to purchase ACCUs to make up for any exceedance of their SGM baselines.

The unlimited use of offsets by SGM facilities presents a number of issues, including undermining the integrity of the SGM through the use of low-integrity offsets, allowing absolute emissions under the SGM to increase, creating a perverse economic incentive for pollution under the SGM, and denying access to this limited mitigation opportunity for essential industries with genuinely hard-to-abate emissions.

It is often stated that the use of offsets is a way to ensure 'least cost abatement'. While the use of offsets may reduce the costs for fossil fuel projects to meet decreasing baselines under the SGM, this is likely to increase the overall cost of meeting Australia's national emission reduction to the economy as a whole, by using up a very large proportion of Australia's limited ACCU supply. Offsets should be reserved for use by essential industries such as agriculture and food production, and for emissions that genuinely cannot

be avoided. Australia's limited supply of ACCUs should not be used to facilitate very large new export fossil fuel projects that can be avoided, and that are not compatible with global carbon budgets.

Integrity concerns with ACCUs and other offset standards are well-documented. They relate to problems with permanence, additionality, and verifiability for the projects that generate the ACCUs or certificates. Despite recent Australian Government review into the integrity of ACCU's, these issues remain. There is no quick fix to supply the market with high-integrity ACCUs given the limited amount of high-integrity ACCUs available.

Effect of this loophole

The unlimited use of offsets will enable absolute emissions under the SGM to increase, while the use of questionable or low-integrity offsets undermines the SGM and Australia's emissions reduction targets as a whole. In addition, the use of offsets will lead to lower than optimal levels of direct abatement by SGM facilities, with higher overall economic costs of meeting Australia's national emissions reduction targets.

The SGM will establish an effective carbon price for one part of the economy (SGM-covered facilities), while the rest of the economy, including agriculture and transport, will have no such carbon price or pollution limits. Enabling the creation of offsets from uncapped sectors of the economy and transferring them to the SGM-covered sector creates an economic incentive for capped sectors to pollute more than would otherwise be economically efficient. This is because the price of offsets created by uncapped sectors will be artificially low, as the sectors generating the offsets are not required to reduce their own emissions. Low-cost offsets will create a limit on the economic incentive for SGM-covered entities to pursue abatement options that are costlier than offsets from uncapped sectors because the price of SGM credits will never rise above the price of ACCUs.

The use of offsets in this way will significantly reduce their availability to provide direct reductions in pollution from the uncapped sectors generating the offsets, including agriculture, which must inevitably reduce emissions to meet the Australian target. For example, the meat and livestock industry has committed to be carbon neutral (achieve net zero emissions) by 2030 and would be competing unnecessarily with the fossil fuel industry for offsets.

How the new WA projects will exploit this loophole

The emissions reduction commitments for the WA projects rely heavily on offsetting rather than direct reduction, generating a very large aggregate demand for offsets of at least 386 million tonnes over the life of the projects. To put this into perspective, the Australian Government's Emissions Reduction Fund (ERF) delivered total offsets equalling 17 million tonnes of abatement in 2021.⁵

If additional offsets are also relied upon to mitigate the residual emissions from these projects, then the total cumulative demand for offsets from these projects alone is likely to exceed 600 million tonnes over their lifetimes.

This represents a new demand for ACCUs equivalent to the entire annual abatement delivered by the ERF at current rates every year for 23 to 35 years.

The use of such a large amount of offsets to meet mitigation goals for these projects will undermine the integrity of the SGM as it will allow actual gross emissions under the SGM to rise substantially, and the offsets themselves will have questionable integrity.

⁵ [Clean Energy Regulator, Media Release: The evolving carbon market: transitional arrangements for Emissions Reduction Fund fixed delivery contracts, 4 March 2022.](#)

As noted above, the demand for offsets created by these projects will significantly reduce the availability of ACCUs to mitigate emissions from existing sources, including essential and hard-to-abate sectors. This will drive up the cost of abatement overall and place Australia's overall emissions reduction goals at risk.

4. New gas and resource projects proposed in Western Australia

The following sections provide further detailed assessment of ten new gas and other high-emitting projects that have received environmental approval from the Western Australian Government or are recommended for approval by the state's Environmental Protection Authority (EPA).

4.1 Pollution growth from fossil gas since 2005

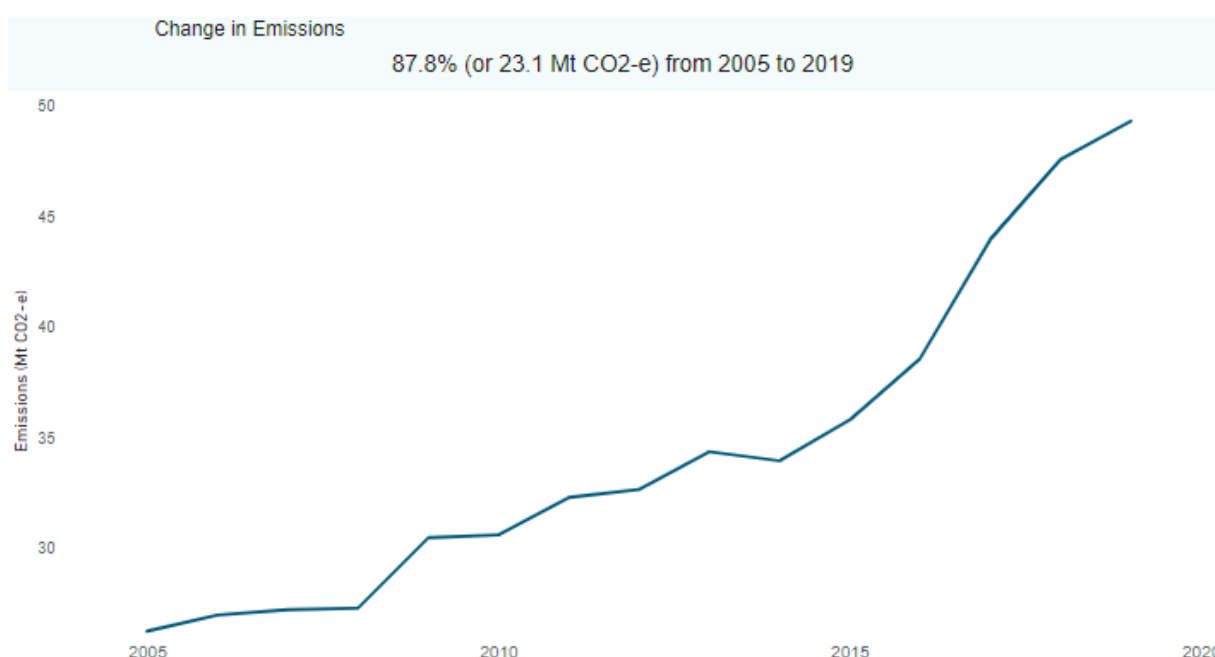
Rapid emission growth from the gas export industry has already played a major role in undermining Australian action on climate change over the past decade. It is likely that this pattern of growth in gas emissions will continue if the loopholes in the SGM identified in this study are not addressed.

While emissions have reduced in the Australian electricity sector, rapid growth in emissions from the gas sector since 2005 have largely cancelled out these gains. This has set back Australia's overall emissions reduction efforts and prevented the adoption of more ambitious national emission reduction goals that are aligned with global efforts.

The impact of growth in emissions from the fossil gas industry can be most clearly seen in Western Australia, where it has not been balanced by reductions in emissions from other parts of the economy. While emissions have reduced since 2005 in most Australian states, Western Australia has seen significant emissions growth over the same period.

Emissions from the WA energy sector, which is dominated by LNG processing for export, were nearly 88% higher in 2019 than in 2005.⁶ Taken on its own, emissions from the Western Australian LNG sector have increased by over 300% since 2005.

Western Australian energy sector (including oil and gas) emissions from 2005 to 2019



⁶ [Department of Climate Change, Energy, the Environment and Water, *State and territory greenhouse gas inventories: annual emissions*, 29 July 2022.](#)

4.2 The ten new projects in Western Australia

Ten new resource projects proposed in Western Australia have been examined as part of this study. The projects are summarised in the table below.

Project	Proponent	Description
Oil and gas projects		
1.Pluto LNG Train 2 / Scarborough	Woodside Energy	Major expansion of the Pluto LNG processing facility on the Burrup Peninsula to process gas from the undeveloped Scarborough gas field
2.North West Shelf LNG extension	Woodside Energy	Extension of the North West Shelf LNG processing facility on the Burrup Peninsula to process gas from the new Browse Basin, Waitsia, and other gas fields.
3.Waitsia onshore gas development	Mitsui E&P Australia and Beach Energy	Major new onshore gas field development in the MidWest for export and domestic use.
4.Northern Goldfields gas interconnector	APA	New gas interconnector pipeline to supply gas to WA Goldfields
Mining projects		
5.Roy Hill iron ore mine revised proposal	Hancock Prospecting / Roy Hill Iron Ore	Increased production at the Roy Hill iron ore project in the Pilbara.
6.West Musgrove copper and nickel project	Oz Minerals	Proposal to develop a new copper and nickel mine in the West Musgrave Ranges of Western Australia.
7.Greater Paraburdoo iron ore hub	Rio Tinto / Hamersley Iron	Proposal to extend the existing iron ore mining operations at Paraburdoo and Eastern Range in the Pilbara.
Other projects		
8.Pilbara Energy Generation power station	Fortescue Metals Group	Gas fired power station to power FMG Iron ore mining operations in the Pilbara.
9.Ammonia plant Renewable hydrogen project – Burrup Peninsula	Yara Fertilisers	Electrolysis plant and a dedicated solar photovoltaic (PV) farm to produce hydrogen for fertiliser production on the Burrup Peninsula.
10. Perdaman urea project	Perdaman	Major new industrial development on the Burrup Peninsula using gas from the new Woodside Scarborough development to manufacture fertiliser.

Nine of the projects have received primary environmental approvals from the Western Australian Government following Environmental Impact Assessment (EIA) undertaken by the state's Environmental Protection Authority (EPA). The remaining project, Woodside's North West Shelf Extension, has been recommended for approval by the EPA, however final approval is still pending following record appeals against the project.

According to the WA Government's Greenhouse Gas Emissions Policy for Major Projects, new and revised resource projects in Western Australia are required to 'contribute to' the state's aspirational emissions reduction goal of net zero by 2050.⁷ Accordingly, under its current guideline the EPA has recommended, and the State has imposed Greenhouse Gas Management Plans that commit proponents to net zero emissions by 2050, while at the same time allowing emissions from new projects to increase overall emissions compared with current levels.⁸

The approved Greenhouse Gas Management Plans and other assessment information for the ten new projects have been used to examine their implications for emissions and the SGM.

4.3 Implications of the new projects for Australian climate policy

Analysis of the ten WA projects and extensions shows that they will have significant implications for global carbon pollution, for Australia's carbon pollution reduction targets, and for the SGM. The analysis reveals how the projects will be able to exploit the SGM loopholes resulting in the transfer of billions of dollars in costs for abating their residual carbon pollution to other Australian businesses, while making a substantial share of Australia's total available carbon offsets unavailable for other sectors.

Total emissions generated by the projects

- Despite commitments to achieve net zero emissions by 2050, the projects will together generate over 7.6 billion tonnes of additional aggregate carbon pollution over their lifetimes (including Scope 3 emissions), assuming the abatement commitments for each project are fully realised.
- This includes more than 600 million tonnes of direct emissions released here in Australia, and over 7 billion tonnes of indirect pollution that will be released in other countries, mostly from the combustion of gas and the use of iron ore in steelmaking.
- Of the direct emissions released in Australia, 220 million tonnes will be unabated residual emissions, while 386 million tonnes are planned to be offset in line with corporate net zero goals and approved Greenhouse Gas Management Plans for the projects.

Fossil gas projects

- New fossil gas production projects, including Woodside's Scarborough to Pluto and Browse Basin to North West Shelf projects, account for the vast majority of these emissions from the ten projects.
- The fossil gas projects alone will generate over 5.8 billion tonnes of emissions in total, with 5.3 billion tonnes of Scope 3 emissions and around 474 million tonnes of direct (Scope 1 and 2 emissions).
- Approximately 283 million tonnes are planned to be offset over the life of the projects, representing around 4.9% of total lifetime emissions from the projects.

Emissions reduction goals and commitments

- Each of the projects has an approved or recommended Greenhouse Gas Management Plan containing commitments to achieve net zero emissions by 2050, as a requirement of the WA Government and state EPA.

⁷ [Greenhouse Gas Emissions Policy for Major Projects](#)

⁸ [EPA Environmental Factor Guideline - Greenhouse Gas Emissions](#)

- Analysis of these plans shows that none of the emissions reduction goals or abatement plans for these projects are aligned with Australia's 2030 national emission reduction targets, or compatible with globally agreed temperature goals.
- In total, emissions reduction plans approved or recommended by the WA Government for these projects will deliver less than 6% reduction in total emissions over the life of the projects, with the overwhelming majority of this (around 90%) to come from offsets.

Demand for offsets

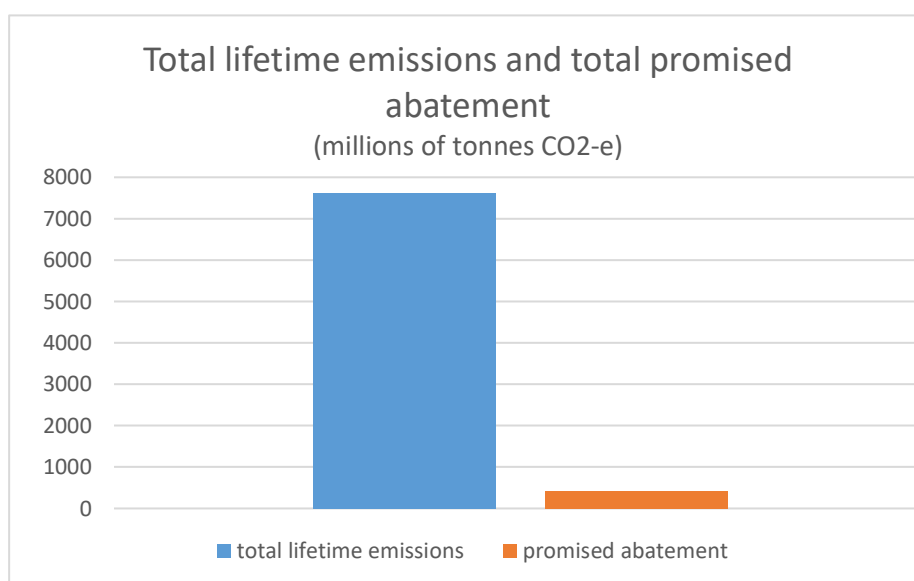
- In order to meet the emissions reduction commitments for the ten projects, at least 386 million tonnes of offsets will be required over the life of the projects.
- All direct residual emissions from these projects will have to be abated in order to meet the emission reduction goals of the SGM. If this abatement is also delivered by offsets, then the total demand for offsets will exceed 600 million tonnes over the life of the projects.
- This represents a new demand for ACCUs equivalent to the entire annual abatement delivered by the Australian Government's Emissions Reduction Fund (ERF) every year for 23 to 35 years.

Summary of emissions and offset commitments from the ten projects

The table below provides a summary of greenhouse gas emissions (measured in millions of tonnes) that are projected to result from the projects that have been approved or assessed by the Western Australian Government. (Further detailed breakdown is provided in Appendix 1).

Project type	Scope 3	Scope 1&2 ⁹	Total gross ¹⁰	Offsets	Net Scope 1&2 ¹¹	Net total
Gas	5,300.3	520.2	5820.5	(329.9)	190.3	5490.6
Other	1,707.9	88.5	1796.4	(56.7)	31.8	1739.7
Total	7008.2	608.7	7,616.9	(386.6)	222.1	7,230.3

The figure below shows the promised abatement for the projects that will be delivered if state conditions and net zero plans are fully implemented, compared with the total emissions that will result over the lifetime of the projects.



⁹ Actual direct (scope 1 and 2) gross emissions released into the atmosphere excluding offsets

¹⁰ Total (Scope 1-3) actual gross emissions excluding offsets

¹¹ Net emissions remaining after all promised reductions and offsets are taken into consideration, assuming all commitments are delivered

4.4 Implications for Australian carbon markets and availability of offsets

Examination of the Greenhouse Gas Management Plans associated with the ten projects reveal that the vast majority (on average around 90%, or 386 million tonnes) of the overall mitigation effort required to meet their emissions reduction goals and commitments is expected to be delivered by offsets. This represents a new demand for ACCUs equivalent to the entire annual abatement effort delivered by the ERF every year for 23 years.

This will leave cumulative residual unabated emissions of 222 million tonnes over the life of the projects here in Australia (excluding Scope 3 emissions), which will have to be mitigated in some other way if SGM targets are to be met. If offsets are also used to abate the residual domestic emissions from these projects, then the total aggregate demand for offsets will exceed 600 million tonnes, equivalent to the annual abatement of the ERF every year for 35 years.

It is not possible to place an exact figure on the amount of offsets that will be required, as this will be influenced by commercial decisions made over the life of each project, taking into consideration the cost and availability of offsets compared with other potential reduction and mitigation options. It is assumed that offsets will be used where no other abatement option has been committed by proponents, with some allowance made for additional economic mitigation options to become available over time as technology improves (see note on methodology).

In a number of cases, the plans reveal that offsets will be used even where alternative means of abatement may be available. For example, Woodside has either made no commitment, or explicitly ruled out the use of Carbon Capture and Storage (CCS) technology and the use of renewable energy to reduce the largest sources of emissions from its LNG facilities – the combustion of gas for energy to power the facilities, and the release of ‘reservoir’ CO₂.

While the use of low-cost international offsets is favoured by WA oil and gas producers, these international offsets are often of questionable integrity and are unlikely to contribute to a reduction in Australia’s domestic emissions in line with national targets. As such, the Australian Government proposes that other than SGM credits, only ACCUs will be recognised as eligible offsets under the SGM.

The substantial aggregate demand for offsets of between 386 and 600 million tonnes over the life of the projects will have significant implications for Australia’s emissions reduction goals as described elsewhere in this study.

5 Conclusions and recommendations

The analysis presented in this study makes it clear that the proposed SGM scheme design is inadequate in its current form, and that loopholes in the SGM must be addressed. In particular, the SGM must not enable highly polluting new fossil fuel projects at the expense of other Australian industry and consumers, and it must not introduce new perverse economic incentives for pollution.

In order to address the issues identified in this study, the following recommendations should be legislated, or at minimum regulated, under the SGM and other legislation as appropriate.

Recommendations relating to the treatment of new entrants and allocation of baselines under the SGM

Recommendation 1)

New entrants to the Safeguard Mechanism should not be allocated new baselines. Instead, they must be required to buy SGM credits to cover all of their emissions.

Under an arrangement where emissions caps and reduction targets are introduced under the SGM, the Coalition policy of allocating free baselines to new entrants cannot be maintained without creating a perverse incentive and effective subsidy for new polluting industries. Requiring new entrants to purchase SGM credits to cover 100% of their emissions would prevent the total amount of emissions from SGM facilities from rising because SGM credits can only be generated through the reduction of emissions by other covered facilities. This recommended change would avoid the transfer of abatement costs to other covered entities and remove the effective subsidy to new fossil fuel projects. The effect would be to push up the cost of SGM credits creating a disincentive for new polluting industries while creating an incentive for existing facilities to reduce their emissions. This would turn a perverse incentive into a positive incentive aligned with meeting Australia's emissions reduction goals.

Recommendation 2)

Baselines for existing LNG production facilities should be reduced on a pathway that reflects the decline of current reserves.

Recommendation 3)

Expansions and extensions to existing fossil fuel projects that involve the development of new reserves (such as the Scarborough and Browse and Barossa gas basins) must be treated as new entrants and baselines must not be allocated for such projects.

The Coalition Government was criticised for extending baselines for SGM facilities to allow increased pollution from expanding facilities, and this must be addressed. In addition, facilities that propose to extend the duration of operations beyond existing approvals or fossil fuel reserves must be treated as new entrants, and required to purchase SGM credits to cover their full emissions. It is not economically efficient or fair to enable very large new fossil fuel reserves to be developed in a way that forces other Australian businesses to bear the costs of their emissions for decades into the future. New projects such as Woodside's Scarborough and Browse Basin developments must be treated as new projects, not simply allowed to operate by extending already generous pollution baselines to accommodate them.

Recommendations relating to the use of offsets

Recommendation 4)

The use of offsets (ACCUs) by SGM facilities should either be prevented or restricted to a maximum of 5% of total lifetime project emissions, with only high integrity Australian offsets used.

Recommendation 5)

The limited use of offsets under the SGM should be reserved for activities with hard-to-abate emissions that provide essential services or contribute to overall decarbonisation efforts, rather than new fossil fuel projects.

Without restrictions on the use of offsets from outside the SGM, a perverse economic incentive is created for SGM entities to pollute more than is economically efficient, total emissions from covered facilities will be able to rise, offset integrity issues will undermine the SGM, and these abatement options will not be available to other parts of the economy (such as the agriculture sector).

Recommendations relating to the assessment of new high-emissions projects

Recommendation 6)

In addition to regulation under the SGM, new projects (including expansions and extensions) should be subject to Commonwealth Government assessment, according to a new climate trigger as part of the reformed EPBC Act or similar statutory instrument. At a minimum, such assessment must include:

- a) assessment of compatibility with Australia's emissions reduction goals;*
- b) assessment of compatibility with global temperature goals, including Scope 3 emissions;*
- c) requirements for projects to have enforceable net zero plans that comply with the new UN and ISO standards for net zero.*

As a single policy instrument, the SGM is limited in application and cannot be expected to fully address emissions growth from new projects and expansion proposals on its own. In addition to the SGM reforms and other recommendations presented here, it is essential that a national framework for assessment of climate impacts of new projects is developed and legislated. This must include the ability to place additional enforceable conditions on new projects, and refuse approvals where projects are clearly inconsistent with Australia's emissions reduction goals and globally agreed temperature goals.

Notes on Methodology

Calculation of emissions from WA projects

Figures for emissions from the new projects have been taken from the State Environmental Impact Assessment (EIA) documents for the projects, including the approved or recommended Greenhouse Gas Management Plans that have been developed by proponents as part of the assessment process. The numbers are provided by proponents according to the WA EPA's preferred methodology for estimating greenhouse gas emissions.

Scope 1 and 2 emissions are treated together in state EIA documents and the figures provided in this report reflect that. While not all scope 2 emissions will be captured under the SGM, the scope 2 emissions for the projects tend to be associated with transport of goods during construction phase, and are negligible when compared with direct Scope 1 operating emissions that are captured under the SGM.

Calculation of emissions from expansion and extension projects

For the sake of this analysis, total emissions and abatement estimates for all emissions covered by the Greenhouse Gas Management Plans or Greenhouse Gas Abatement Plans produced as part of the EIA process for the expansion and extension projects are used.

From the published EIA information, it is not possible to accurately determine the exact rate of decline from existing gas fields and how this would be backfilled by new gas from new developments. This means that some emissions from processing gas from already-developed fields before they are fully depleted will be included in the overall emissions estimates for the new projects. On the other hand, analysis from Climate Analytics has found that the EIA documents for the Pluto LNG facility significantly overestimates the overall abatement that will be delivered by Woodside for this project. This is due to the use of a baseline that is much higher than actual planned production levels, resulting in an overestimate of abatement effort by around 40% for the expanded Pluto facility in 2030¹². This is likely to more than balance out any overestimate in emissions from new projects due to the inclusion of some gas from existing fields. If updates become available from the project proponents on decline rates of existing fields that are already in production, then emissions estimates for extensions and expansions can be adjusted accordingly.

Calculation of abatement costs

Abatement costs for new projects, expansions and extensions have been calculated using a nominal price of \$40 per tonne as a conservative estimate of cost over the life of the projects. This number reflects the approximate median ACCU spot price since 2001. It is higher than ACCU contract prices under the Emissions Reduction Fund, but substantially lower than most long-term price projections for ACCU's. Given the emissions projections for the projects extend to 2050 and beyond, there is a high probability that abatement costs over the life of the projects will exceed this figure.

Allocation of SGM baselines to new projects and expansions.

It is not possible to predict with total accuracy what baselines will be allocated to each of the projects because the baseline rules have not yet been determined. For the sake of this analysis, it is assumed that SGM baselines will be allocated to the ten new projects sufficient to cover 100% of the residual unabated emissions, after corporate commitments and approved Greenhouse Gas Management Plans are fully implemented. This is likely to be a conservative assumption. It is possible that baselines will be allocated to the ten projects which are lower than this level, requiring the projects to undertake greater mitigation efforts and resulting in lower costs being transferred to other SGM entities. However, the Australian

¹² [WARMING WESTERN AUSTRALIA How Woodside's Scarborough and Pluto Project undermines the Paris Agreement](#)

Government has indicated that baselines are likely to be allocated based on industry averages. In this case, possible that the baselines allocated to these projects will be more generous than their actual emissions, assuming that corporate commitments and state conditions are complied with. This has the potential to translate to windfall profit for the projects and an even greater cost being passed on to other SGM facilities.

For expansions and extensions, it is assumed that baselines will be allocated in the same manner as for new projects, reflecting 100% of the net unabated emissions after state conditions and corporate decarbonisation commitments are delivered. Again, this may be conservative. For example, in the case of the Woodside North West Shelf facility, it is likely that Woodside will seek a continuation of its historical emissions baseline, which may be more generous than the final updated conditions and commitments associated with the extension proposal.

Assumptions about the use of offsets to meet emissions reduction commitments

None of the Greenhouse Gas Management Plans for the ten projects state exactly what proportion of the of the overall abatement effort proponents have committed to is expected to be delivered by offsets, so assumptions must be made to estimate this. Where no other abatement option has been committed in the approved Greenhouse Gas Management Plans, it is assumed that offsets will be used to achieve mitigation targets, with some allowance made for additional mitigation options to become available over time as technology improves

In practice, this is likely to be influenced by commercial decisions made over the life of the project, taking into consideration the cost and availability of offsets compared with other potential reduction and mitigation options (such as use of renewable energy). However, after initial investments are made and infrastructure has been built, opportunities to achieve substantial further reductions in emissions over the life of the project may be limited, creating a significant reliance on the use of offsets to meet ongoing emission reduction goals.

The WA EPA Guidance Statement on Greenhouse Gas Emissions recommends a 'mitigation hierarchy' approach is employed by proponents, with offsets used as the last resort after all feasible avoidance and reduction options have been exhausted. Examination of the approved Greenhouse Gas Management Plans for the ten projects shows that in most cases, little effort has been made by proponents to examine or assess avoidance or reduction options. For example, Woodside has either made no commitment, or explicitly ruled out the use of Carbon Capture and Storage (CCS) technology, or use of renewable energy to address the largest sources of emissions from its LNG trains – the combustion of gas for energy to power the facilities, and the release of 'reservoir' CO₂.

Appendix 1 - Details of recent Western Australian resource projects

Oil and gas projects

Proponent (and data source)	Project	Description	Scope 1 (MTCO ₂ e- life of project)	Scope 3 (MTCO ₂ e- life of project)	Net zero target
Woodside Energy ^{13*}	Pluto LNG Train 2	Major expansion of the Pluto LNG processing facility to process gas from the undeveloped Scarborough gas field	~119 (~59 with abatement)	1,248 (865 Scarborough gas only)	Net zero by 2050
Woodside Energy ^{14*}	North West Shelf LNG extension	Extension of the North West Shelf LNG processing facility to process gas from the new Browse Basin, Waitsia, and other unidentified gas fields.	385 (128.8 with abatement)	4,009	30% reduction by 2030 and net zero emissions by 2050
Mitsui ^{15**}	Waitsia onshore gas development	Major new onshore gas field development in the MidWest for export and domestic use.	6.6 (2 with abatement)	37.7**	Net zero by 2050, with 100% offsetting of reservoir emissions from commencement
Chevron ^{16***}	Gorgon LNG revised and expanded proposal	Various revisions and updates to the Gorgon LNG development including requirement for net zero plan	266*** (73 with abatement)	1,394***	Net zero by 2050 along a straight line trajectory measured in 5 yearly increments.
APA ¹⁷	Northern Goldfields gas interconnector pipeline	New gas interconnector pipeline to supply gas to WA Goldfields	0.5	44	Net zero plan not required but proponent aims to achieve net zero (Scope 1 and 2) by 2050
Total			Net: 777.1 (263.3 with abatement) Adjusted: 545 (190.3 with abatement)	Net: 6,732 Adjusted: 5300.3	

¹³ Climate Analytics – [How Woodside’s Pluto to Scarborough project undermines the Paris Agreement](#); [EPA advice to Minister on Pluto Greenhouse Gas Abatement Plan](#)

¹⁴ [EPA Report 1727](#)

¹⁵ Appeals Convener report to the Minister for the Environment – [Waitsia gas project Stage 2](#); [EPA report 1687](#)

¹⁶ [EPA Report 1729](#)

¹⁷ [EPA report 1713](#) Scope 3 emissions associated with increased third party gas consumption generated by the project, assuming 20 year project life at 2.2MTPA CO₂e estimate for Scope 3 emissions provided by proponent.

Notes on the above table:

* Approvals for Pluto and North West Shelf projects reflect a combination of increased LNG processing capacity (in the case of Pluto Train 2) and extended operations of existing facilities beyond their previously approved timeframes, in order to process new gas from previously undeveloped reserves (in the case of Pluto Train 1 and North West Shelf Extension projects). While these approvals represent very significant additional emissions through expansion and increased duration of operations, they will not in all cases result in increased annual emissions, as production from existing resources winds down and the new resources are phased in. Since the Australian target is expressed as a carbon budget, and it is the overall amount of CO₂ entering the atmosphere that matters for the climate, the impact of these additional emissions is the same as if they were to come from new projects and they are treated the same for the purposes of this study.

**Some of the Scope 3 emissions from this project are also counted as Scope 1 and/or Scope 3 emissions for the North West Shelf LNG project. As a result, the Scope 3 emissions from the Waitsia project have not been included in the totals for the purpose of this study, to avoid double counting.

***In the case of the Chevron Gorgon LNG revised development, it is unclear to what extent the project reflects the development of additional gas resources that were not assessed at the time the Gorgon development was originally assessed. This means that the updated approval may not result in an extension in the duration of operations or an increase in annual emissions beyond what was originally approved. For simplicity, emissions and abatement associated with this project have not been included in this analysis.

Mining and minerals projects

Proponent (and data source)	Project	Description	Scope 1 (MTCO ₂ e- life of project)	Scope 3 (MTCO ₂ e- life of project)	Net zero target
Hancock Prospecting / Roy Hill Iron Ore ¹⁸	Roy Hill iron ore mine revised proposal	Increased production at the Roy Hill iron ore project.	8.5 (7.6 with abatement)	976.8	Net zero by 2050 along an approximately linear trajectory (based on 5 yearly limits).

¹⁸ Appels convener report to the Minister for the Environment – [Roy Hill Iron Ore Mine Revised Proposal](#). (Note appeals report contains updated figures correcting underestimated in GHG emissions and overestimates of abatement contained in [EPA report 1716](#))

Oz Minerals ¹⁹	West Musgrove copper and nickel project	Proposal to develop a new copper and nickel mine in the West Musgrave Ranges of Western Australia.	9.4 (4.06 with abatement)	7.7	Net zero by 2040.
Rio Tinto / Hamersley Iron ²⁰	Greater Paraburdoo iron ore hub	Proposal to extend the existing iron ore mining operations at Paraburdoo and Eastern Range.	2.6 (0.8 with abatement)	575	Interim and long term emissions reduction targets for Scope 1 emissions, commencing in 2025 to achieve net zero greenhouse gas emissions by 2050.
Total			20.5 (12.5 with abatement)	1,559.5	

Other projects

Proponent (and data source)	Project	Description	Scope 1 (MTCO ₂ e- life of project)	Scope 3 (MTCO ₂ e- life of project)	Net zero target
Fortescue Metals Group ²¹	Pilbara Energy Generation power station	Gas fired power station to power FMG Iron ore mining operations.	26.8 (9.6 with abatement)	2	Net zero emissions by 2040.
Yara Fertilisers ²²	Ammonia plant Renewable hydrogen project – Burrup Peninsula	Electrolysis plant and a dedicated solar photovoltaic (PV) farm to produce hydrogen for fertiliser production.	Reduction of 0.016MTPA (approx. 1.0% of direct emissions from existing Yara facility)	N/A	No requirement – ‘proponent expects a revised condition to include five yearly reduction targets down to net zero by 2050.
Perdaman ²³	Perdaman urea project	Major new industrial development on the Burrup Peninsula using gas from the new Woodside Scarborough development to manufacture fertiliser.	52 (9.75 with abatement)	146.4	Reduce emissions to net zero commencing in 2030.
Total			78.8	148.4	

¹⁹ [EPA report 1720](#)

²⁰ [EPA Report 1723](#)

²¹ [Appeals report to the Minister](#) – Pilbara Energy Generation Project; [EPA report 1686](#)

²² [EPA Report 1722](#)

²³ [EPA Report 1705](#)

			(19.35 with abatement)		
Total (all projects)			876.4 (295.2 with abatement)	8,439.9	