Australian Government

Emissions Reduction Fund Safeguard Mechanism

Regulation Impact Statement

Contents

1 Introduction

The Direct Action Plan, including the Emissions Reduction Fund safeguard mechanism, is a Government election commitment.

The Emissions Reduction Fund is the centrepiece of the Government's Direct Action Plan to cut greenhouse gas emissions to five per cent below 2000 levels by 2020. It is a $2.55 billion programme to purchase emissions reductions at lowest cost. The Emissions Reduction Fund consists of three main components: crediting, purchasing and safeguarding of emissions reductions.

The crediting and purchasing elements of the Fund are already in place, having commenced following passage of *the Carbon Farming Initiative Amendment Act 2014*. In April 2015, the first Emissions Reduction Fund auction took place. More than 47 million tonnes of emissions reductions were contracted at an average price of $13.95 per tonne. Through this auction, the Government committed $660 million to 144 projects that will reduce emissions in Australia.

The purpose of the safeguard mechanism—the final element of the Emissions Reduction Fund—is to protect taxpayers' funds by ensuring that emissions reductions purchased by the Government are not offset by significant increases in emissions above business-as-usual levels elsewhere in the economy, as this would undermine the effectiveness of the Fund's crediting and purchasing elements. The safeguard mechanism will do this by sending a signal to businesses to avoid large unconstrained increases in emissions beyond business as usual levels. The safeguard mechanism will do this in a way that accommodates economic growth and allows businesses to continue normal operations.

This election commitment was confirmed in the Emissions Reduction Fund White Paper, released in April 2014. The Department of the Environment certified the White Paper as an early stage Regulation Impact Statement in accordance with the *Government Guide to Regulation* (2014).

Implementation of the crediting and purchasing elements of the Emissions Reduction Fund are now underway. The third element, the safeguard mechanism, will commence on 1 July 2016. The safeguard mechanism will establish emissions baselines for facilities which report high levels of emissions under the National Greenhouse and Energy Reporting (NGER) scheme. These facilities will be required to keep their emissions under their baseline level. The safeguard mechanism is intended to support increased productivity in the context of a growing economy, by creating incentives for businesses to improve their emissions intensity of production as they grow. It is designed to ensure that:

1) business-as-usual economic growth is accommodated by the safeguard mechanism;

2) there are a wide range of emissions management options to ensure safeguard obligations are met by the relatively small number of large businesses covered by the mechanism;

3) the application of the safeguard mechanism to the electricity sector reflects the interconnected nature of the electricity market; and

4) new investments are encouraged to perform at industry best practice.

$2.55 billion has been committed to the Emissions Reduction Fund. The Emissions Reduction Fund and the safeguard mechanism are enduring mechanisms, intended to create a stable and predictable policy landscape in which businesses can make new investments.

1.1 Scope of this Regulation Impact Statement

This is a Regulation Impact Statement for the safeguard mechanism. In accordance with the *Australian Government Guide to Regulation* (2014), this Regulation Impact Statement focuses on the policy commitment and the manner in which it should be implemented.

The Government has consulted widely on the safeguard mechanism's design. Terms of reference were consulted on in October 2013, followed by a Green Paper in December 2013. These informed the release of the Emissions Reduction Fund White Paper in April 2014, in which the Government announced a number of important policy decisions on the safeguard mechanism.

The Department of the Environment certified the White Paper as an early stage Regulation Impact Statement in accordance with the *Australian Government Guide to Regulation*.

During passage of the Carbon Farming Initiative Amendment Bill 2014 through Parliament, amendments were made to the *National Greenhouse and Energy Reporting Act 2007* (the Act). These established a high level architecture for the safeguard mechanism and enabled final design elements to be implemented through legislative rules.

This Regulation Impact Statement explores options and sets out recommended positions for the remaining design decisions of the safeguard mechanism, that is, those design elements not decided in either the Act or the White Paper. It also includes estimates of the regulatory burden arising from the introduction of the safeguard mechanism to inform the Government's final decision on its design.

This standard form Regulation Impact Statement fulfils the commitment to develop a Regulation Impact Statement for the safeguard mechanism once sufficient policy detail was available to do so.

1.2 Problem and necessity of Government action

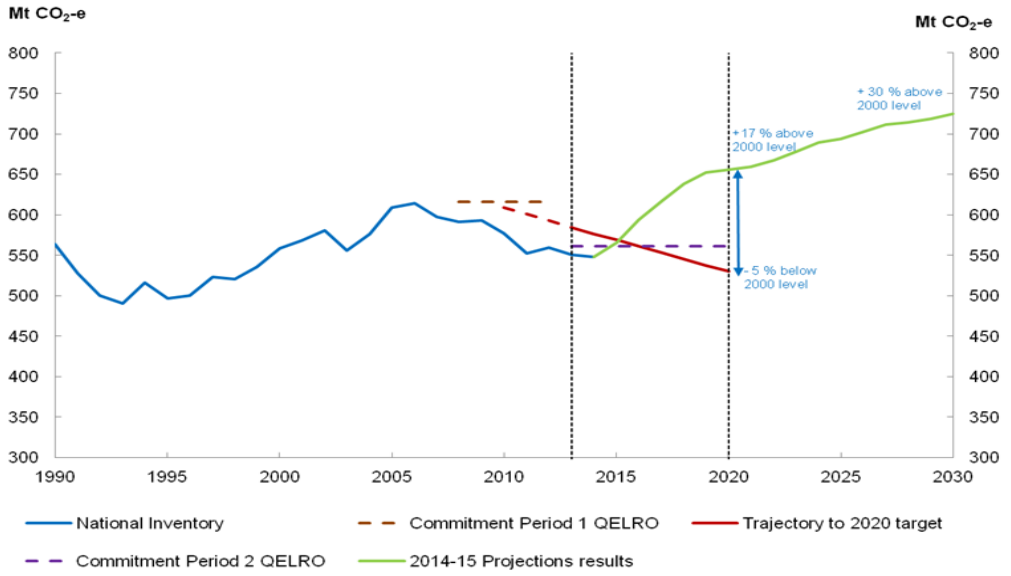
The climate is changing as a result of human activities and further change is projected. Climate change poses risks for Australia's people, economy and environment that can only be effectively mitigated if all major economies take coordinated action to restrain greenhouse gas emissions.

Australia has, through its participation in the United Nations Framework Convention on Climate Change, committed to reducing its anthropogenic emissions to five per cent below 2000 levels by 2020, and 26 to 28 per cent below 2005 levels by 2030. These targets represent a significant challenge. This is particularly the case when viewed in the context of historical and projected underlying emissions growth between 2000 and 2020 (expected emissions growth is illustrated by the green line in Figure 1). Current projections suggest that Australia meeting the five per cent target would require a reduction in emissions of around 236 million tonnes of carbon dioxide equivalent greenhouse gases (CO_2-e) from 2013 to 2020[1]. The target of a 5 per cent reduction against 2020 levels translates to a reduction of 17 per cent compared to projected 'business-as-usual' emissions in 2020 (see Figure 1).

The emissions intensity of economic activity is falling due to structural changes in the economy and the take up of less emissions intensive technologies. Nonetheless, the reduction in emissions required by 2020 cannot be achieved without policy measures. The Emissions Reduction Fund has been designed to help achieve the emissions reductions Australia needs to meet its targets and support economic growth. The safeguard mechanism is a core element of the Emissions Reduction Fund as it ensures that the emissions reductions paid for through the Emissions Reduction Fund's crediting and purchasing elements are not undermined by significant emissions increases elsewhere in the economy.

[1] Department of the Environment (2015) *Australia's emissions projections 2014-15*, Australian Government, Canberra.

Figure 1: Australia's emissions trends, 1990 to 2030



Note: A QELRO is a Quantified Emissions Limitation and Reduction Objective, that is, an emissions target. All years in figures refer to the financial year ending in the year shown.
Source: Department of the Environment (DoE) 2015a; DoE estimates.

2 Remaining design decisions

This Chapter examines options not decided in either the Act or the White Paper for the remaining design decisions needed to implement the safeguard mechanism. The status of safeguard design decisions is set out in Table 1.

Table 1 identifies which policy decisions have already been made, either in the White Paper or through the Act, and which policy questions are still outstanding.

Where policy questions are still outstanding, Table 1 identifies whether those questions involve key design elements—that is, those elements with the potential to affect the regulatory impact of the safeguard mechanism as a whole—or more technical issues expected to have minor or narrowly focused impacts. Those decisions that are considered key design elements have been highlighted in Table 1 and given additional consideration in Chapter 2.

A summary of the recommendations made in relation to the remaining design decisions is included at Appendix A.

Table 1: Status of safeguard design decisions

Design element	Policy decisions already made	Policy questions remaining
Start date	The safeguard mechanism will commence on 1 July 2016.	
Coverage	The safeguard mechanism will apply to facilities with direct emissions of more than 100 000 tonnes of CO_2-e. A broad range of business entities will be covered, including corporations, partnerships, trusts, and local councils. The entity with operational control of a covered facility will be responsible for meeting safeguard requirements.	**Technical Issues** How will emissions from landfills be treated? Are state-based facility boundaries appropriate in the transport sector?
Baselines	Facility emissions must be below their baselines by the compliance deadline. Baselines for existing facilities will reflect the highest level of reported emissions for a facility over the historical period 2009-10 to 2013-14. Baselines for new facilities and significant expansions will be set at a level to encourage facilities to achieve and maintain best-practice. The methods for determining baselines, including for new entrants and significant expansions, will be set in legislative rules.	**Key Design Decisions** Are historical baselines appropriate where emissions are driven by the extraction of natural resources and reserves? Are historical baselines appropriate where historical emissions do not reflect business as usual operations? When is an investment considered to be new? How will baselines be set for new investments already underway? What should be the approach to best practice? How will baselines reflect significant expansions?
		Technical Issues Should historical baselines be adjusted if emissions reporting methods change? Should baselines be adjusted if new regulation causes emissions to increase?

Design element	Policy decisions already made	Policy questions remaining
Emissions management	A range of flexible compliance options will be available to assist operators to meet their safeguard obligations, including the use of carbon offsets. Facilities whose emissions are the direct result of exceptional circumstances, such as a natural disaster, will be temporarily exempt from the safeguard mechanism.	**Key Design Decision** What options will be available to manage annual emissions variability?
Electricity		**Key Design Decisions** How will coverage be determined for the electricity sector? How will baselines be set for the electricity sector?
Administration	The safeguard mechanism will be administered by the Clean Energy Regulator (the Regulator). The Regulator will have discretion over a range of graduated enforcement options to encourage compliance. The final sanction will be a civil penalty, with the maximum amount to be set in regulations.	
Publication of information		**Technical Issues** What information about the operation of the safeguard mechanism should be made publically available?

2.1 Design principles

When developing the Emissions Reduction Fund's crediting and purchasing arrangements, three principles were used to guide design decisions. These three principles are equally relevant when considering options for the remaining design decisions for the safeguard mechanism.

Principle 1: Lowest-cost emissions reductions: the safeguard mechanism should enable facilities to achieve baseline emissions levels at the lowest possible cost.

Principle 2: Genuine emissions reductions: the safeguard mechanism should be based on emissions monitoring and offsets protocols that are consistent with the measurement system that underpins accounting for Australia's emissions reduction target.

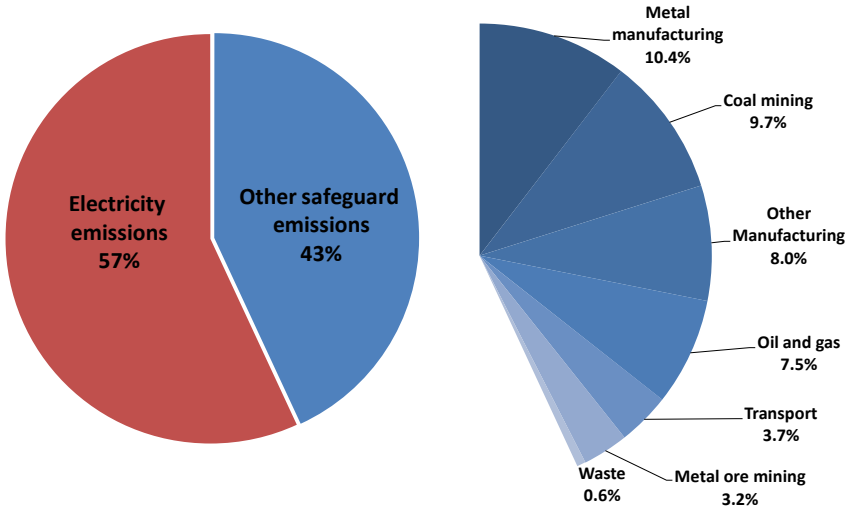
Principle 3: Streamlined administration: the safeguard mechanism should seek to minimise administrative burden for both covered businesses and for the Government.

2.2 Coverage

The safeguard mechanism will apply broadly to cover a variety of business entities, including corporations, trusts, and local councils. A broad approach reduces the potential for competitiveness issues that could arise if covered and uncovered facilities are operating in the same markets.

The business with operational control of a covered facility will be responsible for meeting safeguard requirements. This will result in participation by around 140 large businesses that already report under the National Greenhouse and Energy Reporting Scheme.

Figure 2: Sectoral coverage of the safeguard mechanism



Around 140 businesses (or 330 facilities) are expected to be covered by the mechanism in 2016/17.

Source: Departmental estimate based on emissions in 2013-14 from likely covered facilities.

To be effective, the safeguard mechanism should strike an appropriate balance between covering major emissions sources and avoiding unnecessary administrative costs on business. While most of the policy settings affecting coverage were decided either in the White Paper or the Act, further consultation was undertaken to inform coverage of the waste and transport sectors, where specific technical issues arise in relation to the nature of emissions from these sources. The issues relating to coverage of the waste and transport sectors are discussed below.

2.2.1 How will emissions from landfill be treated?

Emissions from landfill facilities consist mainly of the release of methane from decomposing organic material, such as food, paper, garden waste and wood. This organic material decays over time and can release emissions for many years after its disposal. For example, in the first year of the safeguard mechanism, landfill emissions will arise exclusively from waste deposited over previous decades. However, a landfill operator cannot retrospectively alter landfill composition.

The situation is most acute for landfills which have recently stopped accepting waste. Landfills at this late stage of their life-cycle often experience peak emissions[2], while simultaneously losing their ability to generate revenue needed to support emissions management systems.

[2] Assuming constant deposition rate and composition. See *NGER Solid Waste Emissions Calculator v1.91* (2014).

Option 1: Cover all emissions from waste

Option 1 is to cover emissions from waste on the same basis as emissions from other sectors covered by the safeguard. For the safeguard, this would include emissions from waste deposited over previous decades.

Option 2: Limit coverage to emissions from 'new' waste

An alternative approach (option 2) is to limit covered emissions in the waste sector to emissions from 'new' waste. Under this approach, a landfill would be covered by the safeguard mechanism if emissions from new waste exceed 100,000 tonnes of CO_2-e a year. Covered emissions could then be used to assess a facility's emissions performance and determine whether it has exceeded its baseline emissions. Under this option, new waste would be defined as waste deposited at a landfill after 1 July 2016 (that is, once the safeguard mechanism has commenced).

Baseline emissions would be calculated the same way as for other sectors, that is, using the high point of reported emissions between 2009-10 and 2013-14. During consultation, the waste sector expressed a strong preference for option 2:

> *Only emissions from waste landfilled after 1 July 2016 [should] be included and reported in the Safeguard Mechanism. (Australian Landfill Owners' Association)*

Assessment

Option 1 would impose obligations on landfill operators which relate to emissions from waste deposited prior to the commencement of the safeguard mechanism. This creates two main difficulties for landfill operators. First, operators cannot retrospectively alter the composition of landfill that has already been deposited in order to reduce the emissions that arise. Secondly, landfill operators cannot retrospectively recover costs from the depositors of the waste to support operators' investments in additional technology to manage the emissions from that waste and keep their net emissions within baseline levels.

In contrast, Option 2 would focus safeguard obligations on emissions from waste deposited after scheme commencement. While this would limit coverage of waste sector emissions, the Direct Action Plan provides strong incentives for landfill operators to reduce emissions, including from waste deposited over previous generations. The Emissions Reduction Fund purchasing mechanism will provide $2.55 billion to purchase emissions reductions from across the economy. In the first Emissions Reduction Fund auction, 64 of the 144 successful projects were waste projects. As emissions from waste occur for decades after its deposal, these projects will primarily reduce emissions from waste that was deposited in the past.

In contrast to option 1, option 2 establishes a direct link between current business operations (acceptance of waste) and safeguard obligations. It avoids potential inter-generational equity issues, without jeopardising the effectiveness of the Direct Action Plan, as the Emissions Reduction Fund purchasing mechanism establishes strong incentives to reduce landfill emissions.

Option 2 is recommended.

The recommended option is to cover landfills where emissions from waste deposited after 1 July 2016 exceed 100,000 tonnes of CO_2-e a year. Similarly, net emissions would exclude emissions from waste deposited prior to 1 July 2016.

2.2.2 Are state-based facility boundaries appropriate in the transport sector?

The disaggregated and mobile nature of the transport sector has led to a sector-specific definition of facility for the purposes of reporting under the National Greenhouse and Energy Reporting Scheme (NGERS). Under NGERS, a transport facility is reported as being located in the state or territory where fuel uplift occurs[3], notwithstanding that a portion of the fuel may be used in other jurisdictions. In this way, fuel uplift is used as a proxy for the location in which emissions occur, with facilities delineated along state and territory lines. Several submissions to the safeguard mechanism consultation paper proposed an amendment to the definition of a 'transport facility' under the NGER Regulations.

Option 1: State and territory level definition of a transport facility

The safeguard mechanism will cover emissions from the air transport, rail freight, road freight, road passenger, water passenger transport, water freight and waste collection subsectors. The combined effect of the Act and existing regulations mean that transport facilities—defined using state and territory groupings of activities—with annual emissions above 100 000 tonnes will be covered by the safeguard mechanism.

The advantage of this approach is that it would not require any changes to existing emissions reporting practices.

A disadvantage of this approach is that coverage within each transportation subsector, other than air transportation, is relatively low compared to other covered sectors. Lower coverage of emissions sources reduces the ability of the safeguard mechanism to meet its objectives.

As highlighted in several submissions from the transport sector, a further disadvantage of this option is that it may distort refueling decisions for interstate transport operators to avoid coverage or reduce liability. It also does not account for variability in emissions and refuel patterns as influenced by factors such as weather or route changes:

> *The absence of an aggregated national baseline would also give rise to two further potential weaknesses in achieving the goals of the ERF:*
>
> - *Airlines that have facilities below the relevant 100,000 tonne threshold may be encouraged to uplift fuel in these States and Territories to avoid breaching other baselines; and/or*
> - *The true nature of total domestic emissions year on year would not be captured, as certain facilities would not be counted in these baseline totals.*
>
> *This would also produce a situation in which airlines are not running their businesses in the most efficient way possible, which is inconsistent with the Government's stated goals of "[achieving] a cleaner environment while improving business competitiveness". (Virgin Australia)*

Option 2: A national definition of a transport facility

During safeguard consultations, businesses suggested amending the definition of a transport facility to aggregate the emissions attributed to each state and territory into a single national facility. This approach would be implemented through an amendment to the NGER regulations.

Under the amended regulations, a group entity would be covered by the safeguard mechanism if its total national emissions exceed 100 000 tonnes CO_2-e for each activity. The entity's total emissions would be used for the purposes of determining baselines and compliance. This option would lessen the reporting burden on regulated entities as a single national report would be submitted, instead of the current state-based reporting. Disaggregated information could still be captured for use by state and territory governments.

[3] Subregulation 2.19(2) in the *National Greenhouse and Energy Reporting Regulations 2009.*

This option increases coverage of emissions sources, while providing greater flexibility in managing overall emissions at each regulated facility. For this reason, this is the preferred option of several transportation companies who expect to report more than 100,000 tonnes CO_2-e from their operations in one or more states or territories:

> *Asciano believes that such an approach [state-based facility definition] is flawed. For industries and sectors that have large components of interstate activity (such as the freight industry) a national approach should be used. (Asciano)*

This option also accounts for emissions variability between states and territories and avoids the incentive to shift emissions between states or territories to avoid coverage or exceeding baselines. As with option 1, option 2 also maintains consistency between emissions reporting under NGERS and the safeguard mechanism.

Under this option the number of regulated entities in the transport sector is likely to increase from approximately 15 to 26. This option is also likely to increase the number of companies with reporting obligations under NGERS[4], increasing the overall regulatory burden of the scheme. It could also encourage transportation companies to break up their corporate groups into smaller entities to avoid coverage, noting that the Regulator has anti-avoidance powers to discourage this.

Option 3: Voluntary opt-in to a national definition

A third option is to allow businesses to voluntarily opt-in to a national facility definition. Under this approach, the current state-based facility definition would continue to apply, unless a transportation business asked the Regulator to aggregate their emissions data to the national level for the purposes of the safeguard mechanism.

To continue to improve coverage of the safeguard mechanism, a business that elected to move to the national definition would not be able to opt back into a state/territory facility definition.

This enables companies that would benefit from the national facility definition under the safeguard mechanism to have the flexibility to opt into it.. This option can be expected to result in moderate increases in coverage of emissions.. Unlike option 2, no new entities are expected to be drawn into NGERS reporting or the safeguard mechanism.. An advantage of this option is that firms will have the option to learn about and adjust to the new policy settings, and will then be able to choose to opt into the national definition. .

The disadvantage of this option is that, like option 1, it results in low levels of coverage within the transport sector. Coverage may be slightly higher than option 1, as some businesses may opt-in to a national approach. Low levels of coverage may mean the safeguard mechanism is less effective in restraining significant emissions increases in this sector.

In comparison with option 2, option 3 is more complex for the Clean Energy Regulator to administer, but is no more complex for businesses. However, option 3 will impact fewer firms, so the overall regulatory burden associated with option 3 is likely to be lower.

On balance, option 3 is preferred.

The recommended option is to allow businesses to voluntarily opt-in to a national facility definition in the transport sector.

[4] Reporting obligations under NGERs are triggered by meeting threshold levels of: (1) greenhouse gas emissions; (2) energy production; or (3) energy consumption. These thresholds, set out in section 13 of the *National Greenhouse and Energy Reporting Act 2009*, are currently 25 000 tonnes CO2-e for a facility or 50 000 tonnes CO2-e for a corporation.

2.3 Historical baselines

A baseline is a reference point against which future emissions performance will be measured. In the Emissions Reduction Fund White Paper, the Government decided that baselines will be set using the highest level of reported emissions for a facility over the historical period 2009-10 to 2013-14. Emissions baselines set in this way are termed *historical baselines.* As the safeguard mechanism is designed to accommodate business-as-usual activities, while avoiding significant unconstrained emissions growth, individual facility baselines should be set in a way that broadly represents an aggregate of business-as-usual growth across all covered sectors. The baseline options discussed outline solutions to key design questions within that context. This involves setting baselines for facilities and also maintaining the ability to adjust baselines where appropriate to accommodate business-as-usual growth. A benefit of historical baselines is that they are based on data already reported under NGERS, meaning that no new reporting is necessary to set baselines for businesses covered by the safeguard mechanism. Several circumstances have been identified where setting historical baselines raises measurement or other issues that warrant further consideration. This section deals with two key design decisions by considering whether historical baselines are appropriate where: emissions are driven by the extraction of natural resources and reserves; or historical emissions do not reflect business as usual operations. This section also outlines two technical issues, namely, whether baselines should be adjusted if emissions reporting methods change, or if there are changes in Government regulation that affect emissions levels at specific facilities.

2.3.1 Are historical baselines appropriate where emissions are driven by the extraction of natural resources and reserves?

As set out in the White Paper, a key factor in the Government's decision to set baselines at the historical peak of emissions over the 2009-10 to 2013-14 period was to enable baselines to accommodate normal emissions variability experienced at any given facility from year to year. Further consultation revealed that facilities in some sectors were subject to the potential for significant variation in their future individual emissions profiles, meaning that historical baselines may not adequately reflect this operating environment. Reported NGER data also suggests that variability is particularly apparent in the extraction of natural resources, for example, in the fugitive emissions associated with coal mining. Generally, this variability is associated with operations where:

- the properties and depth of the resource or reserve will have a direct effect on the emissions performance of a facility; and
- the facility has limited ability to control for such emissions.

While facilities aim to minimise their emissions, many facilities involved in mining, oil and gas extraction, and gas processing will exceed baselines set using historical high point data regardless of the level of control they aim to achieve through efficiency or process improvements. The question arises as to how to manage baselines for such facilities to ensure that their business-as-usual activities are accommodated, as is intended for other facilities.

Option 1: Historical high point baselines

The first option is to set historical baselines for existing facilities at the highest level of reported emissions between 2009-10 and 2013-14, in accordance with the general baseline setting rule for existing facilities. However, while this will capture some of the variability associated with natural resources and reserves, the characteristics of the sector (described above) can mean that historical variability is an unreliable indicator of future emissions levels or variability. For example, if the properties of a natural resource or reserve vary as an operation progresses, covered emissions could be significantly above historical high points despite continuity in operational practice.

Option 2: Baselines using forecast data

Another option for setting a business-as-usual baseline for these operations is to allow facilities that meet the criteria outlined above to apply for an adjustment to their baseline using the 'independent assessment' approach' proposed for new investments that are already underway (see section 2.4.3). Under the independent assessment approach, the baseline would be set using an audited emissions forecast provided by the facility operator, with a true-up of the estimate after the forecast period based on actual performance. Rather than allow continual access to baseline adjustments, it may be appropriate to make this option available for an initial period to 2025, with the possibility of extension beyond that date subject to a review.

A weakness of this option is that its effectiveness relies on the ability of an operation to predict future emissions levels, which can be difficult for heterogeneous geological sites. If the variation in natural resource properties was unexpected, allowing the facility to use the independent assessment approach may not address the issue of volatility-driven emissions spikes described in option 1:

> *Short term estimates using the best sampling techniques can vary upwards by up to 30 per cent. The composition (primarily the ratio of methane to carbon dioxide) varies frequently.... Good practice rather than reliance on highly uncertain forecasts should be considered as part of the rules mix. (Minerals Council of Australia)*

Option 3: Baselines based on future emissions levels

If neither projected nor historical data is used to set baselines, the alternative is to use future data (option 3). This option would work by monitoring emissions and setting the baseline at the high point of annual emissions levels reported at a future date or within a future date range. Unlike the other options, option 3 creates a perverse incentive to increase emissions during the year being used to set the baseline and so is not preferred.

Option 4: Historical high point baselines with buffer

A fourth option considered for sectors which meet the above criteria was to set baselines by applying a buffer to the historical high point. The buffer could be a percentage of the historical high point (for example, 10 per cent above the reported historical high point), or could be set to capture a portion of the volatility in the historical data set (for example, at 1 standard deviation above the historical high point). This option is administratively simple but does not take individual circumstances into account, a key concern raised by stakeholders in relation to option 1. Disregarding individual circumstances may result in baselines higher than a facility's capacity to emit, or lower than the emissions volatility they experience.

Submitters' views on these options[5] were mixed:

> *We support the use of the proposed independent assessment approach for existing facilities with inherent variability in their emissions profile. (Australia Pacific LNG)*

> *Enabling resource extraction industries to expand baselines will jeopardise the capacity to meet future greenhouse targets, and displace substantial abatement costs onto households and other sectors of the economy. (City of Sydney)*

Assessment

Option 1 has the virtue of treating facilities in the resource sector in the same way as facilities in other sectors, but does not actually address the problem that resources facilities could exceed their emissions baselines due to inherent emissions variability that is beyond the facility operator's control. It is the Government's intention that the safeguard mechanism should accommodate economic growth and normal business operations, while preventing excessive emissions increases above business-as-

[5] Note that the consultation paper only included options 1 and 2.

usual levels that could undermine the effectiveness of the Emissions Reduction Fund purchasing mechanism.

Option 2, by using the independent assessment approach to set baselines, relies on forecast data, which is less reliable than historical data, and may not be able to account for all future emissions variability. However, facility operators applying for baselines under the independent assessment approach will have a good understanding of their facilities' particular circumstances and will be able to make appropriate estimates of future emissions-intensity and future production. In addition, a true-up of the estimates will occur after the forecast period. This will ensure that the facility's permanent baseline reflects actual, rather than forecast, production. This option places significant onus on independent auditors whose reports will be compared with future NGER reports. The quality of their estimates and credibility would be subject to scrutiny and review, and this adds merit to this option.

Option 3 deals directly with the problems of inherent emissions variability but has the disadvantage that the baseline emissions number cannot be known in advance by facility operators. Moreover, by allowing facilities to set their baseline on the basis of future emissions performance, option 3 creates a perverse incentive for facility operators to increase future emissions above business-as-usual levels in order to gain a higher baseline. This would work against the safeguard mechanism policy objective, which is to avoid emissions increases above business-as-usual levels.

Option 4 would provide a uniform buffer across all resources and mining facilities, which would not take into account facilities' individual circumstances to the same extent as the independent assessment approach. Facilities with emissions above the buffer could still exceed their baselines as a result of inherent emissions variability that is beyond their control. This would be inconsistent with the Government's intention that the safeguard mechanism should accommodate economic growth and normal business operations.

While all of the identified options for setting baselines in the resources sector have advantages and disadvantages, option 2 best captures emissions variability at the facility level and avoids creating a perverse incentive to increase emissions. It also creates the potential for systematic improvement over time as outcomes from actual reports are progressively compared with facility estimates and auditors' assessments.

The recommended option is to allow businesses whose emissions are driven by variability associated with existing natural resources to apply to the Regulator for a limited time period to adjust their baseline using independently audited forecast data.

2.3.2 Are historical baselines appropriate where historical emissions do not reflect business as usual operations?

The safeguard mechanism is designed to send a signal to businesses to avoid large unconstrained increases in emissions beyond business as usual levels. It will do so in a way that accommodates economic growth and allows businesses to continue normal operations.

In certain circumstances, establishing a baseline based on the historical high point in emissions of a facility may not be representative of a business' future performance. During the extensive consultation process undertaken in relation to the safeguard mechanism, businesses across a number of sectors have provided evidence that recent historical performance of a facility is not a good indicator of expected business as usual operations in all cases. For example a facility may, because of particular market conditions, not have been using existing production capacity during the NGERs reporting period used to determine its historical baseline, but be expecting to utilise that capacity in its normal business operations going forward.

This is relevant for sectors that will be covered by the safeguard mechanism that were particularly affected by the Global Financial Crisis (GFC). The reporting period used to determine a historical

baseline for facility operators in these sectors, may not be long enough to represent a return to more normal conditions. This may be evidenced by a trend of continuing growth in the years after (2014-15 and 2015-16) the baseline setting period for existing facilities. In such circumstances, it may be desirable to have an alternative approach to setting a baseline that better reflects expected operating conditions.

Option 1: Historical high point baselines

Under this option, facilities that would qualify for a historical baseline at the commencement of the safeguard mechanism in 2016-17, will have this baseline applied. This option is simple. Baselines will be based on data already reported under NGERS, meaning that no baseline application is required.

This approach, however, has the potential to frustrate the intention of the policy to allow business as usual operations. There are clear reasons why past performance may not be a good indicator for normal business operations going forward. Applying this option may have distributional impacts related to, say, business cycles, rather than emissions performance. It is the clear intention of the policy to limit the impact on normal business operations.

Option 2: Baselines using forecast data

Under this option, facilities that would qualify for a historical baseline at the commencement of the safeguard mechanism in 2016-17 would be able to choose either the historical baseline that would ordinarily apply to the facility, or a baseline determined using the independent assessment approach. That is, the baseline would be set by the Clean Energy Regulator using projected data for the emissions forecast period verified by a registered NGER auditor.

To qualify for this option, a facility operator would need to demonstrate that, in the absence of a baseline adjustment, the facility would exceed its historical baseline in 2016-17. This would mean that this option is only available to those businesses that can demonstrate that their historical emissions would not adequately represent normal operations. This option may contribute to making initial baseline setting more complex, requiring case by case determinations to be made based upon forecasts as to expected operations.

Assessment

The Government's overall policy framework is strongly focused on supporting economic growth. The Government's clear intention in relation to the safeguard mechanism is that it will accommodate business-as-usual economic growth, with the safeguard mechanism's compliance framework only intended to come into play in exceptional circumstances.

Viewed in this context, setting baseline levels using 2009-10 to 2013-14 data in all circumstances will mean that some businesses that are recovering from adverse impacts arising from the global financial crisis and subsequent market weakness may face baselines that are not reflective of their business-as-usual operations going forward. Those businesses would be required to implement technologies to reduce emissions or face the cost of offsetting emissions related to business-as-usual economic activity. This would not be consistent with the Government's policy intention.

Given the impacts on business growth and emissions outcomes that occurred during the 2009-10 to 2013-14 baseline period, including significant impacts on businesses from the global financial crisis, Option 2 better implements the Government's policy to allow business-as-usual operations and accommodate expected business growth, while avoiding excessive emissions increases above business-as-usual levels that could undermine the effectiveness of the Emissions Reduction Fund purchasing mechanism.

The recommended approach is option 2, to provide businesses with a choice between the independent assessment approach and the historical high point method for setting their safeguard mechanism baselines in circumstances where historical baselines may not reflect business-as-usual operations.

2.3.3 Should baselines be adjusted if emissions reporting methods change?

There may be circumstances that lead a business to change the basis on which facility data is reported. For example, a facility may choose to vary the NGERS estimation methods it uses as a basis for reporting emissions. Similarly, some businesses have previously aggregated emissions data across a number of facilities and reported as a single vertically integrated production process. From 2014-15, vertically integrated production process reporting has been discontinued, which means that emissions must now be reported at the facility level. Alternatively, the Government may periodically adjust the global warming potentials used to calculate the carbon dioxide equivalence of emitted gases to ensure Australia's remains consistent with international reporting standards.

As far as practicable, it is important that the data used to establish safeguard baselines is consistent with emissions as they are currently reported — the effectiveness and fairness of a reference point (a baseline) is undermined when the comparison between baseline and current emissions is not made on the same basis. However, the practicality of adjusting baselines to reflect changes to emissions reporting depends on the nature of the change.

Changes to NGER emissions estimation method

For facilities that move to a higher or lower order estimation method in NGERS, it may not always be possible to adjust baselines to mirror current reporting methods, particularly in circumstances where the data collection method has changed. For example, if a facility had used an estimation method based on default values during the baseline period and then moved to a measurement-based method, it would not be possible for the facility to retrospectively measure past emissions. While stakeholders acknowledged that it would be desirable to adjust baselines in such circumstances, a technically feasible option for doing so was not identified by the Department or through the consultation process.

In practice, a change of emissions estimation method by an NGER reporter is frequently from a lower-order to a higher-order method. Where such a move is initiated by the reporter, it generally leads to more accurate reporting as well as lower reported emissions levels. As such, an option for dealing with estimation method changes is to leave baselines unchanged. This will typically not disadvantage a facility that changes reporting method.

Where a facility has moved to a different order estimation method, the recommended option is to leave baselines unchanged.

Changes to global warming potentials (GWPs)

Another change which could affect the way emissions data is reported is changes in official GWPs. Each anthropogenic greenhouse gas reported through NGERs has an official GWP specified in NGER legislation.[6] (The GWP of carbon dioxide is always equal to 1. The GWPs for other gases are used to convert their emissions into carbon dioxide-equivalence. For example, the GWP of methane is 25, meaning that one tonne of methane is calculated to have the same global warming effect as 25 tonnes of carbon dioxide.)

These GWPs are key to emissions data calculation and hence are updated from time to time as new scientific evidence becomes available. If GWPs have changed since the data used to set a safeguard baseline was reported, the baseline no longer reflects a genuine reference point for emissions performance. Such changes may be upward or downward – the most recent changes increased the GWP for methane but reduced the GWP for nitrous oxide.

[6] Regulation 2.02 in the *National Greenhouse and Energy Reporting Regulations 2009.*

Option 1: No adjustment for GWP change

The default option would be to not to adjust baselines in such circumstances. This would mean that GWP changes could make meeting baselines more or less difficult irrespective of the relative emissions performance of the facility, depending on the direction of the GWP change.

Option 2: Adjust for GWP change

An alternative option is for baselines to be adjusted by the Regulator to take account of the new, official GWP values. Recalculating baselines would be straightforward and require no additional reporting as the Regulator has all the required data. Stakeholders were supportive of this option:

> *AIGN supports the ability of the Clean Energy Regulator ("CER") to recalculate a facility's baselines where it is impacted by changes in the global warming potential ("GWP"). (Australian Industry Greenhouse Network)*

Where GWPs have changed, the recommended option is for the Regulator to adjust baselines with available data.

Vertically integrated production processes

Until the beginning of 2014-15, businesses were allowed to report the emissions totals for facilities grouped as a vertically integrated production process, rather than requiring data for each facility. In practice, less than ten businesses chose to report in this aggregated way. The decision to remove the ability to report aggregated data was announced in early 2013. Reporters were notified of the change early to allow sufficient time for modification of internal data collection, analysis and reporting procedures.

The historical ability to report emissions data aggregated at the level of vertically integrated production processes creates an implementation issue for the safeguard mechanism because the safeguard mechanism obligation is set at a facility level. Specifically, a design decision remains about how to set a historical baseline for a facility when the reported data over the baseline period has been aggregated to the level of a vertically integrated production process.

Option 1: Voluntary reporting of historical facility level data

One option for resolving this issue is to allow operators to 'fill the gaps' to ensure that facility level data is available for previous years over the baseline period of 2009-10 to 2013-14 (option 1). That is, they could retrospectively report disaggregated, additional or recalculated historical data for the years in the baseline period in which they reported as a vertically integrated production process. In accordance with the principle of streamlined administration, additional reporting should remain voluntary.

Under option 1, if a facility chose not to provide revised historical data, its emissions in the aggregated years could be determined by the Regulator on a pro-rata basis using disaggregated data reported in 2014-15. Stakeholders were supportive of this option:

> *Rio Tinto supports the consultation paper options presented for entities that have previously reported under the VIPP, which allows entities the option of providing the CER [Regulator] with disaggregated historical data over the baseline period. (Rio Tinto)*

Option 2: Pro-rata disaggregation using ratios reported in 2014-15

An alternative option (option 2) is to have the Regulator disaggregate data to the facility level on a pro-rata basis using the emissions data reported for each facility in 2014-15 (option 2). Under this option, voluntary additional reporting would not be allowed.

Option 3: 2014-15 baseline year

A third option (option 3) would be to set baselines at the emissions level reported in 2014-15.

As relatively few facilities have previously reported as vertically integrated production processes, none of the options is likely to present a significant regulatory or administrative burden for affected organisations or for the Regulator, although option 3 is the simplest to administer.

As option 3 uses the most recent data, it may also be a better representation of future emissions performance. Option 3's primary disadvantage is that, as a single data point, it does not cater for annual variability than can occur in emissions data, which was one of the key reasons for setting historical baselines at the high point of a range of previously-reported data. In this way, under option 3 facilities previously reported under a vertically integrated production process would be at a disadvantage compared to other existing facilities with historical baselines set using the high point in emissions over a five year period. For this reason, this option is not supported.

Option 1 allows facilities to self-identify instances where relative emissions from facilities in a vertically integrated production process have changed over time and can thus be expected to result in baselines that better reflect future emissions performance in comparison to option 2. In this way, option 1 is the best option in terms of ensuring equity between facilities which previously reported in an aggregated manner and those that did not.

The recommended option is to allow voluntary additional reporting where a facility was previously reported as a vertically integrated production process, with the Regulator otherwise determining facility baselines on a pro-rata basis from emissions data previously reported as a vertically integrated production process.

Changes to facility boundaries

Facility boundaries may have changed during or after the baseline period (2009-10 to 2013-14). The options available to establish safeguard baselines consistent with emissions as they are currently reported depends on the nature of the facility boundary change. For example, separate facilities may become one facility, or a single facility may become multiple facilities.

Option 1: Bespoke adjustment

The first option identified for dealing with facility boundary change is to allow the Regulator discretion in making a bespoke adjustment to baselines taking into account the nature of the facility boundary change. For example, where separate facilities become one facility, it may be a simple matter for the Regulator to sum the reported emissions from each facility. Where a single facility has become multiple facilities, the approach for disaggregation of emissions could mirror the approach to disaggregating vertically integrated production processes. That is, disaggregation could be achieved via voluntary additional reporting with pro rata disaggregation based on relative facility emissions reported in 2014-15 used as a default measure.

Under option 1, anti-avoidance measures in legislation would be relied upon to deter businesses from redefining facility boundaries to avoid coverage or to avoid exceeding their baseline. After consultation, stakeholders supported this option:

> *AIGN supports the proposed provisions where companies move to a disaggregated production process (from vertically-integrated) or facility boundaries change to either 'fill in the gaps' to ensure comparable data is available during the baseline period or determined by the CER [Regulator] on a pro rata basis. (Australian Industry Greenhouse Network)*

Option 2: Delayed or suspended coverage

An alternative approach (option 2) would be to wait until sufficient emissions data had been reported according to the new facility boundaries. This option is not supported because it effectively allows a regulated entity to delay or suspend a facility's coverage under the safeguard provisions through boundary adjustments rather than through managing its greenhouse gas emissions.

The recommended approach is to adjust baselines according to the nature of the facility boundary change.

2.3.4 Should baselines be adjusted if new regulation causes emissions to increase?

The introduction of new Government regulation could cause a step-change in the emissions profile of safeguard facilities. Such a change could render historical baselines problematic as reference points because the new regulatory requirement did not exist during the period in which the data was collected. Several affected businesses raised concerns with being expected to manage emissions arising from compliance with new regulation:

> *AIP and its member companies believe there is a major gap in the Safeguards Mechanism in terms of its application to investments undertaken to comply with obligations imposed by other Federal, State or local government regulations. (Australian Institute of Petroleum)*

Option 1: Evaluate safeguard policy options once detail of new regulation is established

The first option is to address new regulation as circumstances arise. Under this option, any interaction between the safeguard mechanism and new regulation could be considered as part of the mechanism's ongoing evaluation cycle or as the need arose in the development of the new regulation. This option provides flexibility and is consistent with the Government's deregulation agenda as it allows a fit-for-purpose response to individual circumstances.

Some stakeholders were concerned that this option does not provide long term investment certainty. These stakeholders advocated re-setting baselines at the emissions level reported in the first year following commencement of the new regulation. This is not considered a viable option because it does not separate out the effects of regulation from other drivers of emissions, such as output changes (see option 3 in section 2.3.2).

Option 2: Pre-determine the approach to, and nature of, a baseline adjustment

An alternative option (Option 2) is for safeguard facilities to be able to apply to have their baseline increased if new regulations are imposed that affect the facility's emissions performance. This amount could be determined using the independent assessment approach (see section 2.4.3). This option would mean that future, perhaps unrelated, regulation would not increase the effort required to meet safeguard mechanism baselines. However, this option requires the Government to pre-determine the nature or impact of unknown future regulations that would create access to a baseline adjustment. This risks creating access to baseline adjustments that are not needed, and/or failing to provide such access where it is needed. Given uncertainty over future regulatory changes at different levels of government, it would be preferable to assess regulatory interactions once the nature and context of new regulations are clear to mitigate the risk of unintended outcomes.

Option 1 is preferred as it is more consistent with the Government's approach to best practice policy-making and its deregulatory agenda. It also avoids the risks associated with putting in place a response now to an unknown future regulatory environment.

The recommended option is to evaluate safeguard policy options once the detail of new government regulation is established, either as part of the safeguard mechanism evaluation cycle or as required in the development of new regulations (option 1).

2.4 Baselines for new facilities and significant expansions of existing facilities

In the White Paper, the Government decided that the safeguard mechanism would be designed to encourage new investments, encompassing new facilities and significant expansions of existing facilities[7], to achieve and maintain best practice. This section assesses options for achieving this policy intent within the context of the design principles (see section 2.1). Given the number of new investments, and their likely scale, all of the design elements discussed in this section are considered to be key design elements in terms of the safeguard mechanism's potential regulatory impact, and the options have been treated accordingly.

Analysis of publically available documents such as environmental impact statements as well as the biannual Resources and Energy Major Projects report, published by the Bureau of Resources and Energy Economics, suggests that from 1 July 2016 until 2025 around 70 new investments will become covered facilities under the safeguard mechanism.

2.4.1 What should be the approach to best practice?

The White Paper states that new investments will be encouraged to achieve and maintain best practice. Encouraging best practice helps avoid locking in more emissions-intensive ways of doing business that could make Australia's emissions reduction task more difficult in the future.

Internationally, there are two broad approaches to defining best practice. One is technology specific (option 1), and the other is performance-based, comparing the emissions intensity of industry peers to set a best practice benchmark (option 2).

Option 1: Technology approach

A technology specific approach (option 1) involves the development of standards or guidance on the least emission intensive technologies or practices for a specific situation. For example, the European Union Industrial Emissions Directive adopts a 'best available technology' approach. It engages experts to establish guidance on what constitutes the best available technology for each industry. However, the technology approach is highly prescriptive and relies on government making judgments about best practice technologies for a wide range of industrial processes.

Government is not well-placed to make judgments on technologies or practices across the economy. An extremely large range of technologies with diverse emissions outcomes exist for the sectors covered by the safeguard mechanism. Many of these technologies have implementation constraints and interact with bespoke features of individual facilities such that determining an optimum technology for a particular industry would be problematic and resource-intensive. Another difficulty in certain sectors is that technologies may be outdated quickly, requiring constant research and updating by the Government. A consequence of the consistency of technological improvements and the likely lags between innovation, industry uptake and then regulatory update is that option 1 risks constraining improvements and industry innovation and, in the best case scenario, would be highly resource intensive in its administration.

Option 2: Performance approach

Option 2 compares the performance of industry peers using existing industry data to define a benchmark of best practice performance. This is generally done by comparing an output-based metric common to members of an industry, such as emissions per unit of output. The advantage of this

[7] A new facility is a facility that did not report its emissions under the NGER Act before 2009–10. The consultation paper suggested that a 'significant expansion' be defined in a consistent manner with other climate law, that is, as an increase in installed capacity of 20 per cent.

output-based approach is that once the baseline is set using a best practice benchmark individual facilities can decide how best to meet it, giving them greater flexibility than the technology approach.

Option 2 has similar implementation risks and disadvantages as option 1. Defining standardised outputs can be difficult to determine for a variety of reasons, including availability of data and market-driven shifts or variability in product quality. Nonetheless, using an output-based approach to emissions-intensity would be less resource-intensive and present fewer implementation risks in comparison with option 1.

In contrast to option 1, option 2 incentivises innovation by aligning Government and industry objectives. Allowing businesses flexibility in meeting policy objectives can be more efficient for business and more effective for society. For example, the Acid Rain Program in the United States mandated sulphur emissions performance, rather than the adoption of best-available technology (sulphur scrubbers). The unexpected result of providing business with this flexibility was that costs associated with fuel-switching were significantly lower than installing the sulphur scrubbers[8]. Establishment of best practice benchmarks based on an emissions intensity comparison is likely to be more effective and efficient than mandating the use of a particular technology.

Option 3: Baselines based on future emissions levels

A third option, suggested by stakeholders, is to monitor emissions and set baselines at the emissions levels reported at a future date. As discussed in section 2.3.2, option 3 is not preferred because it creates a perverse incentive to increase emissions during the year being used to set the baseline.

Assessment

The key difference between options 1 and 2 is what is regulated. Option 1 regulates a behavior which Government expects to most likely result in the desired outcome. Option 2 directly regulates the outcome. Businesses are better placed than the Government to determine behaviours and strategies for achieving the desired outcome within their operating environment. This is particularly the case for the types of facilities covered by the safeguard mechanism, which are principally large industrial facilities with many design features that will be unique to the individual operation (ie bespoke). For the Government to do this, it would need to develop expert knowledge in the wide range of industries covered by the safeguard mechanism, and develop and keep up to date a list of technologies or practices identified by the Government as best practice to remain relevant and avoid stifling innovation. This would be highly resource intensive and time consuming for Government, while still being unlikely to lead to efficient and effective outcomes for individual businesses, as they would either be forced to modify potentially-bespoke design to accommodate technologies mandated by the Government.

Under option 2, the Government would directly specify a desired outcome, in terms of emissions per tonne of output produced. Businesses would be able to determine their own approaches to meeting the outcome, and would be able to design facilities to achieve this in a way that maximised the efficiency and performance of the facility subject to meeting that outcome. Businesses would not be forced to accommodate technology that was not fit-for-purpose for a new facility.

[8] Ellerman, A. *et al.* (2000) *Markets for Clean Air: the US Acid Rain Program.* Cambridge University Press, Cambridge.

The implementation challenge in option 2 would be in identifying the appropriate set of outputs for which benchmarks would be required, and then establishing the appropriate level at which to set performance standards in emissions per tonne of each output. This would require the Government to collaborate closely with industry and technical experts in the development of the performance standards, and identify principles for developing standards considered representative of 'best practice', as well as developing the standards themselves. As with option 1, the performance standards themselves would need to be regularly reviewed and updated. These implementation challenges would be common to both Option 1 and Option 2. However, the performance standards developed under option 2 would likely be less resource intensive and perform better overall than the technology approach under option 1 because:

- A smaller number of factors would need to be assessed – it would require assessment at a higher level of the performance of the least emissions-intensive facilities in a sector, rather than assessment of every relevant piece of technology or equipment used across all facilities in a sector to identify which individual technologies, or combinations of technologies, were best practice;
- have greater longevity – technologies might change very rapidly under Option 1, and a very large number of technologies (and technology combinations) would need to be kept under review and constantly updated; in contrast, the best practice emissions intensity of output within a sector is much easier to identify and keep up to date, and is also likely to need less frequent updating than individual technologies;
- as well as the lower resource requirements in developing the best practice benchmarks (option 2) compared to technologies (option 1), the use of benchmarks by new facilities will be significantly more efficient at the level of an individual business than the technology-based approach.

Under option 3, baselines would be set for new investments by allowing companies to operate for several years and then using their reported emissions levels to set their baseline. For example, a company could operate for three years and it's baseline could be set at its highest level of emissions over the three years. This approach is not preferred for two main reasons. First, setting baselines at the level of the facility's emissions over the first few years would not necessarily mean that the baseline would be set at a level that reflects best practice. While most new investments would generally adopt the latest and most efficient technology and systems, this may not necessarily be the case in all instances. Second, setting baselines based on emissions that occur in the future (that is, once the new investment is built and operating), would establish an incentive to increase emissions during the period that would be used to set the baseline in order to have a higher baseline. This would clearly conflict with the policy objective of limiting emissions increases above business-as-usual levels.

Option 2 is the preferred way to set best practice benchmarks.

The recommended approach is to set baselines based on best practice, output-based benchmarks for new investments.

2.4.2 When is an investment considered to be new?

When considering the application of best practice to new investments, it is important to consider the development stage of the investment. This is because the design of a potential new facility becomes increasingly locked-in as the development of a new facility progresses. Typically, a key milestone in terms of emissions performance lock-in at a new facility is the final investment decision. At the final investment decision, broad parameters key to emissions performance such as site, budget, and industrial design are set.

Proposed facilities that are pre-final investment decision can be designed to achieve and maintain best practice. Once a final investment decision has been made, however, the design becomes more difficult to change. This is particularly true of large and complex projects that may have recently

commenced operation. For this reason, it would not be appropriate to apply a best practice baseline to facilities about which a final investment decision has been made and such facilities should not be regarded as 'new' for the purposes of setting baselines. Applying different baselines to facilities with and without final investment decisions, however, would require a method of determining when a final investment decision has taken place across governance structures as diverse as local councils and large joint venture mining projects.

Option 1: Administrative process

One possible approach is to place the burden of proof with facility operators (option 1). Under this option, new facilities would need to demonstrate to the Regulator within the context of their own governance arrangements that they have made a final investment decision. Because of the potential complexity of the decision-making process and because every facility is different, it could be very difficult to devise a one-size-fits-all set of criteria for determining when this has happened. This could also be resource-intensive to administer as each application would require the Regulator to understand the relevant financial decision making process and then determine if this process had been concluded.

Option 1 would therefore have to allow the Regulator to take facilities' particular circumstances into account in a discretionary manner. However, this could be perceived as lacking fairness and transparency. This option also imposes some administrative burden on both the Regulator and covered entities in requiring provision and assessment of evidence that relevant financial decision-making processes were complete.

Option 2: Universal cut-off date as a proxy

Another approach is to apply a universal cut-off date to all facilities (option 2). Under this approach, only facilities that exceed the safeguard coverage threshold before a certain date are considered by proxy to have made a final investment decision before the commencement of the safeguard mechanism. This approach neither attempts to devise criteria to identify the point at which a final investment decision has been made, nor takes facilities' individual circumstances into account. However, with an appropriate choice of cut-off date, option 2 can provide an accurate proxy measure to divide pre- and post-final investment decision facilities and minimize the risk of miscalculation. In addition, it is more transparent and straightforward from an administrative and compliance standpoint than option 1, and would result in the least regulatory burden on covered entities. For these reasons, option 2 is recommended, subject to an appropriate cut-off date.

Assessment

An important consideration is the regulatory burden of the options considered. Option 1 would involve companies demonstrating to the Clean Energy Regulator when a final investment decision was taken including the provision of evidence. It would also require the Clean Energy Regulator to assess this information and arrive at a determination as to when it thought a final investment decision had been made on the project. This could be complicated by the very large size of many of the investments covered by the safeguard which could involve multiple investment decision stages.

The cut-off date should reflect the underlying policy rationale for making special provisions for new investments already underway. If the cut-off date is too late or early, it will not be effective at distinguishing pre and post final investment decision facilities. Given the significant lead times for developing and undertaking a major investment, a cut-off date of 1 July 2020 is considered a reasonable reflection of the investment horizon of facilities of sufficient size to be covered by the safeguard mechanism. This approach also avoids the regulatory burden associated with option 1 for both covered entities and the Clean Energy Regulator. During consultation, stakeholders were generally supportive of this option.

The recommended option is to have a different method for setting baselines for new facilities that exceed the coverage threshold before 1 July 2020.

2.4.3 How will baselines for new investments already underway be set?

A design decision remains about how to set baselines for new facilities already underway, including those deemed to have already made the final investment decision.

For the reasons outlined in section 2.4.2, best practice baselines may not be appropriate for new investments already underway because of their more limited ability to change design in response to best practice regulation. Instead, it is recommended that the method for setting baselines for these facilities should reflect baselines for existing facilities, as they have a similar capacity to alter their inherent emissions performance. Stakeholders were supportive of this principle:

> *APPEA welcomes the acknowledgement in the Consultation Paper of the need to ensure that 'new investments already underway' receive treatment that is consistent with the treatment of existing investments. (Australian Petroleum Production and Exploration Association)*

Option 1: Baseline using incomplete historical data

One option is to allow facilities with limited historical data to set baselines using the data available. Option 1 is consistent with the policy objective of having baselines for new investments already underway set using a similar method as baselines for existing operations and would be simple and low-cost for both regulated entities and the Government to implement.

The key difference between setting baselines using complete historical data and option 1 is the size of the dataset used to derive the baseline. The smaller dataset size used in option 1 reduces the effectiveness of the high point method's ability to capture year-on-year emissions variability. The level of impact of this effect at an individual facility is bespoke but related to the annual variability in emissions at a facility. Facilities with greater variance in their year-to-year emissions are less likely to have that variance captured by a historical high point method; decreasing the size of the dataset will compound this effect. This approach also risks advantaging older, less efficient facilities at the expense of newer, more efficient competitors.

For facilities with incomplete historical data because the facility was commissioned towards the end of the historical period, the available historical data may also not capture the full 'ramp up' phase. A large number of facilities with incomplete historical data are likely to be in this 'ramp up' category.

The disadvantage of this option is thus its varied impact on individual facilities. For some facilities, the approach may work very well; for some, it may not capture the emissions levels normally associated with the operation of the facility or that are expected once the facility has completed its 'ramp up'

Option 2: Baseline at level first reported over coverage threshold

Another option is to set baselines at the level of emissions in the facility's first year of coverage. However, this option could result in baselines that do not reflect the fact that facilities are still 'ramping up' production. Setting baselines when production is not at standard operating levels does not achieve the intent of creating an approach for new investments already underway that is broadly consistent with that for existing facilities with historical baselines. This approach is also unlikely to deal very well with emissions variability because it relies on a single data point as an indicator of future performance. Finally, if the first year of coverage can be predicted by a firm, the perverse incentive discussed in option 4 also exists.

The primary advantage of this approach is its simplicity and correspondingly low regulatory burden to administer.

Option 3: Baselines based on forecast data

Another option is to define an emissions forecast period that covers a facility's 'ramp up' phase. The baseline would be set using projected data for the emissions forecast period using the 'independent assessment' approach' developed for new investments. The independent assessment approach consists of a forecast high point, verified by a registered NGER auditor. Stakeholders were supportive of this approach:

> *Origin supports the use of the proposed independent assessment approach for facilities for which investment is already underway and will shortly be in production (Origin Energy Limited)*

The strength of this option is that it avoids the perverse incentive associated with using actual future emissions levels (see option 4) while also accounting for emissions variability by allowing operators to account for uncertainty in their forecast and to forecast over an extended time period (the 'ramp-up phase).

A weakness of this option is that its effectiveness relies on the ability of an operation to predict future production and emissions intensity levels. This can be difficult, particularly for heterogeneous geological sites. However, in practice, most facility operators make output projections many years ahead based on market intelligence and forward contracting levels. Emissions intensity projections will vary depending on the nature of the production process and inputs. Analysis of NGER data suggests that resources-based industries have the greatest emissions intensity variability, with the highest occurring where fugitive emissions are involved. Nonetheless, operators of resource facilities that are already in operation are likely to have the best information about the likely future emissions intensity of their facilities.

Option 4: Baselines based on reported future emissions levels

The last option identified is to use future data (option 4). This option would work by monitoring emissions and setting baselines at the emissions levels reported at a future date. A common suggestion amongst submissions was to delay the application of coverage until five years of emissions had been reported under NGERs to allow 'consistent treatment' with existing facilities whose baselines were based on historical high points. In contrast with the other options, this option would create the same dataset size as the historical baseline method (five annual data points) and so deals with emissions variability in the same way as for existing facilities.

However, the argument for delayed coverage to allow time for emissions to be monitored creates a perverse incentive to increase emissions during the years being used to set the baseline. The operators of existing facilities have no ability to influence the emissions they reported in the past in order to obtain a more generous baseline, whereas under option 4 the incentive at the margin is for operators of new facilities to allow a higher emissions-intensity of production than might otherwise occur.

Assessment

Option 1 – using the small set of historical emissions data that new investments already underway may have – represents a low cost option for both regulated entities and the Government as no application would need to be submitted or assessed. This option does not, however, cater for those facilities that have no historical emissions data as they start operations after the start of the scheme (but before 2020). Nor does it fully cater for businesses that may have only one year of data, as this year is likely to be during the ramp-up phase of the new investment and therefore not representative of emissions from normal business operations.

As options 2 and 4 set baselines based on future actual emissions levels, they risk introducing an incentive for higher emissions than might otherwise occur in order for firms to have a higher baseline. This would conflict with the policy objective of preventing emissions increases above business–as-usual levels. In addition each has individual drawbacks: Option 2 is only based on one data point as so may not be very representative of the entity's normal business operations; and Option 4 leads to many years without any baseline in place, effectively meaning that highly emitting new investments may not be initially covered by the safeguard mechanism.

As option 3 is based on forecast emissions rather than actual emissions, it avoids the perverse incentive associated with options 2 and 4. It also provides a long enough baseline period to accommodate any 'ramp-up' phase associated with new projects and therefore the baseline is more likely to reflect emissions from normal business operations. It is therefore considered to be the most effective option from those examined in terms of achieving the desired policy outcome of setting baselines for new investments already underway in a manner consistent with the approach used for existing facilities.

The recommended approach for new investments already underway is to allow businesses to apply for a baseline using an independent assessment approach. Where incomplete historical data is available under NGERs, it is recommended that businesses be allowed a choice between the independent assessment approach and the historical high point method.

2.4.4 How will baselines reflect significant expansions?

The recommended design of the safeguard mechanism includes several options for accommodating normal year-to-year variations in facility emissions, for example by setting baselines based on the highest emissions over a five year period and potentially allowing multi-year monitoring periods (see section 2.5.2). However, the baselines set under the mechanism do not permanently accommodate emissions from facilities that significantly expand. Accordingly, the safeguard mechanism consultation paper released in March 2015 proposed that baselines could be permanently adjusted for significant expansions, defined as the installation of new equipment resulting in a 20 per cent increase in the facility's productive capacity.

More than half of the submissions received expressed concern that the significant expansion baseline adjustment approach proposed in the consultation paper was an inadequate response to rising emissions from incrementally expanding production, particularly where that new production was at low emissions intensity.

> *The AAC strongly urges the inclusion of an emissions intensity test as part of the safeguard mechanism design, to ensure some of the world's most efficient facilities are not penalised for "business as usual" incremental production growth. (Australian Aluminium Council)*

> *If the Safeguard Mechanism proposes to take into account significant expansions, there also needs to be rules in place to allow facilities to increase emissions other than by step change, provided the principles of best practice are maintained. If an emissions intensity alternative was available, then this would enable companies to look to increase production in a manner that does not increase emissions intensity. (Qenos)*

The Government has developed and considered options for recognising falling emissions intensity where production is incrementally expanding. Those options are explored as part of the emissions management framework in section 2.5.

This section explores options for identifying new investments at 'brownfield' sites – that is, which new investments qualify as 'significant expansions' – and seeks to identify the approach that best ensures competitive neutrality between new investments at 'greenfield' and 'brownfield' sites. Maintaining competitive neutrality between 'greenfield' and 'brownfield' sites is an important policy objective because expanding a 'brownfield' site may be more efficient from a production and emissions

perspective than developing a new 'greenfield' site. The safeguard mechanism seeks to avoid distorting investment decisions by maintaining this competitive neutrality.

Two design decisions remain about what qualifies as a significant expansion. The first decision relates to the measure of significant expansion which will be assessed—production (option 1) or productive capacity (option 2). The second decision relates to the threshold over which an increase in the chosen metric is considered to be 'significant'.

Decision 1: Metric

Option 1: Production metric

One way to determine whether a facility has undergone a significant expansion is to compare production levels before and after the expansion (option 1). For example, a facility could be deemed to have undergone a significant expansion if its production increased significantly after the installation of a new piece of equipment.

The primary advantage of this approach is its straightforward implementation. Production is easy to measure and is already recorded for financial accounting purposes, so associated costs would be low. This option was popular amongst businesses likely to be covered by the safeguard mechanism.

The disadvantage of this approach is that an increase in production associated with bringing unused productive capacity online will rarely constitute a new investment. As evidence of the tenuous nature of a link between significant expansions resulting from new investment and an increase in production, many submissions gave examples in their industries of incremental increases in production completely unrelated to new investments. In addition, production can often be increased at a facility without the facility investing in new plant or equipment, for example by 'de-bottlenecking' a facility. There is therefore no direct relationship between a production increase at a facility and its physical expansion. Option 1 is thus unlikely to ensure competitive neutrality between new investments at greenfield and brownfield sites.

Option 2: Capacity metric

Another option is to compare a facility's productive capacity before and after an expansion (option 2). For example, a facility could be deemed to have undergone a significant expansion if its theoretical maximum output volume increased significantly after the installation of a new piece of equipment. Theoretical maximum output volume is the maximum output that a facility could achieve in a scenario where there is a surplus of demand.

The advantage of option 2 is that an increase in productive capacity is likely to represent a significant financial investment at a brownfield site that could otherwise be made at a greenfield site. In this way, option 2 can ensure competitive neutrality between new investments at greenfield and brownfield sites, provided that the threshold used to determine significance reflects the minimum viable production from a greenfield site.

In terms of implementation, significant financial investments would likely be subject to a final investment decision, which would normally be accompanied by documentation including the productive capacity of the proposed expansion. Option 2 can thus be expected to be low-cost.

A disadvantage of using a capacity metric is that productive capacity is difficult to define in a consistent way across different businesses which may make verification of consistent application difficult. However, this disadvantage can be offset by the fact that facility operators applying for a baseline variation on the grounds of a significant expansion will be in a good position to substantiate an increase in productive capacity at their facility.

Decision 2: Threshold

As foreshadowed above, the threshold at which an expansion is considered significant is an important element of ensuring the significant expansion policy results in competitive neutrality between investments at greenfield and brownfield sites. To achieve this objective, the threshold should be set at a level that reflects the minimum viable production from a greenfield site. On the one hand, a threshold that is too high might alter the decision about whether to invest in brownfield facilities or construct new greenfield facilities. The safeguard mechanism is not intended to influence businesses' decisions about whether to build brownfield or greenfield facilities. If, on the other hand, the threshold is too low, facilities could get baseline increases by making only minor investments in capital and equipment. This would undermine the integrity of historical baselines.

Because there are such a variety of facilities covered by the safeguard mechanism, a threshold that relies on a percentage increase in productive capacity is fairer and easier to administer than an approach that seeks to set absolute thresholds. Setting absolute thresholds would either be more administratively complex because a different threshold would need to be set for each kind of facility, or would operate regressively, making it more difficult for smaller facilities (for which the absolute threshold would be relatively hard to meet) to pass the significant expansion test.

Stakeholders supported a percentage-based, threshold-setting approach to significant expansions, if incremental expansion in production was addressed through another mechanism (that is, through an emissions intensity test—see section 2.5.1):

> *…the legislative rules should be clear that a significant expansion is one where capacity is increased beyond 20 percent as a result of capital investment in additional equipment. (Chevron Australia)*

Assessment

Generally, a firm seeking to develop new capacity to produce can do so by creating a new plant (known as a 'greenfield' investment) or by investing in new capacity at an existing plant (known as a 'brownfield' investment). It is important that the baselines for these investments are set in similar ways in order to avoid distorting investment decisions between greenfield and brownfield facilities. As discussed above, baselines for significant expansions and new facilities will be set in the same way – the independent assessment approach for projects that occur before 2020 and the best practice benchmark approach for projects that occur after 2020.

An important consideration when setting baselines for significant expansions concerns the threshold for what is, and what is not, a significant expansion. The threshold determines which 'brownfield' investments are eligible for a baseline adjustment. The threshold has two elements. The first relates to the metric to be used for the threshold. The second relates to the level of the threshold.

While using production as the metric (option 1) would be administratively simpler than productive capacity (option 2) because it is constantly measured and regularly reported, it would be less accurate in identifying projects that do expand productive capacity and are similar to 'greenfield' investments. This is because production can be expanded significantly without requiring additional investment in capacity, for example, if a facility had recently been operating at well below its capacity. As the key issue to be addressed is avoiding distortions between greenfield and brownfield investments, option 1 is less effective than option 2, and for this reason, option 2 is preferred.

The threshold should be a percentage of the productive capacity rather than being set at an absolute level in order to recognize that the investment is relative to the size of the facility. To illustrate, an absolute threshold could be extremely high for a smaller facility and very low for a large facility. This would disadvantage smaller facilities as they would find it harder to get a baseline adjustment for investments in productive capacity.

Other Australian schemes have typically used 20 per cent as the threshold for significant expansions. For example, the Renewable Energy Target has used a 20 per cent threshold to define a significant expansion for the purpose of emissions-intensive, trade-exposed industry assistance since 2010. Evaluation conducted to-date has not shown any issues with a 20 per cent threshold.

The recommended approach is to adjust baselines for significant expansions, where significant expansions are defined as the installation of new equipment resulting in an increase of at least 20 per cent of productive capacity at a facility.

2.5 Emissions management options

During consultations on the design of the Emissions Reduction Fund, businesses emphasised that year to year variation in emission levels was a consequence of normal operations.

> *A key consideration to setting baselines is the need to include adjustments for those facilities that experience year to year variability in emissions, most businesses do not operate in a 'stable state' but rather are managed to respond to the external environment. There will always be a fluctuation in emissions as a natural part of business... (BP Australia)*

This normal variability was the reason for the Government's decision in the White Paper to use the historical high point of reported emissions to set baselines.

Several other options outside of the baseline-setting method have been considered to allow for short-term peaks and troughs in emissions. These options are: an emissions-intensity test, multi-year averaging, corporate pooling and baseline buffers. The ongoing management of emissions is a key design element in determining the potential regulatory impact of the safeguard mechanism, and the options for managing emissions discussed in this section have been treated accordingly. The baseline buffer option is explored in section 2.3.2.

2.5.1 Emissions-intensity test

Many businesses supported an exemption based on an emissions-intensity test, which would allow facility emissions to exceed their baseline, so long as the emissions intensity of production is falling.

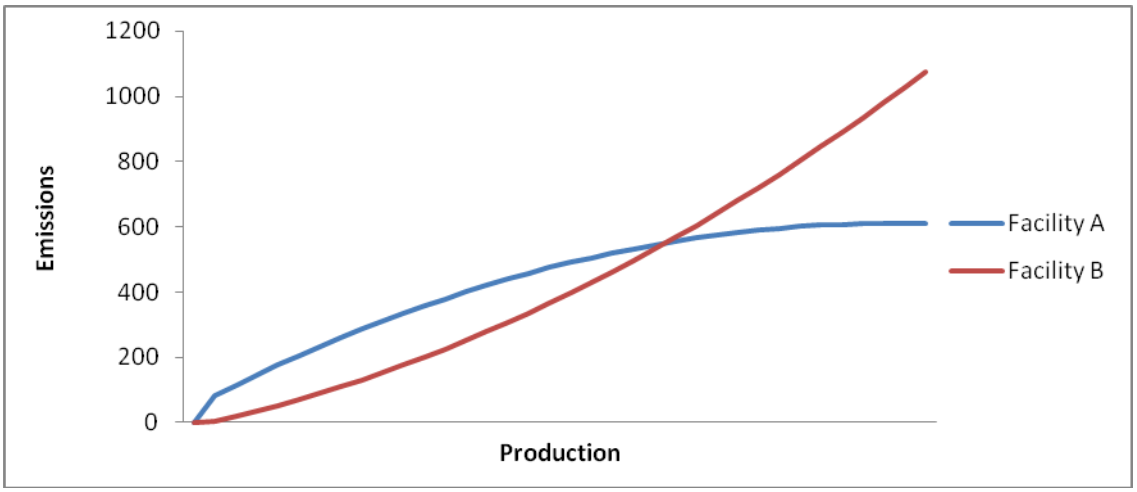
> *…the Safeguards Mechanism should include a provision that enabled any facility that exceeded its absolute emissions baseline to then be tested against its established emissions intensity to take into account operational factors not covered by the relatively short period of time used to set the baseline for the facility. To do otherwise will impose significant additional costs on otherwise highly efficient, marginal production. (Australian Institute of Petroleum)*

> *AFPA urges, as an option, the inclusion of an emissions intensity test that would allow a facility to exceed its absolute baselines so long as the emission intensity of production is not increasing. (Australian Forest Products Association)*

Option 1: No recognition of emissions intensity improvement

The default option (option 1) is to enforce baselines irrespective of emissions intensity trends at the facility. While this option is the most administratively simple, it may result in perverse emissions outcomes. The likelihood of these perverse incentives occurring is enhanced where production shifting is possible amongst facilities. For example, consider a company operating two facilities which both make the same product, but at which a different relationship between emissions and production exists (see Figure 3). Under option 1, if Facility A was operating close to its baseline, but Facility B was far below its baseline, the safeguard mechanism would incentivise the operator to meet additional demand from Facility B, even if this were above the point at which the emissions intensity of the two facilities was equal and would result in higher aggregate emissions than meeting demand using Facility A.

Figure 3: Emissions intensity profile of two facilities (example)



Option 2: Recognition of emissions intensity improvement

An alternative option (option 2) would be to disregard baseline exceedence where emissions intensity is falling. This option was both strongly supported by stakeholders and avoids the perverse emissions outcome described above:

> *AIGN therefore proposes the option to include an emissions intensity test that would allow a facility to exceed their absolute baselines so long as the emission intensity of production is not increasing. Providing a secondary threshold of emission intensity better reflects the realities of business operations over the business cycle... (Australian Industry Greenhouse Network)*

This option avoids the potential perverse outcome of Option 1, and supports economic growth and emissions efficiency. This option is therefore consistent with the objective of accommodating business as usual growth, while avoiding large unconstrained increases in emissions.

This option also aligns with the Government's decision in the White Paper to set absolute baselines, and not emissions intensity baselines. Temporarily disregarding emissions exceedances under this option provides an emissions management tool, while avoiding the implementation of emissions intensity baselines, in line with the policy decision expressed in the White Paper to set absolute baselines.

It may be appropriate to review the operation of this option as part of the review of the safeguard mechanism between 2017 and 2018. In particular, such a review could seek to understand possible interactions between post-2020 best practice benchmarks and the emissions intensity test in determining the future form and nature of the test.

Option 3: Permanent baseline increase for emissions intensity improvement

A third option would be to increase baselines where emissions intensity could be demonstrated to be falling. A few submissions received in response to the consultation paper recommended implementing this option via the removal of the productive capacity threshold associated with the definition of a significant expansion. This could work by defining a significant expansion by reference to a production increase rather than to capacity (as recommended in section 2.4.4), which would lead to a baseline reset using the independent assessment approach. Given that the independent assessment approach uses emissions intensity to establish baselines, using a production instead of productive capacity test to define significant expansions would be a way of recognising falling emissions intensity.

However, this option may lead to operators of multiple facilities, who temporarily shift production between their facilities as a matter of course, automatically qualifying for baseline increases at each facility without either a permanent increase in production or a permanent reduction in emissions intensity. It could also lead to an operator of a single facility achieving a permanently higher baseline

as a result of a temporary fall in emissions intensity that is not sustained. For this reason, option 3 is not recommended.

Assessment

It is the Government's intention that the safeguard mechanism should accommodate economic growth and normal business operations. The significant expansion test (section 2.4.4) allows baseline adjustments only where there is a significant and permanent increase in production capacity at a safeguard facility. There will also be many instances where businesses grow incrementally, for example, businesses may increase production within existing plant capacity, or expand capacity by less than 20 per cent.

Option 1 does not accommodate incremental business growth. It would require expanding businesses to take action to comply with the safeguard mechanism, even if their emissions-intensity of production is improving. This would fail to satisfy the Government's intention that the safeguard mechanism should allow business-as-usual economic activity and accommodate economic growth.

Option 2 allows emissions to increase above baseline levels if a facility's emissions-intensity of production is falling. Under this approach, businesses that deliver emissions-intensity improvements can grow incrementally without engaging the safeguard mechanism's compliance frameworks. Once they expand sufficiently to meet the significant expansion test, they can apply for a permanent baseline increase. While this approach allows an increase in absolute emissions, it provides for an improvement in the emissions intensity of the economy and is consistent with the Government's policy intention of accommodating business-as-usual economic growth, and its approach to achieving emissions reductions through the Emissions Reduction Fund purchasing mechanism.

Option 3 accommodates incremental growth, but introduces a risk that baselines could be increased above business-as-usual levels. This could occur if businesses temporarily shift production between facilities to progressively increase baselines at a number of different locations. While there may be limited opportunities to do this in practice, it is important to ensure that baselines do not expand beyond business-as-usual levels, as this would not be consistent with the policy objective. The safeguard mechanism is designed to avoid emissions increases above business-as-usual levels.

The recommended option is to recognise emissions intensity improvements by disregarding baseline exceedence where emissions intensity can be demonstrated to be falling (option 2). It is recommended that the operation of the emissions intensity test be reviewed as part of the safeguard mechanism review between 2017 and 2018.

2.5.2 Averaging measures

The Government also considered whether operators should be able to manage emissions variability through various averaging measures.

Option 1: Temporal averaging (multi-year monitoring periods)

The Act empowers, but does not require, safeguard rules to allow businesses to apply for a multi-year monitoring period where there is a reasonable expectation that emissions could be returned to baseline levels over an extended period of time. Stakeholder views on multi-year monitoring periods were mixed:

> *The use of multi-year averaging has merit, creating a potentially reasonable, practical and flexible compliance framework… (Minerals Council of Australia)*

> *Multi year averaging should not be permitted by the rules and facilities should be required to stay within their baseline each and every year. (Australian Conservation Foundation and Environmental Justice Australia)*

Multi-year analysis of NGERS data highlights that emissions vary from year to year because of a range of factors. Research and stakeholder feedback indicate that these factors can be as varied as, (for example), weather, input grade and market volatility. Multi-year averaging may provide an effective option for taking into account this emissions variability. A key determinant of the impact of multi-year averaging is the length of time over which emissions are averaged. For example, if there was no limit on the length of a monitoring period or the number of extension applications, regulated entities with covered emissions over baseline levels could comply with the safeguard mechanism by pushing the end of the monitoring period further and further into the future.

While the length of a monitoring period should give businesses sufficient time to implement emissions reduction projects, acquire offsets, or help capture natural peaks and troughs in emissions, it must also ensure that emissions increases are rectified within a reasonable timeframe. Consultation has suggested three years is an appropriate length of time to balance these concerns.

Option 2: Corporate averaging (pooling)

Several stakeholders suggested that large corporations should be allowed to manage facility emissions at the portfolio level. This option, sometimes known as pooling, allows emissions to be averaged across facilities within a corporate group, so that increases at one facility can be offset by decreases at another.

The advantage of pooling is that, like multi-year averaging, it provides businesses with flexibility to manage emissions in a way that complies with the overall objectives of the safeguard mechanism. The scale of the potential benefits of corporate averaging is proportional to the number of facilities controlled by the business. Pooling may therefore place businesses with fewer facilities at a competitive disadvantage compared to businesses with more facilities.

Stakeholders with multiple facilities expressed support for this option:

> *Considering aggregate emissions for a controlling corporation... would address circumstances where organisations can switch activities between facilities. This may also encourage an overall reduction in emissions in some circumstances where activities can be switched from a higher emissions-intensity facility to a lower emissions-intensity facility... (Melbourne Water)*

Assessment

The policy approaches recommended for the safeguard mechanism—such as setting historical baselines at the high point over 5 years—seek to accommodate emissions variability at the facility level. This is because emissions are expected to fluctuate over time and it would not be efficient to require facilities to take action to comply with the safeguard mechanism in response to minor annual variations. Implementing additional emissions-averaging opportunities will give businesses additional flexibility to manage emissions that occur in the normal course of business.

Of the two options examined, corporate level pooling (option 2) risks creating a competitive distortion across corporate structures (number of facilities) and sizes, which would breach competitive neutrality principles. For example, a large company that controls multiple safeguard facilities could benefit from corporate pooling by using the ‘headroom’ or gap between actual emissions and baseline emissions at one facility, to increase emissions above baseline levels at another facility. A business that controls only one facility could not benefit from this opportunity.

In contrast, option 1 would give all safeguard facilities the opportunity to average their emissions over time. This would allow a facility to exceed its baseline in one year, so long as average emissions over multiple years remain below the baseline. Limiting the multi-year monitoring period to three years reduces the risk that average emissions cannot be returned to baseline levels, while giving facilities sufficient time to implement emissions reduction projects, purchase offsets or smooth out peaks and troughs in emissions. This approach will not jeopardise the policy objectives of the safeguard mechanism, as overall emissions levels will remain unchanged.

The recommended option is to allow operators to apply for multi-year monitoring periods, with monitoring period length to be limited to three years (option 2).

2.6 Electricity sector

The electricity generation sector is important to Australia's economic and social prosperity. Electricity is an essential input to other sectors and to basic human needs. The electricity sector has undergone significant change in recent years and continues to be impacted by a number of technological and macroeconomic factors. Experts within and outside the electricity sector expect electricity generation to a play a critical role in providing solutions to current and future emission reduction challenges by providing a low emissions alternative to liquid fossil fuels used in transport and onsite generation.

Currently, the electricity sector produces around one third of Australia's emissions and is the single largest source of emissions by sector. While emissions from electricity generation have decreased in recent years due to a range of factors, including a decline in demand and support for renewable energy, the profile of the sector is such that even a small increase in emissions can have significant implications for meeting national emissions targets.

Several businesses in submissions to the Emissions Reduction Fund Green Paper noted the unique characteristics of the electricity sector when compared to other sectors covered by the safeguard mechanism.

> *Therefore, as flagged in the Green Paper, the generation and networks sectors could be split out from the rest of the economy in the design of the ERF. The ESAA considers that this is a sensible approach given the scale of the electricity industry and the fact it produces a uniform output—megawatt hours—regardless of fuel type or location. (Energy Supply Association of Australia)*

The Government recognises the importance of ensuring that the safeguard mechanism is applied to the electricity generation sector in a way that complements existing energy market objectives.

In the White Paper, the Government committed to implementing a safeguard mechanism to encourage businesses to keep emissions within historical baselines. Recognising the significance of the electricity sector to Australia's emissions, the Government agreed to consult with the sector on the specific application of the safeguard mechanism and its interaction with the Renewable Energy Target (RET).

The following sections are specifically focused on outstanding policy considerations relating to how baselines are set and coverage. Beyond this, it is recommended that electricity generators have the same access to emissions management options as other facilities in the safeguard mechanism.

2.6.1 Should there be a sectoral baseline for the electricity sector?

In the Emissions Reduction Fund White Paper, the Government set out its decision that emissions baselines for facilities under the general safeguard mechanism will be based on absolute emissions using historical data reported under NGERS. The Emissions Reduction Fund White Paper also set out that emissions baselines will be set using the highest level of reported emissions for a facility over the historical period 2009-10 to 2013-14 (see section 2.3 of this document for further detail).

This section examines two potential options for applying baselines to the electricity sector:

i. A sectoral baseline: set one sector-wide baseline for the generation industry, where individual baselines would apply in the event that the sectoral baseline was exceeded; or

ii. Individual baselines: set individual baselines consistent with the approach to setting baselines for other facilities under the safeguard mechanism.

Option 1: A sectoral baseline

The consultation paper stated that the Government is exploring an option, proposed by the electricity sector, to apply a sectoral baseline to the generation sector with individual baselines to apply in the event a sectoral baseline is exceeded. This option recognises that generators that are connected to a designated electricity network make production decisions by taking into account the operational requirements of the whole network and production decisions of other connected generators. In this respect, grid-connected generators behave as a single entity that coordinates production to meet a given level of demand at any point in time.

A sectoral baseline would be based on aggregated historical emissions reported by all grid-connected generators connected to the designated electricity networks: the National Electricity Market (NEM), the South West Interconnected System (SWIS), the North West Interconnected System (NWIS), the Darwin-Katherine Interconnected System (DKIS), and the Mt Isa network.

Under a sectoral baseline approach, generators that are *not* connected to any of the designated electricity networks would be covered by the general safeguard mechanism. That is, they would be subject to individual facility baselines from 1 July 2016 onwards, with concurrent access to the emissions management options available to individual facilities.

The majority of submissions in response to the consultation paper supported the concept of a sectoral baseline for the electricity sector:

> *Recognising some of the unique attributes of the electricity sector and operation of the electricity market the government is proposing a sectoral approach for electricity generation. The Business Council supports the use of a sectoral scheme where it is clear the proposed approach does not result in any unintended consequences. (Business Council of Australia)*

> *Given such a significant decline in electricity sector emissions and the potential for this trend to continue (with potential contractions in demand and continued substitution of existing high emitting plant with renewable distributed generation), it would appear prudent to use a sectoral baseline in the first instance. This would minimise administrative burdens given it would appear that if current trends continue baselines will not be exceeded. If a sectoral baseline is adopted, AGL is not opposed to it being based upon average emissions over the 2009/10 to 2013/14 period. (AGL Energy Limited)*

The electricity sector's emissions will continue to face downward pressure as new renewable generation is introduced through the RET through to 2020. Currently, the sector is facing an over-capacity of supply and some power stations have closed or announced that they intend to close their generating units. These closures mean that other generators within the sector need to increase output to meet demand. The initial use of a sectoral baseline would ensure that, while these transitions are occurring within the sector, no additional administrative costs were placed on generators until a point in time at which overall emissions from the electricity sector started to rise.

Some submissions expressed concerns about the use of years for which there was a carbon price signal when determining a sectoral baseline:

> *To address the shortcomings of a baseline referenced to average industry wide emissions, it is more appropriate to establish a sectoral baseline that;*
>
> *1. is derived from the maximum sectoral emissions in the reference period;*
>
> *2. excludes any period in which a carbon price signal was applied to the electricity sector; and*
>
> *3. at a minimum utilises NGERs data from 2008/9 to 2011/12. (Delta Electricity)*

Under the general safeguard mechanism, the decision to set individual baselines at the high point of historical emissions levels is intended to accommodate variability in emissions that may occur over a compliance period due to changes in factors such as production levels.

A sectoral baseline can accommodate variability that occurs at the individual generator level due to changes in production levels, plant maintenance and the quality of inputs used. Setting it at a high point of reported NGER emissions over a historical period would provide an effective buffer for one-off increases in emissions, while ensuring emissions from the sector do not increase significantly.

In the event that overall emissions from the electricity sector remain stable or decline over time, the use of a sectoral baseline would ensure that the safeguard mechanism does not place unnecessary compliance costs on generators if normal variability in emissions causes them to exceed their individual baselines in any given year.

Option 2: Individual baselines

Under this option, baselines for generation facilities would be set in the same manner as the general safeguard mechanism, using the high point in emissions reported under NGERS over the historical period 2009-10 to 2013-14.

A key benefit of this approach is its consistency with the general safeguard mechanism architecture. A high point individual baseline, for instance, would accommodate variability in emissions by capturing a generator's historical responses to unusual market events such as generator and network outages, and prolonged impacts from the weather like heatwaves and droughts. It would also provide a buffer against the variability in emissions due to changes in levels of output, operational requirements within a facility and changes to the quality of inputs used. Some submissions in response to the consultation paper supported individual baselines.

Assessment

Unlike Option 1, Option 2 does not recognise that grid-connected electricity generators behave in a co-ordinated manner. Grid-connected electricity generators vary their output, contingent on the output of other generators in a grid. In the event that an old inefficient generator closes, other generators within a grid would need to raise their output and consequently, their emissions.

The electricity sector is currently facing an over-supply of capacity which is leading to some power stations retiring or mothballing their generating units. The reduction in output from these generators will need to be taken up by other generators in a grid in order to meet demand for electricity. Providing disincentives for generators to raise their output while the sector's overall emissions are not increasing could potentially distort market signals without providing any further contribution to achieving the desired policy outcome of safeguarding against significant increases in emissions from the sector. To address the transitional phase the that sector is currently going through, it is proposed that a single sectoral baseline is used until there is a significant increase in the overall emissions of the grid-connected electricity generation sector.

The recommended option is for a single sectoral baseline to be set at a high point of reported NGER emissions across all grid-connected generators in the main grids that operate in Australia—the National Electricity Market, South West Interconnected System, North West Interconnected System and the Darwin-Katherine Interconnected System and the Mt Isa network. Generators outside of these grids will be covered by the general safeguard mechanism rules.

2.6.2 What happens if the sectoral baseline is exceeded?

Under Option 1 in the previous section, in the event that the sectoral baseline is exceeded, individual baselines would apply.

To prevent overlaps between individual generators' proposed multi-year compliance periods (see section 2.5.2) and the sectoral baseline, it is proposed that individual baselines would take effect from the financial year after the Regulator announces that the sectoral baseline has been exceeded and apply each year thereafter; that is, the sectoral baseline would not be re-established. Only generators

that exceeded their individual baselines would be required to offset their individual excess emissions by the end of the monitoring periods that apply when the sectoral baseline is no longer in place.

A key benefit to this approach is that it helps generators understand their potential obligations up front. The approach is also broadly consistent with the general safeguard mechanism, which improves overall regulatory and implementation efficiency.

Under the general safeguard mechanism, individual baselines are set at the high point of historical emissions levels to accommodate variability in emissions at a single facility that may occur over the course of a compliance period due to changes in factors such as production levels. The consultation paper suggested that individual baselines for the electricity generation sector could be set with reference to a generator's average emissions over the same historical period as the sectoral baseline. This would ensure that the sum of individual generator baselines do not exceed the sectoral baseline.

In response to the consultation paper, some stakeholders have supported the use of average emissions to determine facility baselines:

> *AGL supports the approach that in the event of exceedance of the sectoral baseline, the facility level baseline is the facility average for the same period as used to set the sectoral baseline. (AGL Energy Limited)*

> *We note the use of averages for sectoral and individual baselines rather than high points and support this approach. (ERM Power)*

Other stakeholders have opposed the use of average baselines for electricity generators, arguing that it is inequitable when other facilities have their baseline set at the high point of historical emissions levels:

> *At either sectoral or facility level, it is inequitable to apply maximum baselines to other sectors but average baselines to electricity generators. (Energy Supply Association of Australia)*

> *Under the general approach to setting baselines, a facility's highest annual emissions during the reference period forms the baseline for that facility going forward, as a proxy for business as usual variability. The same approach should be the starting point for the consideration of the electricity sector – that is, each facility should ultimately have an individual baseline at the high point of historic emissions. (Stanwell)*

> *Delta Electricity supports the establishment of individual emissions baselines, set using the highest level of reported emissions for a facility over a historical reference period, in order to accommodate natural variability in emissions that is evident for market facing facilities such as refineries or electricity generators. (Delta Electricity)*

It is proposed that in order to be consistent with the rest of the safeguard mechanism, baselines are set with reference to the high point of historical emissions between 2009-10 and 2013-14.

2.7 Publication of information

A transparent approach to regulation is part of the Australian Government's commitment to Open Government, which fosters "effective collaboration between citizens and government [via] timely sharing of the information held by Government."[9]

The Australian Government's Declaration of Open Government states:

[9] Department of Finance (2009) *Government 2.0 Taskforce Report*

> *The Australian Government now declares that, in order to promote greater participation in Australia's democracy, it is committed to open government based on a culture of engagement, built on better access to and use of government held information, and sustained by the innovative use of technology*[10]*.*

Stakeholder views on the publication of safeguard information varied:

> *The proposed publication of facility-level greenhouse gas emissions data runs counter to [the]underpinning approach of the National Greenhouse and Energy Reporting Scheme Act 2007, the level at which data has been published since NGERs was established in 2007 and, indeed, one of the bases for industry support for establishment of NGERs itself. (Australian Petroleum Production and Exploration Association)*

> *The City of Sydney is supportive of...the transparent sharing of information through annual publication by the Clean Energy Regulator (City of Sydney)*

Most information held by the Government regarding the operation of the safeguard mechanism has great potential for creating value if shared by the Government. For example, publication of safeguard information provides taxpayers with transparency around the effectiveness of a key policy designed to protect public expenditure. It could also help facilitate a functional secondary ACCU market. Many impacted businesses, however, were concerned that publishing safeguard information could have adverse impacts on their business.

> *Our view is that the disclosure of information at the facility level may reveal information that is commercially sensitive, particularly in industries where there are a small number of similar facilities. Consequently, we believe that legitimate commercial concerns must be appropriately addressed ahead of any additional disclosure. (BHP Billiton)*

These concerns are addressed through the existing ability of a business to request that the Regulator not publish information which has a commercial value which could be destroyed or diminished (section 25 of the NGER Act). Similar concerns were expressed when the Act was first introduced in 2008, however only a small number of non-disclosure requests have been received by the Regulator to date.

The recommended option is to publish information about the operation of the safeguard mechanism. A person may request the Regulator refrain from publishing a particular piece of information if that information is commercially sensitive.

[10] Available on the Department of Finance's website.

3 Impact analysis

This Chapter describes the regulatory impact anticipated from the safeguard mechanism. For the purposes of this analysis, the recommended implementation options are assumed to be adopted[11].

Given the number of, and the interaction between, implementation options, the regulatory impact of each possible implementation scenario has not been analysed in accordance with the *Australian Government's Guide to Regulation's* directive to analyse regulatory impact at a level commensurate with the expected impact.[12] This Chapter instead examines the assumptions underpinning the key drivers of the cost estimates presented in section 3.6 in an implementation scenario encompassing the suite of recommended implementation options only. The recommended implementation options are those with the highest likely net benefit.

The safeguard mechanism will send a signal to businesses to avoid large unconstrained increases in emissions beyond business-as-usual levels. It will do so in a light touch way that supports economic growth and allows businesses to continue normal operations. As proposed, the safeguard mechanism is not expected to affect prices, impact on households, or adversely affect economic growth. The safeguard mechanism is designed to avoid large unconstrained increases in emissions beyond business-as-usual levels and to allow business-as-usual production growth by companies, and it is not envisaged that there will be any distributional impacts.

As the safeguard mechanism has been designed to accommodate business as usual growth, and assuming the recommended key design decisions are implemented, it is not expected that the safeguard mechanism will affect investment and production decisions for covered sectors beyond ordinary business as usual processes.

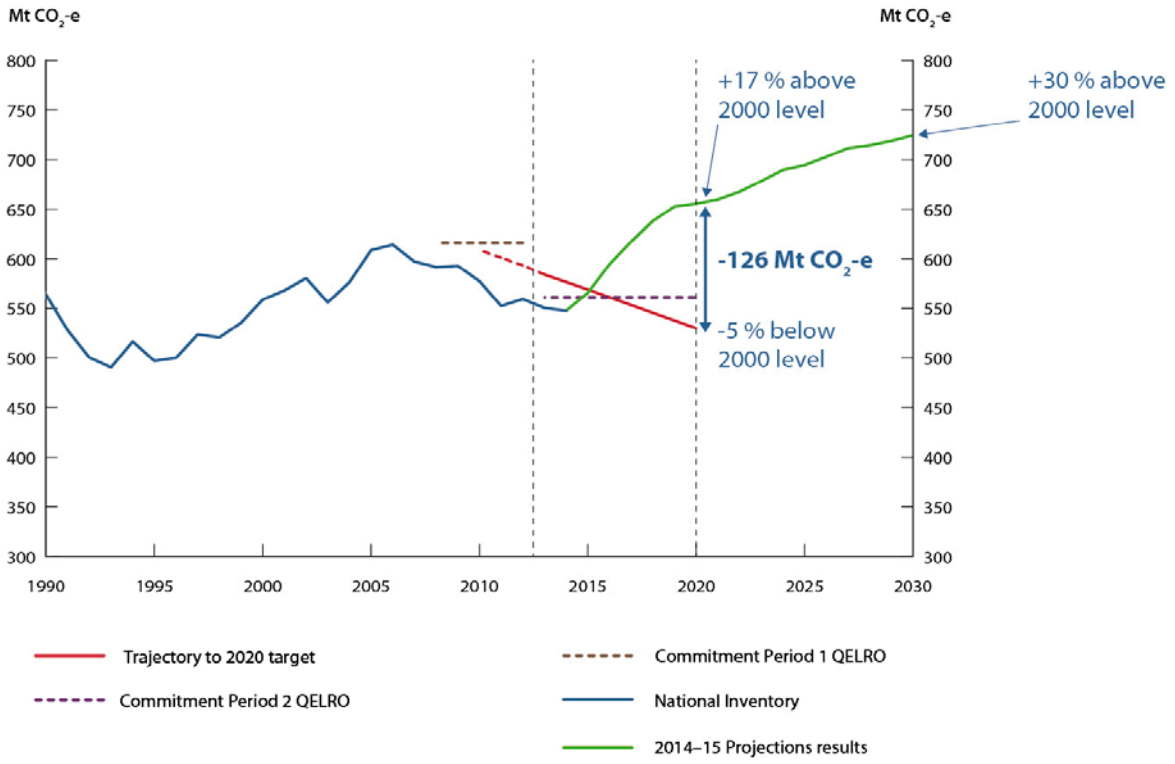
3.1 Benefits

The safeguard's primary benefit is to support taxpayer funds by ensuring the emissions reductions paid for by the crediting and purchasing arrangements are not displaced by significant increases in emissions elsewhere in the economy.

Australia's target to reduce emissions to 5 per cent below 2000 levels by 2020 represents a significant challenge. This is particularly the case when viewed in the context of historical and projected underlying emissions growth between 2000 and 2020 (expected emissions growth is illustrated by the green line in Figure 4). Current projections suggest that Australia meeting the 5 per cent target could require a reduction in emissions of around 236 million tonnes from 2013 to 2020. The target of a 5 per cent reduction against 2020 levels translates to a reduction of 17 per cent compared to projected 'business-as-usual' emissions in 2020 (see Figure 4).

[11] A summary of the recommended implementation options is included at Appendix B.
[12] *The Australian Government Guide to Regulation* (2014) Department of the Prime Minister and Cabinet, Australian Government, Canberra. p31

Figure 4: Australia's emissions trends, 1990 to 2030



Note: A QELRO is a Quantified Emissions Limitation and Reduction Objective, that is, an emissions target. All years in figures refer to the financial year ending in the year shown.
Source: Department of the Environment (DoE) 2015a; DoE estimates.

The safeguard mechanism's goal is to protect against unexpected emissions growth. In this way, the safeguard mechanism aims to keep Australia's emissions reduction goal from moving further away, thereby protecting taxpayer funds spent on measures to help Australia meet its 2020 target.

A secondary benefit of the safeguard mechanism is the potential to create a stable and predictable policy landscape in which businesses can make new investments by setting clear expectations of future emissions performance at the facility level. There was widespread support for setting such clear expectations about future emissions levels through long-term baselines:

> *To support a long-term transition to a low-carbon economy, the government should set indicative baselines out to at least 2030, if not longer. (World Wildlife Fund)*

A third benefit is an enhanced incentive for safeguard facilities to undertake Emissions Reduction Fund projects. The Government has allocated $2.55 billion to purchase emissions reductions (ACCUs) from Emissions Reduction Fund projects. Safeguard facilities choosing to undertake emissions reductions can access this funding and gain valuable co-benefits from reducing their emissions, such as lower energy bills and improved productivity. These co-benefits strengthen the competitiveness of Australian businesses.

3.2 Who will be impacted

Operators of facilities with direct emissions of more than 100 000 tonnes of CO_2-e have obligations under the safeguard mechanism. This coverage threshold captures a variety of business entities, including corporations, trusts, and local councils (section 22XH and definition of 'person' in the Act). A broad approach ensures competitive neutrality between different legal entities operating in the same markets, for example, between public and private operators. The typical entity covered by the safeguard mechanism will be a large corporation.

The business with operational control of a covered facility will be responsible for meeting safeguard requirements (section 22XH of the Act). This will result in participation by around 150 large businesses that generally already report under the National Greenhouse and Energy Reporting Scheme[13].

Placing obligations on the entity with operational control of the facility ensures that responsibility rests with the entity that is best placed to manage the facility's emissions and take action to reduce them, if needed.

The Joint Petroleum Development Area (JPDA) and Greater Sunrise gas fields will not be covered by the safeguard mechanism (section 6A of the Act). These areas are jointly owned by Australia and East Timor.

3.3 Compliance costs

The safeguard's compliance costs are expected to arise when operators learn about the safeguard mechanism (education costs), when they engage with administrative processes (administrative costs) and when the electricity sector monitors the emissions performance of the sector (substantive compliance cost).

The regulatory burden associated with the safeguard mechanism is estimated to be around $500,000 per year across all covered facilities. This compares with the regulatory burden associated with the carbon pricing mechanism of around $85 million.

The key driver of the safeguard mechanism's estimated compliance costs is the number of responsible emitters (regulated entities). Responsible emitters are the operators of facilities covered by the safeguard mechanism. Section 3.2 describes the groups impacted by the recommended options.

Administrative costs are expected to constitute the majority of regulatory burden experienced by regulated entities, with baseline applications and falling emissions intensity applications expected to comprise most of the administrative costs. Where multiple emissions management options are available to businesses, the administrative costings assume the lowest cost method of meeting the safeguard obligation is selected.

As the safeguard mechanism is designed to accommodate business as usual growth, there is expected to be only a limited number of businesses that exceed their baselines. The preference for any business that exceeds its baseline would be to access a multi-year monitoring period or have its baseline exceedence temporarily disregarded through the emissions intensity test. If, after doing so, the business still expects to exceed its baseline, its preference would be to seek to undertake a project through the Emissions Reduction Fund. By doing so, the business can seek Government funding for its project, thereby getting assistance to reduce its direct emissions to below its baseline.

Facilities covered by the safeguard mechanism will incur a cost associated with learning about the safeguard mechanism. Businesses will need to invest time to understand their obligations and to understand how they can best manage their facilities to meet their obligations. The time invested in education is expected to vary between groups (in descending order of impact per regulated entity): new entrants (including significant expansions and facilities in the resources sector); electricity generators; and existing facilities.

Furthermore, targeted communication with these groups can optimise the education investment regulated entities make. For example, facilities that are ineligible to apply for their baseline using the independent assessment approach can be directed away from investing time in understanding this process. This costing assumes communications material is tailored to facilitate time spent learning about the safeguard and is appropriate to the broad circumstances of the facility.

[13] This estimate is based on emissions data reported under the National Greenhouse and Energy Reporting Scheme by corporations and other legal entities in 2013-14 and includes facilities forecast to exceed the threshold in 2014-15.

The estimated average annual cost incurred by all covered businesses learning about the safeguard mechanism during the first ten years of its operation is $32,332.

Administrative costs are expected to arise when the operators of safeguard facilities undertake the following processes (until 2025-26, in descending order of magnitude):

- applying for a new baseline, including engaging an auditor—estimated average annual cost of $332,416 in aggregate across the scheme;
- applying for recognition of falling emissions intensity—estimated average annual cost of $94,675 in aggregate across the scheme;
- applying for a multi-year monitoring period—estimated average annual cost of $2,474 in aggregate across the scheme; and
- opening an account in the Registry[14]—estimated average annual cost of $0.

Baseline applicants will need to develop a baseline application for their facility and have it audited by a qualified NGER auditor. The cost was calculated as the product of the number of expected baseline applications and the estimated cost per baseline application. The number of baseline applications was calculated from projections of NGER data and based on the number of entities belonging to at least one eligible group. The cost per baseline application is primarily driven by audit costs. The assumptions underpinning the cost estimates for the audit process were developed in consultation with the Regulator and the Australian Audit Standards Board and resulted in an estimate of $13,500 per baseline application.

Facilities with emissions above their baseline (exceedence) that have reduced their emissions intensity are able to apply for recognition. This recognition means the safeguard obligation has been met. Consultation has revealed the majority of facilities with years in likely exceedence are also likely to have reduced their emissions intensity. As with baseline applications, the cost per emissions intensity application is primarily driven by audit costs associated with assurance on the production data used as evidence in support of the application.

The electricity sector is expected to source data to conduct short-term projections on sectoral emissions in order to monitor the likelihood of sectoral baseline breach. While the data required to undertake these projections is freely available on Government websites, electricity generators will probably spend time gathering this data, analyzing it and reporting it to senior management as part of the monitoring exercise. While this monitoring exercise is not necessary in order to comply with the safeguard mechanism, consultation with the sector suggested that most generators were likely to expand internal emissions reporting to include performance against any safeguard sectoral baseline and so it has been included in the estimates of regulatory burden.

3.4 Market impacts

This section describes the likely impact of the safeguard mechanism on competition in covered sectors and on the carbon credit market.

In terms of corporate structure, the safeguard legislation extends the existing NGER Act coverage for the purpose of the safeguard mechanism beyond constitutional corporations to include facilities operated by ‘persons’, such as a governing body or a trust. Extending coverage to persons other than constitutional corporations ensures competitive neutrality between legal structures.

The safeguard mechanism will operate in a light-touch way that supports economic growth and allows businesses to continue normal operations. As proposed the safeguard mechanism is not expected to

[14]The Australian National Registry of Emissions Units. It is assumed that only new businesses (those commencing operations after the repeal of the carbon tax) offsetting their emissions will need to open Registry accounts because those that were subject to the carbon tax are likely to have retained their Registry accounts.

affect prices or distort investment decisions. The recommended emissions management options and the ability to apply for funding under the Emissions Reduction Fund are expected to be adequate for safeguard facilities to meet their obligations without creating a significant need to purchase carbon credits.

3.5 Regulatory burden and cost offset of preferred safeguard mechanism design

Average Annual Compliance Costs (difference from business-as-usual)

Costs ($)	Business	Community Organisations	Individuals	Total Cost
Total by Sector	$487,693	$0	$0	$487,693

Cost offset ($m)	Business	Community Organisations	Individuals	Total by Source
Agency	-$487,693	$	$	-$487,693
Within portfolio	$	$	$	$
Outside portfolio	$	$	$	$
Total by Sector	-$487,693	$	$	-$487,693

Proposal is cost neutral?	no
Proposal is deregulatory?	no
Balance of cost offsets	$0

4 Implementation and evaluation

4.1 Implementation and administration

The policy and administrative functions underpinning the Emissions Reduction Fund, including the safeguard mechanism, are functioning well. These two key functions have been separated to streamline process, ensure transparency and avoid conflicts of role. Clear governance arrangements have ensured decisions made in the administration of the purchasing and crediting elements of the Emissions Reduction Fund are transparent and the decision-makers are accountable to the public. The safeguard mechanism will be implemented within this operational implementation framework.

The Government, through the Minister for the Environment, will continue to be responsible for making the rules that guide the operation of the Emissions Reduction Fund. The Regulator will continue to apply those rules to participants and regulated entities within the Emissions Reduction Fund. For example, the Government will set, through safeguard rules, the methods and administrative processes by which safeguard baselines will be determined. The Regulator will assess baseline applications according to the safeguard rules and be accountable to the Administrative Appeals Tribunal for the decisions it makes on those applications.

4.2 Evaluation

To ensure the safeguard remains effective, efficient and equitable, reviews of the mechanism should be conducted on a periodic basis. While reviews and the implied possibility of policy change create perceptions of regulatory risk within the regulated community, the importance of ensuring key environmental policy, such as the safeguard, is functioning as intended outweighs the advantages of greater policy stability. Stakeholders were generally supportive of the planned evaluation outlined in the consultation paper:

> *Effective, long-term energy and climate change policy and regulatory frameworks will be required to lower Australia's emissions, and the ERF, in concert with the Safeguard Mechanism, is aimed at being part of this solution. Nevertheless, their collective performance must be monitored, and we strongly endorse the Government's position as stated in the Consultation Paper that the mechanism should be reviewed on an ongoing basis to ensure that it remains effective. (BHP Billiton)*

The recommended option is for Government to undertake a review of the safeguard mechanism before the end of 2017-18, covering the following elements:

- the operation of the safeguard mechanism in concert with the purchasing and crediting elements of the Emission Reduction Fund;
- the operation of the safeguard mechanism in the electricity sector with reference to the ongoing application of the Renewable Energy Target;
- the effectiveness of baseline setting processes;
- the transition from independent assessment to an output-based approach for new investments;
- any arrangements for existing facilities to adjust baselines;
- the operation of emissions management options, including the emissions intensity test; and
- the scope and timing of the next review.

The *National Greenhouse and Energy Reporting Act 2007* (the Act) also includes a legislated review of the NGER Act to take place between 30 June 2016 and 31 December 2018. The proposed review of the safeguard is additional to this review. The additional review is necessary given the interaction of the safeguard mechanism with the elements of the Emissions Reduction Fund that fall outside the scope of the Act, specifically the crediting and purchasing arrangements of the Emissions Reduction Fund which are enacted through the *Carbon Credits (Carbon Farming Initiative) Act 2011.*

5 Consultation

The Government has partnered with business and the community to develop the safeguard mechanism. Consultation began in late 2013 and has included formal written submissions processes, technical workshops, face-to-face policy briefings across the country and one-on-one meetings at the request of individual organizations.

While special efforts have been made to consult with the businesses that will be directly affected by the scheme, community organisations, peak bodies, state and territory government agencies and individual citizens have also engaged with the policy development process. Stakeholder views, including proposed policy options possible within the legislative constraints on the safeguard mechanism, have been explored in detail in Chapter 2 of this Regulation Impact Statement.

In summary, three separate, iterative policy papers have been published on the Department's website between December 2013 and May 2015, in response to which almost 400 written submissions were received during the 131 days of cumulative formal consultation. Throughout 2014, the Department convened five separate consultation sessions lasting more than ten hours with representatives from sectors likely to be covered by the safeguard mechanism to inform development of the policy options in the consultation paper (the third formal policy paper released for public consultation). The Department also held industry and community briefings over five business days in early 2015 on the policy options included in this Regulation Impact Statement. Over 120 individuals representing more than 60 entities attended these face-to-face briefing sessions. The Department has also met bilaterally with many diverse organisations to discuss the policy options and costings assumptions included in this Regulation Impact Statement.

5.1 Emissions Reduction Fund terms of reference

The Government invited submissions on the Terms of Reference for the Emissions Reduction Fund. The terms of reference discussed the safeguard mechanism in the broader context of the Government's climate change policy. The consultation period ran over a period of 34 days, from 16 October to 18 November 2013.

Over 290 submissions were received. Unless otherwise requested, the Department has published all of these submissions on its website. Submissions generally recognised the need for the safeguard mechanism, enforced with a final penalty, in the context of the Emissions Reduction Fund and requested further consultation on the mechanism's design.

5.2 Emissions Reduction Fund Green Paper

The Government released a Green Paper on 20 December 2013 outlining design options for the Emissions Reduction Fund. The consultation period ran from 20 December 2013 to 21 February 2014 (64 days) and included a series of face-to-face briefing sessions, attended by over 150 members of the community.

344 written submissions were received, which both addressed the options put forward for the safeguard mechanism in the Green Paper as well as suggesting new options, some of which were included in the White Paper. Unless otherwise requested, the Department has published all of the Green Paper submissions on its website.

5.3 Reference groups

The Government has taken advice from an Expert Reference Group, which was comprised of experts from business, the non-government sector and leading consultants. The Expert Reference Group met twice in 2014 to inform the development of the White Paper.

In 2014, the Government also established a safeguard reference group comprising representatives from a range of sectors likely to be covered by the safeguard mechanism, including the mining, oil and gas, electricity, construction, industrial, transport sectors and relevant industry associations. The safeguard reference group met five times during 2014.

The broad representation of the reference groups provided the Government with insight into the regulatory impacts of the safeguard mechanism across different industries and was influential on the policy positions put forward in the White Paper, released on 24 April 2014. The views of the reference groups have also informed the assumptions underpinning the regulatory impact described in Chapter 3.

5.4 Consultation paper

The Government released a public consultation paper on the safeguard mechanism on 26 March 2015 and guaranteed to consider all written submissions received within the following 33 days. The consultation paper can be considered an early draft of Chapter 2 of this Regulation Impact Statement, with a focus on consulting on Departmental analysis on policy decisions not made in the White Paper.

More than 85 submissions were received and considered in the development of the recommended options presented in Chapter 2. Views were received from a variety of sectors, including the electricity, manufacturing, mining, waste and transport sectors as well as peak bodies, non-government organisations, state government agencies and local councils.

Many submissions explicitly discussed the compliance costs associated with the safeguard mechanism. These views have been incorporated (in italics) into Chapters 2 and 3.

5.5 Targeted policy consultation sessions

The Department conducted a series of face-to-face policy consultation sessions following the release of the consultation paper, to provide briefing, answer questions and receive feedback on the consultation paper.

All NGER reporters likely to be covered by the mechanism, industry groups, peak bodies, state government agencies and self-identified key non government organisations were invited to the sessions.

Over 120 individuals representing more than 60 entities attended face-to-face sessions in Melbourne, Sydney, Brisbane, Perth and Canberra or otherwise participated in teleconferences. Major peak bodies in attendance included the Business Council of Australia, Energy Supply Association of Australia, Minerals Council of Australia, Australian Petroleum Production and Exploration Association, Australian Aluminium Council, Australian Industry Group and the Australian Landfill Owners Association.

The Department also met bilaterally with various industry associations and companies to discuss the consultation paper.

At each meeting, a number of different policy options, many of which had not been raised in the consultation paper, were raised and discussed. The discussion addressed the regulatory impacts of these options.

5.6 Key themes raised during consultation

During initial, targeted consultation on the safeguard mechanism, businesses raised a number of key themes which necessarily focused on the remaining design options that were not previously covered in either the Act or the White Paper. The views raised by stakeholders during initial discussions on these key themes were included in the safeguard mechanism consultation paper. Through further feedback during the formal consultation sessions, options raised in the consultation paper were refined, and have been used to inform the finalisation of the policy design for the safeguard mechanism.

During consultation, potential regulatory burden impacts were raised as part of the discussion around key themes. Through this discussion, stakeholders were able to understand the nature of the proposed regulatory processes, and express views on it. Responses from stakeholders were used to help scope and cost the regulatory burden. Key themes raised during consultation are discussed below.

Coverage

Businesses were interested in:

- how to determine the treatment of legacy waste emissions from landfills, that is, emissions from waste that has already been deposited into landfill.
- how to determine facility boundaries in the transport sector, given that it is a disaggregated and mobile sector of the economy.

Baselines

Businesses discussed whether historical baselines should be adjusted if emissions reporting methods change, including how to deal with changes to NGER emissions estimation methods and changes to global warming potentials. Another key theme discussed, was whether historical baselines are appropriate where emissions variability is outside the ordinary control of an operator, such as where emissions are driven by the extraction of natural resources and reserves. They were also interested in:

- whether baselines should be adjusted if new regulation causes emissions to increase;
- what should be the approach to best practice;
- when is an investment considered to be new;
- how will baselines be set for new investments already underway; and
- how will baselines reflect significant expansions of facilities.

Emissions management: What options should be available to manage annual emissions variability and when emissions go above baselines.

Electricity: Determining coverage for the electricity sector and setting baselines for the electricity sector.

Publication of information: Deciding what information about the operation of the safeguard mechanism should be made available to the public.

5.7 Future consultation

Stakeholders will next be consulted on the draft subordinate legislation (rules and regulation), which will give effect to the implementation options now before the government.

APPENDIX A: Summary of recommendations for remaining design decisions

Coverage

The safeguard mechanism will strike an appropriate balance between covering major emissions sources, and avoiding unnecessary administrative costs on business.

Remaining decision	Recommended Policy Option
How will emissions from landfills be treated?	To cover landfills where emissions from waste deposited after 1 July 2016 exceed 100,000 tonnes of CO2-e a year. Similarly, net emissions to exclude emissions from waste deposited prior to 1 July 2016.

Historical baselines

Emissions baselines will be based on direct (scope 1) emissions using data reported under the NGERS over the historical period 2009-10 to 2013-14. Emissions baselines will be set using the highest level of reported emissions for a facility over the historical period, with adjustments made where practical and necessary.

Remaining decision	Recommended Policy Option
Should historical baselines be adjusted if emissions reporting methods change?	Where a facility has moved to a higher or lower order estimation method, baselines will not be adjusted. Where an official global warming potential changes, the Regulator will adjust baselines with available data. Where a facility was reported in aggregate as a vertically integrated production process in the historical period 2009-10 to 2013-14, the Regulator will determine baselines on a pro-rata basis using disaggregated data reported in 2014-15. Facilities in this situation have the option of additional voluntary reporting to support the Regulator's disaggregated baseline determination. Where a facility boundary has changed, the Regulator will adjust baselines according to the nature of the facility boundary change where practical.
Are historical baselines appropriate where emissions are driven by the extraction of natural resources and reserves?	For businesses whose emissions are driven by variability associated with existing natural resources, businesses can apply to the Regulator for a limited time period to adjust their baseline using the independent assessment approach.

Are historical baselines appropriate where historical emissions do not reflect business-as-usual operations?	To accommodate circumstances where historical baselines are not representative of future business-as-usual emissions performance, baselines can be adjusted if facilities exceed their baseline in the safeguard mechanism's first year.
Should baselines be adjusted if new regulation causes emissions to increase?	The effects of new regulation on emissions and baseline-setting will be addressed on a case-specific basis as new regulatory proposals are developed.

Baselines for new investments and significant expansions

Baselines for new facilities will be set in a way that encourages their operators to achieve and maintain best practice, recognising that there is less scope to alter new investments once a final investment decision has been made.

Remaining decision	
What should be the approach to best practice?	Baselines will be set based on best practice, output-based benchmarks for new investments.
When is an investment considered to be new?	The safeguard mechanism will distinguish between new projects that are already underway—and have little scope to change their design—and entirely new endeavours. Facilities are considered to be 'already underway' if their emissions exceed 100 000 tonnes before 1 July 2020.
How will baselines for new investments already underway be set?	Businesses can apply for a baseline using an independent assessment approach. Where incomplete historical data is available under NGERs, businesses can choose between the independent assessment approach and the historical high point method.

Managing emissions

A range of flexible compliance options will be available to assist operators of safeguard facilities to meet their obligations.

Remaining decision	
Flexible compliance options	Businesses can apply for multi-year monitoring periods and recognition of falling emissions intensity.

Electricity sector

The safeguard mechanism will be applied to the electricity generation sector in a way that complements existing energy market objectives.

Remaining decision	
Sectoral baseline	A sectoral baseline will apply to the grid-connected electricity sector, based on the highest level of reported NGER emissions from the sector. The sectoral baseline will cover the National Electricity Market (NEM), South West Interconnected System (SWIS), North West Interconnected System (NWIS), Darwin-Katherine Interconnected System (D-KIS) and the Mt Isa-Cloncurry Electricity Network. Generators outside these grids will be covered by the general safeguard mechanism rules.
Baselines if sectoral baseline exceeded	In the event that the sectoral baseline is exceeded, individual baselines will apply to grid-connected generators that emit more than 100,000 tonnes CO_2-e each year. Individual baselines will be set as the highest level of reported emissions over the historical period 2009-10 to 2013-14.
Compliance framework	In the event that individual baselines are triggered, the compliance framework that applies to other safeguard participants will also apply to covered electricity generators. This includes the use of offsets; multi-year monitoring; and an exemption for emissions associated with exceptional circumstances.

Publishing safeguard information

To ensure that information about the effectiveness of the safeguard mechanism is available to the public, the Regulator will regularly publish information about its operation

Remaining decision	
Publication of information	

APPENDIX B: Glossary

Act means the *National Greenhouse and Energy Reporting Act 2007.*

ACCU means an Australian Carbon Credit Unit, a greenhouse gas offset unit generated under the *Carbon Farming Initiative Act 2011*.

brownfield, in reference to a site being considered for an industrial development, means a site at which industrial activity already occurs. For example, an existing facility.

baseline means a reference point, expressed in tonnes of CO_2-e, against which future emissions performance will be measured.

CO_2-e means the carbon dioxide equivalent of an amount of greenhouse gas or gases.

compliance deadline means the date at which the duty to keep net emissions below baseline emissions levels is enforced. The compliance deadline for the safeguard mechanism is the 1 March following the end of the monitoring period.

consultation paper means the Emissions Reduction Fund Safeguard Mechanism consultation paper, released in March 2015.

coverage means subject to the safeguard mechanism.

CSIRO means the Commonwealth Scientific and Industrial Research Organisation.

electricity sector means all grid-connected electricity generators.

emissions means greenhouse gas emissions.

emissions management means actions taken by a responsible emitter to reduce their net emissions number.

facility means an activity, or a series of activities, that emits greenhouse gas of energy or the consumes or produces energy and that forms a single undertaking or enterprise.

greenfield, in reference to a site being considered for an industrial development, means a site at which no industrial activity has previously occurred. For example, a vacant block of land.

GWP means the global warming potential of a greenhouse gas.

historical baseline, in reference to a facility covered by the safeguard mechanism, means a baseline set at the high point of covered emissions reported during the historical period.

historical period means financial years 2009-10 to 2013-14.

independent assessment approach is a baseline determination method which uses the forecasted high point of emissions over a defined time period. This forecasted high point is reviewed by a registered NGER auditor.

multi-year averaging means averaging emissions across multiple years.

NGER means the National Greenhouse and Energy Reporting scheme.

operator means the person or organisation with the greatest ability to introduce and implement operational environmental and health and safety policies at a facility.

output or ***product*** means a good or service.

pooling means averaging emissions across a corporate group.

productive capacity (capacity) means the theoretical maximum output volume; the maximum output that a facility could achieve in a scenario of surplus demand.

ramp-up means the initial operating phase at a newly commissioned facility, characterised by relatively low production values.

Regulator means the Clean Energy Regulator.

regulated entity means the operator of a facility covered by the safeguard mechanism. Regulated entities (in the Act – ***responsible emitters***) are responsible for meeting the safeguard obligation which exists in relation to a large NGERs facility.

RET means the Renewable Energy Target, a Commonwealth program administered under the *Renewable Energy (Electricity) Act 2000*.

vertically integrated production process means a group of facilities reported in an aggregated manner under the NGER scheme prior to 2014-15.

White Paper means the Emissions Reduction Fund White Paper, released in April 2014.