REVIEW OF THE NATIONAL GREENHOUSE AND ENERGY REPORTING LEGISLATION

A CONSULTATION PAPER

31 JULY 2018

Published by the Climate Change Authority

www.climatechangeauthority.gov.au

INFORMATION ON HOW TO MAKE A SUBMISSION

CONSULTATION PAPER

The Climate Change Authority has released this consultation paper to assist individuals and organisations to prepare submissions to inform the Authority's review of the National Greenhouse and Energy Reporting legislation. It outlines:

- the scope of the work
- matters on which the Authority is seeking comment and information
- how to make a submission.

This consultation paper identifies matters the Authority considers most pertinent to this work. Comments on any other relevant issues are also welcome.

Key dates

Issues paper released
31 July 2018 ❯ **Submissions close**
11 September 2018 ❯ **Final Report**
December 2018

Submissions can be lodged

via email to: submissions@climatechangeauthority.gov.au
via post to: Submissions, Climate Change Authority, GPO Box 787, Canberra ACT 2600

Please use the coversheet for submissions available on the Authority's website at: www.climatechangeauthority.gov.au/consultations.

Submissions made in confidence will not be published on the Authority's website.

Contacts

For further information about this work or making a submission, contact the Climate Change Authority on 1800 475 869 or via email at enquiries@climatechangeauthority.gov.au.

Website

www.climatechangeauthority.gov.au

CONTENTS

FIGURES

TABLES

CHAIR'S FOREWORD

The Climate Change Authority is pleased to release this paper as a basis for consultation on its review of the operation of the National Greenhouse and Energy Reporting legislation.

Under the legislation, companies measure and report their greenhouse gas emissions and energy production and use. It is a far-reaching scheme covering around 800 companies and 60 per cent of Australia's emissions.

The legislation also underpins the safeguard mechanism, which places limits on emissions from facilities and provides a framework for companies to measure, report and manage their emissions. The safeguard aims to ensure emission reductions purchased through the Emissions Reduction Fund are not offset by significant increases in emissions elsewhere in the economy.

As well as covering emissions and energy reporting and the safeguard, the legislation establishes the greenhouse and energy auditing framework. This is an important part of the compliance regime applying to audits under the reporting scheme, the safeguard, and other climate change policies such as the Emissions Reduction Fund and the Renewable Energy Target.

The review will consider whether each of these aspects of the legislation is achieving its objectives, is fit for purpose, and if any improvements are needed. It is timely to review the reporting scheme given it is now a decade old. By contrast, the safeguard has only been in place for a couple of years.

The Authority is particularly interested in whether the old adage of 'you can't manage what you don't measure' has held true and if the reporting scheme has led to improvements in the way emissions and energy are being managed throughout the Australian economy.

The Authority encourages organisations and individuals with an interest in the legislation to make a submission on this review by 11 September 2018. Your contributions are valued greatly by the Authority and will inform the Authority's final review report on the legislation, which is due by 31 December 2018.

Dr Wendy Craik AM
Chair, Climate Change Authority
31 July 2018

CHAPTER 1. BACKGROUND AND OVERVIEW

1.1 ABOUT THE REVIEW

The Climate Change Authority is an independent statutory agency, which provides expert advice to the Government on climate change policy. The Authority is required to review the operation of the National Greenhouse and Energy Reporting legislation by 31 December 2018 and then complete further reviews every five years.

The legislation has three key elements. It:

- requires companies over certain thresholds to measure and report their greenhouse gas emissions as well as their energy production and use to the Australian Government
- underpins the safeguard mechanism, which places emissions limits on large facilities and provides a framework for them to measure, report and manage their emissions
- establishes the greenhouse and energy auditing framework applying to audits required under the reporting scheme, the safeguard and other climate change policies such as the Emissions Reduction Fund and the Renewable Energy Target.

This review will focus on these aspects of the legislation with a view to determining whether each of the individual elements is achieving its objectives, is fit for purpose and if any improvements are needed.

The Authority will assess the National Greenhouse and Energy Reporting legislation with reference to the principles in its own legislation: economic efficiency, environmental effectiveness, equity, public interest, supporting the development of an effective global response to climate change, consistency with Australia's foreign policy and trade objectives, and taking into account the impact on households, businesses, workers and communities (Appendix A).

1.2 SUBMISSIONS ON THE REVIEW

The Authority invites submissions from organisations and individuals on all issues relevant to the scope of this review. Those interested in making a submission should not feel constrained by the issues or questions in this paper.

Submissions can be emailed to submissions@climatechangeauthority.gov.au until 11 September 2018. A coversheet for submissions can be found on the Authority's website at: www.climatechangeauthority.gov.au/consultations.

The Authority will also talk to stakeholders to complement the written submissions.

The Authority notes some issues relevant to this review were canvassed in submissions on other processes, including the Government's consultation on the safeguard baseline settings in 2018 and the Government's review of climate change policies in 2017. The Authority will consider public submissions made to those processes for the purposes of this review.

1.3 THE REPORTING SCHEME

The objects of the reporting scheme are to establish a single national reporting framework for emissions and energy information to inform policy making and the Australian public, meet Australia's international reporting obligations, assist government programs and activities and avoid the duplication of similar reporting to the states and territories.

The legislation establishes rules for:

- who is required to register and report their greenhouse gas emissions and energy production and use
- what they must report and how to measure them
- publishing the data.

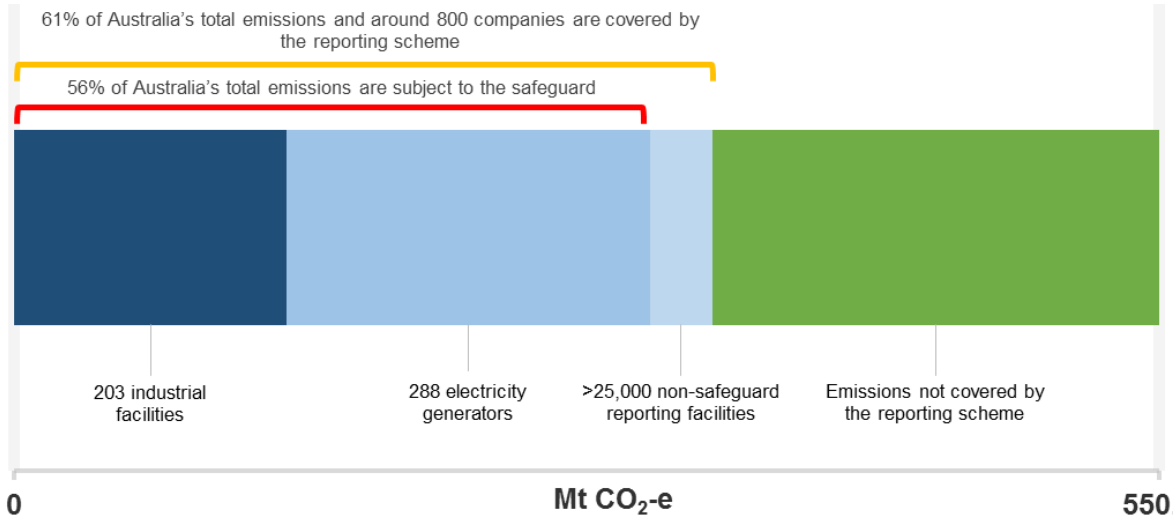
The reporting scheme was introduced in 2007 (with reporting from 1 July 2008) to replace a range of industry surveys and government programs with greenhouse gas emissions or energy reporting requirements. It now supports the reporting required by the safeguard mechanism.

1.4 THE SAFEGUARD MECHANISM

The safeguard mechanism commenced on 1 July 2016. It places limits (called baselines) on facilities that emit more than 100,000 tonnes of carbon dioxide equivalent (t CO_2-e) a year. Companies with safeguard obligations are known as responsible emitters.

In 2016-17, the safeguard covered 203 facilities in the industrial sectors of mining, oil and gas, manufacturing, transport and off-grid electricity. A sectoral limit applied to 288 grid-connected electricity generators (Section 3.3.2). Together, these facilities accounted for 56 per cent of Australia's emissions. Figure 1 illustrates the proportion of Australia's emissions subject to the reporting scheme and the safeguard.

FIGURE 1: PROPORTION OF AUSTRALIA'S TOTAL EMISSIONS SUBJECT TO THE REPORTING SCHEME AND SAFEGUARD IN 2016-17



Note: Although data is reported for over 25,000 facilities under the reporting scheme, the majority of these are subject to simplified reporting. For example, a company can report all the emissions and energy data for small facilities within a state or territory (e.g. a number of supermarkets) as a facility aggregate.

Source: DoEE 2017c; CER 2017a; CER 2018b; CER 2018g; CER 2018j.

Facilities covered by the safeguard must keep their emissions at or below a limit set by the Clean Energy Regulator, which administers the scheme. Facilities which exceed their baseline can meet their safeguard obligations through a range of mechanisms such as using Australian Carbon Credit Units as offsets or applying for a multi-year monitoring period (which in effect allows them to average their emissions over several years).

1.5 GREENHOUSE AND ENERGY AUDITING

The legislation underpins the administrative arrangements and requirements for greenhouse gas emissions and energy audits and auditors. Entities required to report their greenhouse gas emissions and energy production and use are encouraged to engage a registered auditor to confirm they comply with the scheme. Safeguard facilities also use auditors in some circumstances. The Regulator uses greenhouse and energy audits as part of their compliance regime under the reporting scheme, safeguard and other climate change policies such as the Emissions Reduction Fund and the Renewable Energy Target.

1.6 POLICY AND ADMINISTRATION

The Department of the Environment and Energy is responsible for policy development for the reporting scheme, the safeguard and greenhouse and energy auditing. This includes updating and improving measurement methods used for greenhouse gas emissions, energy and safeguard reporting.

The Regulator administers the reporting scheme, the safeguard and the auditing framework. This includes registering reporters in the National Greenhouse and Energy Register; receiving reports and publishing data; registering responsible emitters under the safeguard; setting safeguard baselines; and registering auditors. The Regulator is also responsible for monitoring and enforcing compliance with the legislation and pursuing breaches if they occur.

CHAPTER 2. THE NATIONAL GREENHOUSE AND ENERGY REPORTING SCHEME

The legislation establishes rules for:

- who is required to register and report their greenhouse gas emissions and energy production and use (reporters)
- what they must report and how to measure them
- publishing the data (Chapter 4).

2.1 WHO IS REQUIRED TO REPORT UNDER THE LEGISLATION?

Companies have to report emissions and energy data if they, or facilities they control, meet certain thresholds. There are separate thresholds for individual facilities and corporate groups (Table 1).

TABLE 1: CORPORATE GROUP AND FACILITY THRESHOLDS

	Scope 1 and 2 emissions combined (Kt CO_2-e a year)	Energy production (TJ a year)	Energy use (TJ a year)
Corporate group threshold	50	200	200
Facility threshold	25	100	100

Note: To provide companies time to transition into the reporting scheme, the corporate group thresholds were gradually reduced from 125 kt CO_2-e and 500 TJ in 2008-09 to current threshold levels in 2010-11.

Source: CER 2018o.

As a reference point, a corporate group with around 25 large supermarkets would likely meet the energy consumption threshold. A wind farm consisting of five large wind turbines would likely meet the energy production threshold for a facility.

The reporting obligation applies at the facility level. Facilities are defined as an activity or series of activities that generate greenhouse gas emissions or produce or use energy and form a single enterprise. Examples of facilities include factories, electricity generators, manufacturing plants, landfill and construction sites, and retail outlets. Activities that constitute a single facility may not be on the same physical site, for example, if they make up a single supply chain.

Reporters are generally the companies (at the head of the corporate group) that have operational control over one or more facilities that meet the threshold. Operational control refers to the ability to introduce and implement operating, health and safety or environmental policies at a facility.

If the corporate group threshold is met, data on all facilities (even if they individually do not meet the facility threshold) must be reported.

If the facility threshold is met but the corporate group threshold is not, only facilities that meet the threshold need to be reported.

Companies must register with the Regulator by 31 August following the financial year in which they first meet a reporting threshold. For example, if a company exceeded a threshold for the first time in 2017-18, they must register by 31 August 2018 (CER 2016a).

A company can apply to be de-registered if they expect to be below the threshold for three years in a row. In certain circumstances, a company can transfer responsibility for reporting to another person, who must also register.

The Authority is interested in whether the types and size of entities required to report effectively balance the Government and public interest in capturing Australia's emissions and energy data with the cost and any other impacts on companies.

2.2 GREENHOUSE GAS EMISSIONS

2.2.1 TYPES OF EMISSIONS

Companies are required to report their emissions of carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, and certain hydrofluorocarbons and perfluorocarbons. This broadly aligns with the gases currently covered under the Kyoto Protocol of the United Nations Framework Convention on Climate Change (UNFCCC) and those reported in Australia's greenhouse gas inventory.

Companies must report their direct (or scope 1) emissions released as a direct result of an activity at their facility. For example, releasing emissions by burning fossil fuels to produce energy, or releasing emissions in industrial processes. They must also report indirect (or scope 2) emissions from the use of electricity generated offsite. For example, a large retailer using electricity from the grid for lighting, heating or cooling must report the associated emissions (Figure 2).

FIGURE 2: SCOPE 1 AND 2 EMISSIONS

Scope 1

Emissions released as a **direct** result of an activity

EXAMPLES OF SCOPE 1 EMISSIONS

Emissions from:

- the production of electricity by burning coal
- burning natural gas to heat up a hardware store
- manufacturing processes such as cement
- the burning of diesel fuel in trucks
- coal mining
- smelting aluminium.

Scope 2

Indirect emissions are associated with the use of electricity at a facility

EXAMPLES OF SCOPE 2 EMISSIONS

Emissions from electricity generated offsite and used by:

- a large retailer for lighting, heating or cooling
- an aluminium smelter
- a cement producer to grind raw materials.

Reporting scope 2 emissions introduces some duplication where emissions from electricity production are already covered by scope 1 reporting obligations on electricity generators.

However, it is important for decision makers to know who the large energy users are and what amount of emissions from energy they are responsible for. For example, aluminium production accounts for about 20 per cent of all scope 2 emissions reported under the scheme but only about five per cent of scope 1 emissions (CER 2017a). Just relying on scope 1 emissions for aluminium could be seen as unrepresentative of the sector's contribution to Australia's emissions profile.

2.2.2 EMISSIONS SOURCES

The reporting scheme covers emissions from electricity generation and use; fuel combustion; industrial processes; waste disposal; and fugitive emissions resulting from mining, and oil and gas production and distribution.

Companies are not required to report on emissions from the Agriculture or Land Use, Land-Use Change and Forestry (LULUCF) inventory sectors (e.g. methane from livestock or carbon emissions and sequestration from land management). However, land and agriculture businesses may be required to report their scope 1 and scope 2 emissions and energy use if they meet the reporting thresholds.

The Authority is interested in stakeholders' views on whether agricultural emissions should be reported under the scheme, noting most farms would be below the reporting threshold.

Emissions from soil or vegetation resulting from land management are not included in the reporting scheme because Australia already has in place a national system providing detailed data on LULUCF emissions (Explanatory Memorandum, National Greenhouse and Energy Reporting Act 2007 (Cth)). The Authority is interested in stakeholders' views on whether LULUCF emissions and carbon stored should be reported.

2.3 ENERGY PRODUCTION AND USE

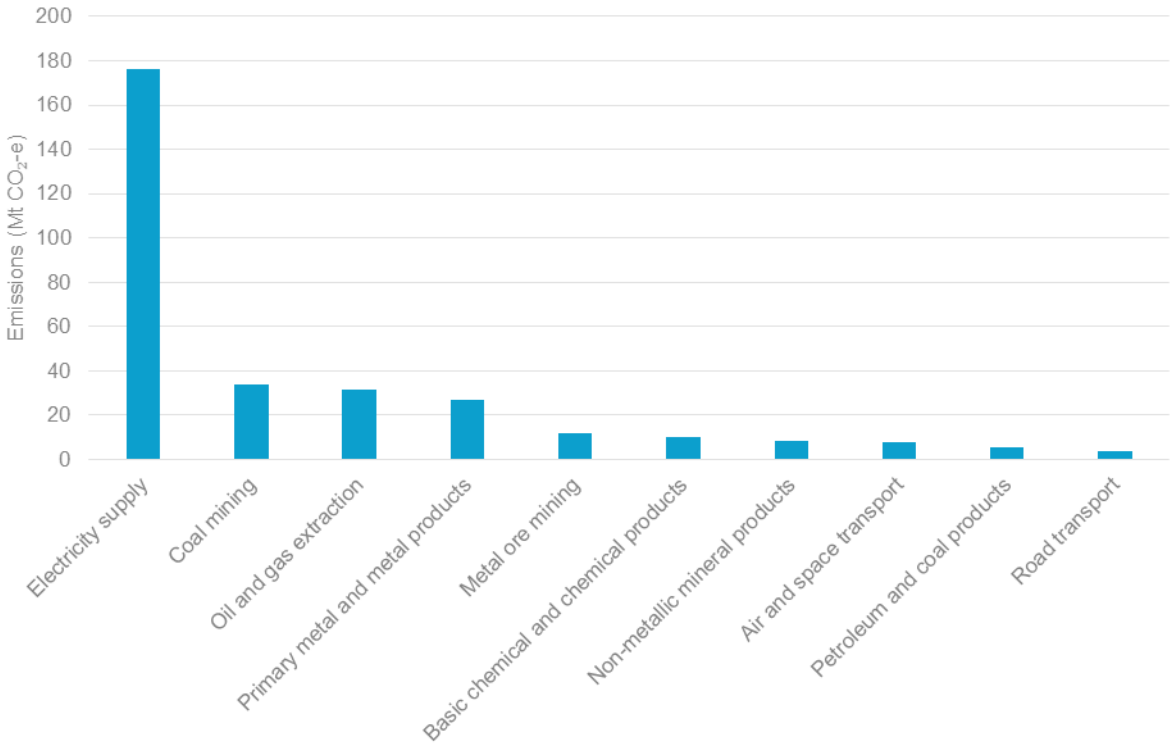
Energy production and use covered under the reporting scheme includes the production and use of various fuels and energy commodities including coal, petroleum, gas and biofuel. It also includes sources of energy for electricity generation such as wind and solar. For example, if a coal-fired power plant uses coal to produce electricity, it must report the coal used as energy use and the electricity generated as energy production.

2.4 INDUSTRY COVERAGE

Around 800 companies representing more than 25,000 facilities reported under the scheme in 2016-17 (CER 2017a; CER 2018j). The number of facilities reporting from each sector varies significantly, including because of differences in activities, emissions, production facilities and business models across sectors. Sectors such as road transport, property operators and real estate and food product manufacturing have large numbers of facilities covered by the reporting scheme. Other sectors, such as coal mining, have fewer individual facilities.

Over 60 per cent (or 336 million tonnes of carbon dioxide equivalent (Mt CO_2-e)) of Australia's emissions were reported under the scheme in 2016-17. Almost 80 per cent (or 268 Mt CO_2-e) of the emissions reported come from the 100 highest emitting facilities (CER 2017a). The electricity supply sector makes up the majority of emissions reported representing over half of all emissions reported (Figure 3) (CER 2017a).

FIGURE 3: TOP TEN INDUSTRY SECTORS BY SCOPE 1 EMISSIONS FOR 2016-17



Source: CER 2017a.

2.5 MEASURING EMISSIONS AND ENERGY

The National Greenhouse and Energy Reporting measurement determination details how companies must measure their emissions and energy data. The emissions measurement methods used in the determination are based on those used for the national inventory. The determination is aligned with international rules for measuring and reporting emissions and energy so that the data helps Australia meet its international reporting obligations, for example to the UNFCCC.

The Department of the Environment and Energy seeks to update the measurement determination each year to keep it in line with the national emissions inventory. The Department consults with companies and others before updating the determination. The Department also releases technical guidelines each year to assist companies to understand and apply the determination (CER n.d.a).

Reporting entities must use the most recent version of the measurement determination to measure and report their emissions and energy information.

The Authority welcomes stakeholders' views on the annual process for updating the measurement determination.

2.5.1 ENERGY

The measurement determination provides guidance on how to measure the amount of an energy commodity a facility produces or uses (e.g. the quantity of coal or electricity) and the energy content of that commodity. All forms of energy production and use reported under the scheme are converted to a comparable physical metric (e.g. gigajoules of energy).

2.5.2 EMISSIONS

The measurement determination lists principles that guide how reporting entities should measure their emissions: transparency, comparability, accuracy and completeness. Reporters must also assess the level of uncertainty that applies to their measurement of scope 1 emissions when they exceed specified thresholds. However, most reporting entities are provided with some flexibility in how they can measure their emissions. For emissions sources, there are up to four tiers of methods that entities can choose from.

Method 1 is generally the most straightforward and is based on national average estimates of emissions. Methods 2 and 3 use facility specific emissions factors and allow for more accurate emissions measurement. Method 4 focuses on measuring emissions directly.

This approach broadly aligns with international guidance on emissions measurement, which recognises the sophistication of emissions measurement approaches needed to reflect the differences in industries, sectors and the gases being measured (IPCC 2006).

Once an entity chooses a higher order tier (method 2, 3 or 4), it generally cannot swap to a lower tier method for four years to prevent gaming (Explanatory Statement, National Greenhouse and Energy Reporting (Measurement) Determination 2008 (Cth)).

There are various reasons a reporter might choose a different method tier among the options available, including the administrative cost of using a more or less complex method, the accuracy of the results, and the measurement and data collection practices they already have in place for other purposes.

The Authority would like to hear stakeholders' views on whether the methods available for measuring emissions are fit for purpose and meet the needs of reporters and those who use the data.

2.6 HOW AND WHEN COMPANIES REPORT

Companies must submit their reports by 31 October for the preceding financial year. For example, if a company exceeds a threshold in the 2017-18 financial year it must report by 31 October 2018. Reporting entities are encouraged to audit their reports but this is not compulsory (Section 5.1).

Scheme participants must keep records of their activities for five years. This includes detail about the emission sources monitored, methods used for emissions measurement and justification for methods chosen (CER 2018e).

Companies report electronically using the Emissions and Energy Reporting System, which is administered by the Clean Energy Regulator (CER 2016b).

There may be companies which are below the reporting thresholds and would like to report their emissions and energy data on a voluntary basis, for example to meet their corporate social responsibility objectives.

The Authority is interested in feedback from stakeholders about:

- The frequency and timing of when registration and reporting obligations fall due and whether these requirements are fit for purpose.

- Experiences using the reporting tool and if it is easy to use, fit for purpose, comprehensive and representative.
- If companies would like to report voluntarily using the Emissions and Energy Reporting System and if that data would be useful for providing information to companies, governments, investors, consumers and others about the emissions and energy activities of a broader set of companies.

2.7 STREAMLINING EMISSIONS AND ENERGY REPORTING

One of the objectives of the legislation is to have a single national framework for reporting and disseminating emissions and energy information (NGER Act s 3.1). The Authority is interested in exploring the extent to which this objective has been realised and how the scheme might be used to service a range of existing and future data and reporting needs.

Companies are required to report on other gases or particulate matter (such as carbon monoxide, nitrogen oxides and sulphur dioxide) through the National Pollutant Inventory, which covers 93 substances that can affect human health, or air and water quality (DoEE n.d.b). Some of these substances are greenhouse gas precursors or aerosols that affect climate and are required to be reported under the UNFCCC.

Companies may also report emissions and energy data under other state-based, local or voluntary initiatives. For example, many states have energy efficiency programs under which companies may need to report energy use. Some companies may also participate in voluntary environmental or carbon neutral accreditation schemes that require emissions and energy reporting.

In addition, there is increasing interest in companies reporting on climate-related financial risks. Climate-related risks can include consideration of climate change impacts on corporate assets and operations; the potential impact of future emissions reduction policies and technological change on companies' future viability; and the potential for reduced demand for emissions intensive goods and services.

In 2017, the international Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) published high level recommendations around how companies should report on climate risks (TCFD 2017).

The Australian Prudential Regulation Authority (APRA) has recognised climate change imposes 'foreseeable, material and actionable' financial risks on Australian companies (Summerhayes 2017) and is engaging with companies on how they approach, measure and manage these climate-related risks. The Australian Securities and Investment Commission is also working with APRA, the Reserve Bank of Australia and Treasury to help ensure a coordinated response to climate risk and its impact on Australia's financial system and markets (Price 2018).

In May 2018, the Australian Securities Exchange (ASX) released draft amendments to the ASX Corporate Governance Principles and Recommendations encouraging listed entities that have material exposure to climate-related risks to consider implementing the TCFD's recommendations.

The Authority is interested in stakeholders' views on:

- Whether any voluntary or mandatory schemes that use emissions and energy data could be streamlined into the reporting scheme to lower costs. This could include incorporating additional gases, emission sources or types of entities that report into the framework.
- How the reporting scheme can support climate-related risk disclosure.

2.8 DOES REPORTING HELP COMPANIES MANAGE THEIR EMISSIONS AND ENERGY?

Reporting under the scheme has now been in place for a decade, enough time to consider whether it has been effective in encouraging companies to measure and manage their emissions and energy use. If companies have reduced energy use and emissions in response to the reporting scheme, the Authority would like to hear about how they have done so.

2.9 INTERNATIONAL EMISSIONS AND ENERGY REPORTING SCHEMES

There are a number of international examples of mandatory emissions or energy reporting schemes. These include programs in the United States, European Union, Canada, Japan, New Zealand and South Korea. These schemes differ in terms of the emissions and size of facilities they cover and the information that is published.

The Authority is interested in hearing from stakeholders about lessons from similar schemes operating in other countries that could be applied to Australia's emissions and energy reporting scheme.

CONSULTATION QUESTIONS: CHAPTER 2

Q. 1 Do the National Greenhouse and Energy Reporting scheme reporting thresholds balance coverage with administrative costs? Should thresholds be increased, decreased or kept as is?

Q. 2 Should the scope of reporting under the National Greenhouse and Energy Reporting scheme be expanded or reduced e.g. to include or exclude certain greenhouse gases, emissions sources, inventory sectors or types of entities who report?

Q. 3 Do you have any feedback on the annual policy and consultation process to update the measurement determination?

Q. 4 Are the methods for reporting emissions and energy in the measurement determination fit for purpose?

Q. 5 Does the frequency and timing for reporting cause any particular issues for companies?

Q. 6 Is the Emissions and Energy Reporting System tool easy to use and fit for purpose?

Q. 7 Are there emissions and energy data that companies would like to report through the Emissions and Energy Reporting System but are currently unable to? Would the development of a voluntary tool be useful for this information?

Q. 8 Are there opportunities to streamline emissions and energy reporting obligations under the National Greenhouse and Energy Reporting scheme and other programs?

Q. 9 How does the National Greenhouse and Energy Reporting scheme contribute to providing useful information for climate-related risk disclosure or other data users and are any enhancements to the reporting scheme desirable?

Q. 10 Is reporting of emissions and energy data meeting the needs of data users and inducing change in business operations? If so, how?

Q. 11 Are there learnings from international emissions and energy reporting schemes that could be applied in Australia?

CHAPTER 3. SAFEGUARD MECHANISM

Under the National Greenhouse and Energy Reporting legislation, the objective of the safeguard mechanism is to ensure facilities covered by it do not exceed their greenhouse gas emissions limits (known as baselines). The safeguard provides a framework for Australia's companies to measure, report and manage their emissions. It aims to ensure emissions reductions purchased under the Emissions Reduction Fund are not offset by significant increases in emissions above business as usual levels elsewhere in the economy. The safeguard was designed to allow businesses to continue normal operations while at the same time providing an incentive to keep their emissions below their baseline.

The safeguard commenced on 1 July 2016.

The Authority is interested in hearing stakeholders' views on whether the safeguard is meeting its objectives and if it is fit for purpose.

3.1 THE SAFEGUARD EMISSIONS THRESHOLD

The safeguard applies to facilities that have direct (or scope 1) emissions of more than 100,000 tonnes of carbon dioxide equivalent (t CO_2-e) a year. In 2016-17, the safeguard covered 203 facilities in the industrial sectors of mining, oil and gas, manufacturing, transport and off-grid electricity. A sectoral limit applied to 288 grid-connected electricity generators.[1] Together, they accounted for 56 per cent of Australia's emissions.

The emissions threshold was set to cover a large proportion of Australia's emissions while only affecting a relatively small number of Australian facilities (Commonwealth of Australia 2014). Increasing the emissions threshold above 100,000 tonnes would reduce the number of facilities covered by the safeguard and the associated obligations of complying with it. However, it would also mean that fewer facilities would need to keep their emissions below a baseline. On the other hand, reducing the emissions threshold (from say 100,000 tonnes to 50,000 tonnes) would mean more facilities and more of Australia's emissions are covered by the safeguard. This would also increase the number of companies subject to safeguard compliance obligations.

The Authority would like to hear from stakeholders as to whether the current threshold is set at a level that makes an efficient trade-off between emissions coverage and obligations on businesses.

3.2 TYPES OF EMISSIONS COVERED

In general, the emissions covered by the safeguard are the direct (or scope 1) emissions included in the National Greenhouse and Energy Reporting measurement determination

[1] Grid-connected electricity generators would only be subject to individual safeguard emissions limits if the sectoral baseline is breached. The sectoral baseline has not been breached since the safeguard was implemented. If the sectoral baseline is breached, those grid-connected electricity generators with emissions above 100,000 t CO_2-e would be subject to individual baselines. 58 of the 288 grid-connected electricity generators had emissions above 100,000 t CO_2-e in 2016-17. For a further explanation of the treatment of grid-connected electricity generators under the safeguard see Section 3.3.2.

(Section 2.5). Chapter 2 asked stakeholders whether any changes should be made to the scope of the reporting scheme.

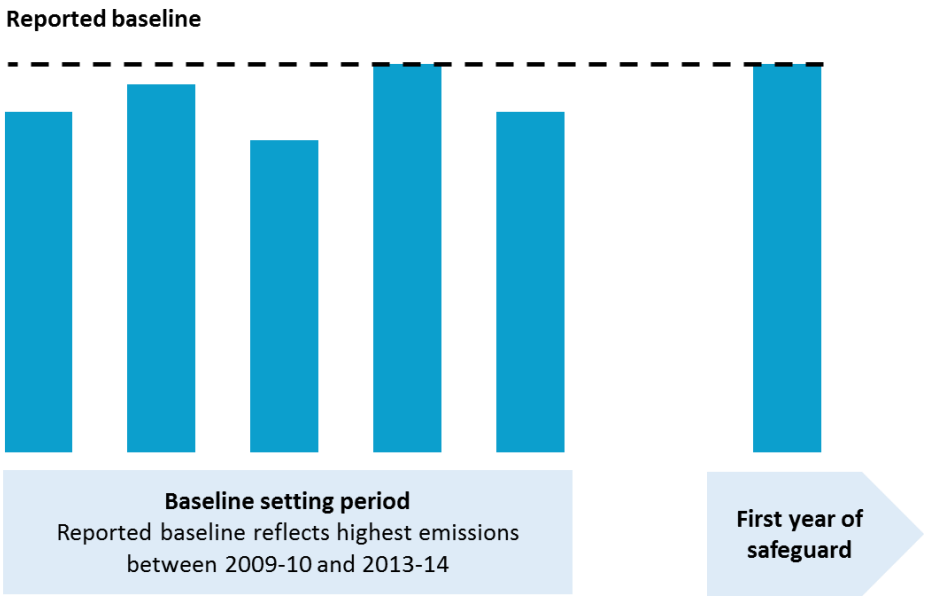
The Authority is interested in hearing from stakeholders if any changes should be made to the safeguard as a consequence.

3.3 SAFEGUARD BASELINES

Emissions baselines are determined by the Clean Energy Regulator based on the options in Table 2. In 2016-17, 357[2] facilities had baselines (CER 2018p).

Most facilities have 'reported' baselines that are set at the high-point of their historical emissions under the reporting scheme for the period from 2009-10 to 2013-14 (Figure 4 and Table 2).

FIGURE 4: SETTING A REPORTED BASELINE



The Government also allowed for a number of other approaches for setting baselines because some companies did not have historical data or because the historical data was not seen as a good indicator of the future emissions profile of particular sectors or businesses.

Some baselines rely on concepts of emissions intensity (emissions per unit of production). Some of these baselines are calculated by multiplying forecast or actual production by emissions intensity.

[2] There are fewer facilities with baselines (357) than there are safeguard facilities in total (491). One of the reasons for this is that electricity generators that are part of the sectoral baseline do not have individual baselines if they have emissions below the 100,000 t CO_2-e safeguard threshold. There are also some facilities that have baselines (as they previously exceeded the 100,000 t CO_2-e threshold) but are no longer safeguard facilities because they now emit below the safeguard level.

TABLE 2: SAFEGUARD BASELINES

Baseline type	Based on	Applies to	Available from	Number of facilities with baselines
Reported	High point of emissions between 2009-10 and 2013-14.	Existing facilities where historical emissions are reported under the reporting scheme and are likely to be a reasonable indicator of future emissions. This is the most common baseline type.	1 July 2016	281
Calculated	High point of **forecast** production over next three years multiplied by **forecast** emissions intensity (emissions per unit of production).	Facilities where historical emissions are viewed as a poor predictor of future emissions such as new or significantly expanded facilities, or mining or natural gas operations (where emissions intensity is affected by the particular seam of the resource being extracted). Companies who exceeded their baseline in 2016-17 could also apply for a calculated baseline as a one off change.	1 July 2016 for generally three years	75
Benchmark (best-practice baseline for new facilities)	High point of **forecast** production over next three years multiplied by **best-practice** emissions intensity benchmark.	New or significantly expanded facilities from 2020. The use of a best-practice benchmark aims to encourage new facilities to achieve and maintain best practice. The approach to best practice still needs to be developed. Not currently in operation.	1 July 2020 for generally three years	Not yet available
Production-adjusted	High point of **actual** production in previous three years multiplied by emissions intensity in previous baseline (either benchmark or previously forecast emissions intensity).	Facilities who had a calculated or benchmark emissions baseline will move to production-adjusted baselines after three or five years (for large facilities) to align benchmarks with historical rather than forecast production. The original emissions intensity will be retained, which removes the incentive for facilities to increase their emissions intensity in order to increase their baseline.	1 July 2019	Not yet available
Default	Baseline is the same as the threshold (i.e. facilities can emit up to 100,000 tonnes before being required to reduce emissions).	Facilities who have no other baseline.	1 July 2016	1

Source: CER 2018d; CER 2018p.

3.3.1 VARYING A BASELINE

As discussed in Chapter 2, the National Greenhouse and Energy Reporting measurement determination is updated annually to reflect improvements in methods for measuring emissions. These updates could affect a facility's reported emissions and therefore their obligations under the safeguard. Safeguard reporters can seek a baseline variation if global warming potentials[3] are updated (CER 2018p).

The Authority is interested in stakeholders' views as to whether this provision should be extended to other changes in emissions measurement methods.

3.3.2 GRID-CONNECTED ELECTRICITY GENERATORS' SECTORAL BASELINE

In addition to the baseline options outlined in Table 2, there is a separate baseline arrangement for the grid-connected electricity generation sector. Their baseline is set at the sector's emissions in 2009-10, which was the high point of Australia's electricity emissions. These electricity generators have a sectoral baseline because at the time the safeguard was being designed, the Government took the view the sector behaves more like a single entity, where electricity output is centrally coordinated to meet demand in real time (DoEE 2015). This means if one power station temporarily reduced production, then other generators would increase output to make up for the shortfall.

If the sectoral baseline is reached, then individual generators will be subject to individual baselines set on the basis of the high point of a generator's emissions between 2009-10 and 2013-14.

The electricity generation sector will be subject to an emissions requirement under the proposed National Energy Guarantee (Section 3.6.3).

3.3.3 BASELINES FOR NATIONAL TRANSPORT FACILITIES

The reporting framework allocates emissions to transport facilities based on the state within which the fuel used is purchased. Facilities that operate a similar type of transport in different states or territories can nominate to report their emissions as a single national transport facility to give greater flexibility for managing emissions.

The baseline for the national transport facility is determined by aggregating together the baselines of the state-based facilities. If emissions increase at some of the state-based facilities, so long as there is a corresponding decrease in the other states, the national facility may not exceed its baseline. As a result, a single national baseline allows for smoothing of emissions across a company's operations. Once facilities choose to report on a national basis, this decision cannot be reversed. Virgin Australia, Qantas Airways, Toll Group and Pacific National have chosen to report their emissions as single national transport facilities (CER 2018p).

Given the nature of transport facilities that operate across states, if transport facilities were unable to report at the national level, they would potentially make refuelling decisions to keep

[3] The Regulator may amend baselines to account for updates to global warming potentials (GWPs) specified in the *National Greenhouse and Energy Reporting Regulations 2008* (Cth) (section 56 of the Safeguard Rule). GWPs convert different greenhouse gas emissions into a single carbon dioxide equivalent metric (CO_2-e) that would produce the same warming effect as CO_2 over a 100 year period. GWPs may be updated from time to time as the science improves based on the findings of the Intergovernmental Panel on Climate Change.

below their state-based safeguard limits and this could lead to perverse outcomes such as increased refuelling and transport costs.

The Authority is interested in hearing from stakeholders about how the single reporting rule for transport is working.

3.4 REPORTING UNDER THE SAFEGUARD MECHANISM

All facilities currently covered by the safeguard already report under the reporting scheme so no additional reporting for the safeguard is required. The safeguard does, however, cover broader types of organisations (if they meet the safeguard threshold) than those with obligations under the reporting scheme. For example, many local councils that operate landfills do not have reporting obligations (as they do not meet the definition of a controlling corporation) but may have safeguard obligations in the future if their emissions exceed 100,000 t CO_2-e a year.

The safeguard reporting year runs from 1 July until 30 June of the next year and reports are due by 31 October in that year.

3.5 MANAGING EMISSIONS: ALTERNATIVE COMPLIANCE OPTIONS

A facility operator has until 1 March after the end of the previous financial year to bring its net emissions to a level at or below its baseline. Facility operators have a number of options for managing their emissions to comply with the safeguard. These are outlined below.

3.5.1 EMISSIONS INTENSITY BASELINE VARIATION

A facility operator can apply to have its baseline temporarily increased in any year where its baseline is exceeded and at the same time the facility improves its emissions intensity. This is intended to create an incentive for facilities to continually lower their emissions intensity (CER 2018c). In 2016-17, two facilities applied for and were granted an emissions intensity baseline variation (CER 2018a).

3.5.2 MULTI-YEAR MONITORING PERIOD

To accommodate year to year variability in emissions, facility operators can apply for a multi-year monitoring period. Under multi-year monitoring, a facility may exceed its baseline in one year, as long as average annual net emissions over the multi-year period are below the baseline (CER 2018i). This has the effect of smoothing net emissions over the monitoring period, adding flexibility.

The maximum multi-year monitoring period is three years. However, there is no limit to further multi-year periods being granted after the first expires.[4] In 2016-17, six facilities were granted a multi-year monitoring period (CER 2018a).

3.5.3 EXCEPTIONAL CIRCUMSTANCE EXEMPTION

An exemption to safeguard obligations may be granted in exceptional circumstances where excess emissions are a direct result of a natural disaster or criminal activity, for example bushfire or fraud (CER 2018h).

[4] The facility has to acquit the first multi-year monitoring period before commencing a further multi-year monitoring period.

The Regulator has stated it will consider whether reasonable steps were taken to mitigate the risk of excess emissions arising from the exceptional circumstances, both before and after its occurrence. To date, no facility operators have applied for an exemption declaration.

3.5.4 PURCHASING AUSTRALIAN CARBON CREDIT UNITS TO REDUCE NET EMISSIONS

Companies may use Australian Carbon Credit Units (ACCUs) to offset their emissions and reduce their net emissions below their baselines. Currently, ACCUs are the only offset credits eligible under the safeguard.

In 2016-17, 16 facilities surrendered nearly 450,000 ACCUs for compliance with the safeguard (CER 2018a).

3.5.5 PARTICIPATING IN THE EMISSIONS REDUCTION FUND TO GENERATE AUSTRALIAN CARBON CREDIT UNITS

A safeguard entity can undertake an Emissions Reduction Fund project at its facility and generate ACCUs. These ACCUs can be sold to the Government under an Emissions Reduction Fund contract while at the same time reducing the net emissions of the facility under the safeguard through 'deemed surrender'. In contrast, offsets like ACCUs can generally only be used once (i.e. to meet emissions reduction obligations for only one scheme).

Deemed surrender results in a double benefit to the safeguard entity (for the same emissions reductions) as it receives payment from the Government under the Emissions Reduction Fund contract as well as having its emissions reduced against its safeguard obligation (CER 2018h; CER n.d.b).

The Authority is interested in stakeholders' views on deemed surrender, noting this arrangement has been used by one facility and its usage may increase over time (CER 2018k, pers. comm.).

The Authority is also interested in how facilities are meeting their safeguard obligations and if the options to manage excess emissions are efficient and effective.

3.6 FUTURE DIRECTIONS

3.6.1 THE AUTHORITY'S PREVIOUS RECOMMENDATIONS

In *Towards a climate policy toolkit: Special review on Australia's climate goals and policies* (CCA 2016), the Authority considered the role the safeguard could play in meeting Australia's international commitments under the Paris Agreement.

The Authority's key recommendations were:

- For the electricity sector, it be covered by a market mechanism.
- For the industrial sector:
  - Coverage of the safeguard be expanded to more companies by reducing the reporting thresholds.
  - Safeguard entities should no longer have the ability to re-set baselines.
  - Safeguard baselines should decline in a linear fashion to allow fewer emissions over time in line with Australia's Paris Agreement obligations.
  - Safeguard entities should be able to meet their compliance obligations with ACCUs and international units provided the international units meet quantitative and qualitative limits to ensure they are robust and to avoid delaying the transition to a lower emissions economy. Emissions intensive trade exposed industries with safeguard obligations should not have a quantitative cap on the use of international units to address competitiveness concerns.
- Emissions Reduction Fund purchasing should continue for sectors covered by the safeguard to provide transitional assistance to invest in low emissions technologies but safeguard entities should only be able to generate ACCUs if they meet additionality rules for emissions reduction projects.
- The Government should review the policy toolkit as a whole in 2022 to assess its effectiveness including whether the enhanced safeguard should remain in place or whether another policy instrument such as a market mechanism be introduced for sectors covered by the safeguard.

3.6.2 THE GOVERNMENT'S CONSULTATION ON SAFEGUARD BASELINE SETTING

In its 2017 review of climate change policies, the Government found the safeguard was working well but there was scope for improvement (DoEE 2017a). It committed to consult on ways to bring baselines up-to-date with current circumstances and make the safeguard fairer and simpler. The Department of the Environment and Energy is currently consulting on draft amendments to the *Safeguard Rule 2015* (Cth), with a view to changes taking effect for the 2018-19 compliance year (DoEE 2018a).

The Government also decided to review the mechanism again by 2020 including with reference to progress towards Australia's 2030 target (DoEE 2017a). That review will also consider the role of international units in the safeguard.

3.6.3 THE NATIONAL ENERGY GUARANTEE

The proposed National Energy Guarantee is designed to deliver a more affordable and reliable energy system and help Australia meet its international emissions reduction commitments. It requires electricity retailers and large energy users in the National Electricity Market to meet a reliability guarantee and an emissions guarantee (DoEE n.d.a.; COAG Energy Council 2018).

CONSULTATION QUESTIONS: CHAPTER 3

Q. 12 Is the safeguard mechanism delivering on its objectives and fit for purpose?

Q. 13 Are the emissions thresholds under the safeguard mechanism efficient and effective or should they be changed so more or fewer emissions are covered?

Q. 14 Should the scope of the safeguard mechanism be expanded or reduced if changes are made to the emissions and energy reporting scheme?

Q. 15 Should the provision allowing baseline variations in response to a change in global warming potentials be extended to other changes that may occur in the measurement determination?

Q. 16 Is the single reporting rule for transport fit for purpose?

Q. 17 Should facilities be able to use the same emission reductions to meet safeguard mechanism and Emissions Reduction Fund contract obligations?

Q. 18 What actions are facilities taking to meet safeguard mechanism obligations and are the options available to facilities to manage their excess emissions effective and efficient?

CHAPTER 4. DATA USE AND PUBLICATION

The National Greenhouse and Energy Reporting legislation makes provision for data collected under the Act to be published, shared and used to inform government policy formulation and the Australian public.

4.1 RULES FOR DATA PUBLICATION

The legislation requires the Clean Energy Regulator publish information about companies registered under the Act and their greenhouse gas emissions and energy production and use. The Regulator must also publish information about greenhouse and energy auditors (Chapter 5).

4.1.1 NATIONAL GREENHOUSE AND ENERGY REGISTER AND REPORTING DATA

The Regulator maintains a National Greenhouse and Energy Register including information about companies that report under the scheme and their emissions and energy data. The Regulator publishes much of this data on its website. It is required to publish company level emissions and energy data by 28 February for the previous financial year. To ensure data is not published in a way that identifies smaller companies and raises confidentiality concerns, the legislation states the Regulator must not publish information about a company if their emissions and energy data are less than the publication threshold (Table 3). However, it may publish a range within which emissions and energy values fall.

TABLE 3: PUBLICATION THRESHOLDS

	Combined scope 1 and scope 2 emissions (Kt CO_2-e)	Production or use of energy (TJ)
Companies	50	200
Reporting transfer certificate holders	25	100
Electricity generators	No threshold	

Note: A reporting transfer certificate allows the transfer of reporting obligations for a facility from a corporate group to another entity that has financial control of the facility.
Source: NGER Act s 24.

4.1.2 SAFEGUARD MECHANISM DATA

The legislation requires the Regulator to publish certain safeguard mechanism data for each reporting year after the 1 March compliance deadline (Chapter 3). This includes identifying the responsible emitter, its baseline, annual emissions (including if it is above its baseline) and any Australian Carbon Credit Units surrendered. The Regulator must also publish information about every safeguard baseline and baseline variation it makes. It has published the full set of this data for 2016-17, the first year of the safeguard (CER 2018a).

The Authority is interested in stakeholders' views on:

- the publication threshold
- what is published, how it is published and when, and the data's role in informing policy development and other purposes
- if there are reasons to expand or further limit the information that is published about reporting entities and safeguard facilities.

4.1.3 EXEMPTIONS FROM PUBLICATION

A person or company can apply to have information reported under the legislation withheld from publication if the information is commercially sensitive (NGER Act s 25).

In practice, the Regulator has rejected applications to withhold information from two companies in relation to reported emissions baselines for four facilities. Applications from five companies in relation to the publication of reported or calculated baselines for 13 facilities are still being considered.

The Authority is interested in stakeholders' views on whether current publication arrangements effectively balance commercial sensitivities with data transparency.

4.2 RULES FOR DATA SHARING

The legislation outlines how data can be shared and published. There are restrictions on what can be disclosed and penalties are in place for breaches of those restrictions. Officials of the Regulator can only disclose protected information such as the names and contact information of scheme participants under certain circumstances, for example when required for law enforcement purposes. A company can also request the disclosure of their own information (NGER Act s 28).

The Authority is interested in whether these rules for data sharing effectively protect commercial and other sensitivities while ensuring the data is available to inform decision makers.

4.3 CLIENT PORTAL

Government agencies, including from states and territories, access data through the Regulator's client portal. This enables access to data that state and territory governments may have once collected themselves and streamlines reporting under the legislation. Each login is customised to provide access to the appropriate data, for example, if the person is from a state or territory they can only access data about facilities that are wholly or partly located in that state or territory.

The Authority is interested in stakeholders' views on whether the processes in place for government agencies for accessing data are efficient and user-friendly.

4.4 DATA USE

There are many ways the public, businesses and governments can use the emissions and energy data reported under the legislation.

At the Commonwealth level, the Department of the Environment and Energy draws on the data to produce an annual inventory of Australia's greenhouse gas emissions (DoEE 2018b) and the Australian Energy Statistics (DoEE 2017b). The Department also uses data to inform

energy and climate change policy development and evaluation. For example, the Department uses the data to develop methods under the Emissions Reduction Fund and to develop National Energy Productivity Plan initiatives.

States and territories use the data to help develop policies aimed at improving energy use or reducing emissions.

Businesses also use the data to get a better understanding of how their emissions and energy intensity compares with other companies in their sector. This can help companies to identify inefficient processes or equipment and improve their emissions intensity and energy use.

The Authority is interested in understanding how stakeholders access and use the data and if any improvements are required to how the data is reported. For example, has it helped governments develop policy, investors make decisions and businesses identify opportunities to improve their emissions and energy use?

4.5 FUTURE DATA NEEDS

The kind of emissions and energy data governments, businesses and others need may change over time. One example is the continuous improvement in Australia's measurement and reporting of greenhouse gas emissions, which is reflected in Australia's inventory. This includes a commitment to prepare reporting of black carbon emissions (soot), which would expand the scope of Australia's reporting (Climate & Clean Air Coalition 2016). The Energy Security Board has also suggested data collected under the National Greenhouse and Energy Reporting legislation be used for the proposed National Energy Guarantee.

The Authority is interested in whether and how the reporting scheme should evolve over time to support changing data needs.

CONSULTATION QUESTIONS: CHAPTER 4

Q. 19 Are the publication thresholds set at the right level?

Q. 20 Are any changes required to the data reported, when it is published or how it is published?

Q. 21 Do the rules for data publication and sharing balance the public interest with commercial or other interests or should they be changed?

Q. 22 Are the processes in place for accessing National Greenhouse and Energy Reporting data efficient and user-friendly?

Q. 23 How do you access and use emissions and energy data published or shared under the National Greenhouse and Energy Reporting legislation and are any improvements required?

Q. 24 How should the National Greenhouse and Energy Reporting scheme evolve over time to support changing data needs?

CHAPTER 5. AUDITS

The National Greenhouse and Energy Reporting legislation sets out the administrative and governance arrangements for conducting greenhouse and energy audits and for registering as an auditor. The audit framework applies to the reporting scheme, the safeguard mechanism, the Emissions Reduction Fund and the Renewable Energy Target. Some other government programs also use the audit framework on a voluntary basis, such as the National Carbon Offset Standard.

The Clean Energy Regulator is responsible for administrating the audit framework.

The Authority is interested in stakeholders' views on whether the audit framework is effective at ensuring compliance in the schemes in which it is used, and whether there are opportunities for improving the framework or reducing the costs of audits.

5.1 AUDITS

5.1.1 NATIONAL GREENHOUSE AND ENERGY REPORTING SCHEME AUDITS

Reporters are encouraged to engage a registered greenhouse and energy auditor to confirm they comply with reporting requirements prior to submitting their reports. But there is no legislative requirement to do so.

In 2016-17, 73 voluntary audits under the reporting scheme were assessed by the Regulator.

5.1.2 SAFEGUARD MECHANISM AUDITS

Safeguard facilities that apply for a calculated, production-adjusted or benchmark baseline (Table 2), or an emissions intensity baseline variation (Section 3.5.1) must submit an audit report with their application. Audits are intended to provide assurance of a company's forecast production and emissions intensity (which is required for these baselines) and they also confirm the criteria has been met.

In 2017, 75 safeguard audits were undertaken and provided to the Regulator, with four returning qualified findings and none returning adverse or inconclusive opinions (CER 2018l, pers. comm.).

5.1.3 EMISSIONS REDUCTION FUND AUDITS

In general, Emissions Reduction Fund projects must satisfy audit requirements before the Regulator issues them with Australian Carbon Credit Units. Audits are required to provide a reasonable level of assurance that projects meet legislative requirements such as using an Emissions Reduction Fund method and reported emissions reductions are accurate.

In 2017, 117 audits of Emissions Reduction Fund projects were undertaken and provided to the Regulator (CER 2018l, pers. comm.).

5.1.4 RENEWABLE ENERGY TARGET AUDITS

Companies that are emissions-intensive and trade-exposed are exempt from certain obligations under the Renewable Energy Target. To receive an exemption, companies must submit an audited application. These audits may be completed by registered greenhouse and energy auditors or certain auditors registered under the *Corporations Act 2001* (Cth).

In 2017, 84 Renewable Energy Target audits were undertaken and provided to the Regulator, 56 of which were completed by greenhouse and energy auditors (CER 2018l, pers. comm.; CER 2018m, pers. comm.).

5.1.5 CLEAN ENERGY REGULATOR INITIATED AUDITS - COMPLIANCE MONITORING AND MANAGEMENT

The Regulator commissions a series of audits each year to investigate particular compliance priorities or risks and audits a selection of reporters, safeguard entities, Emissions Reduction Fund projects and Renewable Energy Target entities.

In 2016-17, the Regulator's audit program focused on particular methods under the Emissions Reduction Fund that raised compliance concerns including herd management, vegetation and savanna burning. In the reporting scheme, audits focused on energy production and use, flaring of coal mine methane, and the chemical manufacture industry. Audits under the Renewable Energy Target were focused on demonstrating power station compliance.

In addition, where the Regulator has reasonable grounds to suspect a breach of the National Greenhouse and Energy Reporting legislation or the Emissions Reduction Fund legislation, a company can be required to undertake a compliance management audit. For these audits, the scheme participant can appoint and pay for a greenhouse and energy auditor of its own choice, unless a particular auditor has been specified in the notice.

In 2016-17, the Regulator assessed 53 compliance monitoring and management audits, accounting for 2-5 per cent of the total matters that could be audited across the schemes (CER 2018l, pers. comm.).

5.1.6 AUDIT FINDINGS

Of the overall 380 audits undertaken and provided to the Regulator in 2016-17, around 55 per cent of the matters audited returned an unqualified audit (meaning no errors were found), about 30 per cent were qualified (meaning one or more errors were found not affecting the conclusions), around 8 per cent were adverse (where errors were found affecting the conclusions) and around 7 per cent were inconclusive (CER 2018l, pers. comm.).

5.2 REQUIREMENTS FOR AUDITORS

The audit framework sets out standards of professional conduct, qualifications, knowledge, training and experience auditors need to have to be registered by the Regulator. Once registered, auditors must continue to meet certain requirements, such as actively participating in audits and continuing professional development. The Regulator publishes a register of greenhouse and energy auditors, including details such as company and location. As at July 2018 there were 105 auditors registered (CER 2018n).

The Regulator monitors the performance and compliance of registered auditors through education, registration reviews, on site and desktop inspections, and auditor risk profiling.

In response to feedback from auditors, the Regulator has proposed changes to the audit framework to ensure auditors and audits are of an acceptable standard and quality.

5.3 NON-COMPLIANCE BY GREENHOUSE AND ENERGY AUDITORS

The Regulator can apply conditions to an auditor's registration, or suspend or deregister an auditor who does not comply with the audit framework. The Regulator has used these powers

in a small number of cases. Auditors can also choose to suspend their registration or deregister voluntarily to avoid the ongoing requirements to maintain their registration.

5.4 OTHER PROGRAMS USING THE AUDIT FRAMEWORK

Some other government programs use the greenhouse and energy auditors registered under the legislation, such as the National Carbon Offset Standard. This a voluntary standard that allows businesses, products or events to be certified as carbon neutral. The standard is administered by the Department of the Environment and Energy, not the Regulator.

The Authority understands other government programs may also use the audit framework. The Authority is interested in hearing from stakeholders as to whether any other government, businesses or others use the audit framework.

The Authority is interested in stakeholders' views on whether the requirements for auditors in the audit framework effectively balance the need for high quality audits at a reasonable cost, and whether stakeholders believe there are currently sufficient auditors of a high quality available to complete the audits needed.

CONSULTATION QUESTIONS: CHAPTER 5

Q. 25 Is the audit framework in the National Greenhouse and Energy Reporting legislation effective and efficient at ensuring compliance?

Q. 26 Are there opportunities for improving the audit framework such as reducing the cost of audits or making the audits more effective?

Q. 27 What other government or non-government programs use the National Greenhouse and Energy Reporting audit framework?

Q. 28 Do the requirements for auditors effectively balance the cost and quality of audits?

Q. 29 Are there enough quality auditors available?

CHAPTER 6. GOVERNANCE AND COMPLIANCE

The Department of the Environment and Energy and the Clean Energy Regulator both play a role in the governance of the National Greenhouse and Energy Reporting scheme, the safeguard mechanism and the auditing framework.

The Department has formal oversight of policy development for the reporting scheme, safeguard and the auditing framework, while the Regulator administers those schemes and is also responsible for enforcement and compliance.

6.1 COMPLIANCE AND THE CLEAN ENERGY REGULATOR

The Regulator encourages compliance with the legislation using a tiered approach of education, support and enforcement. It assists participants to understand their rights and obligations through education, training, guidance and other resources (CER 2017c).

The Regulator uses a risk-based approach to detecting non-compliance focusing on those areas or companies they believe are at greatest risk of material breaches of the legislation. It considers the findings of voluntary and mandatory audit reporting as well as undertaking data analytics and other information gathering to target potential areas of non-compliance (CER 2017c).

The Regulator has recently focused on whether data reported and audits undertaken are compliant with the requirements of the emissions and energy reporting and safeguard schemes (CER 2017c; CER 2017b).

The Authority is interested in hearing from stakeholders about whether guidance made available by the Regulator online or through phone and email makes it easy to understand company obligations under the reporting scheme, safeguard and audit components of the legislation.

6.1.1 TIMELINE FOR SCHEME OBLIGATIONS

Companies are required to register and report for the previous financial year by 31 August and 31 October respectively.

Under the safeguard, applications for baselines and flexible compliance measures (like the multi-year compliance period) for the previous financial year are due on 31 October. The deadline to surrender Australian Carbon Credit Units to avoid excess emissions above baselines is 28 February following the previous financial year.

The Authority is interested in stakeholders' views on whether the timing of reporting and other obligations allows sufficient time to meet these obligations.

6.2 ENFORCEMENT BY THE CLEAN ENERGY REGULATOR

Where breaches of the legislation have occurred, the Regulator has a range of enforcement options. In making a decision to take enforcement action, the Regulator will consider the materiality of the breach and the conduct of scheme participants. For example, the Regulator considers whether it appears they deliberately breached the legislation and the likelihood they will comply in the future. The Regulator's enforcement actions aim to be proportionate to the breach that occurred (CER 2017c).

6.2.1 ENFORCEABLE UNDERTAKINGS

In order to resolve breaches or improve compliance with the legislation, the Regulator may work with individuals or companies to develop voluntary enforceable undertakings, which are written statements that each party will do, or refrain from doing, certain actions. Breach of an enforceable undertaking may result in court action.

The Regulator has issued two enforceable undertakings under the legislation. The details of enforceable undertakings are published on the Regulator's website (CER 2018f).

6.2.2 PENALTIES, INFRINGEMENT NOTICES AND COURT ACTION

Most penalty provisions in the legislation impose financial penalties. The Regulator is also able to issue infringement notices. The infringement notice specifies the nature of the alleged breach and the amount of the penalty. For example, a company that fails to register for the reporting scheme when a threshold is met could be subject to a financial penalty (up to $12,600) imposed through an infringement notice.

Alternatively, or if a company fails to pay, the Regulator may take court action. For failing to register, a court could impose a penalty of up to $420,000 initially and $21,000 for each subsequent day the company fails to comply.

It may be a criminal offence to provide false or misleading information or documents to the Regulator.

To date, the Regulator has not used any of these provisions under the legislation.

6.2.3 NATIONAL GREENHOUSE AND ENERGY REPORTING AUDITORS

If the Regulator identifies a breach of the legislation by an auditor, for example, knowingly giving a positive audit of a report when the data does not support it, the Regulator may decide to apply conditions to an auditor's registration, suspend their registration if they do not undertake specified actions or deregister them (Chapter 5).

The Authority is interested in feedback on whether the Regulator's current enforcement powers are sufficient to encourage compliance with the legislation.

6.3 REVIEW OF CLEAN ENERGY REGULATOR DECISIONS

Under the legislation, stakeholders can request the Administrative Appeals Tribunal (AAT) review certain decisions made by the Regulator. These include decisions relating to the Regulator's setting of safeguard baselines and auditor registrations. One applicant has sought a review of a calculated baseline decision but the application was withdrawn (CER 2018m, pers. comm.).

Although stakeholders do not have to request an internal review prior to lodging an appeal with the AAT, the Regulator's website states it 'is committed to transparent decision making processes and to providing access to a fair and objective procedure for the internal review of decisions' (CER 2015). The Regulator has not conducted any internal reviews of decisions under the legislation (CER 2018m, pers. comm.). The Authority is interested in hearing from stakeholders on whether there are any opportunities for improvements in the Regulator's decision making and review processes.

CONSULTATION QUESTIONS: CHAPTER 6

Q. 30 Is the guidance provided by the Clean Energy Regulator on its website, and through other channels such as by phone or email helpful in complying with National Greenhouse and Energy Reporting legislation obligations? How (if at all) could it be improved?

Q. 31 Does the timing of obligations for National Greenhouse and Energy Reporting and the safeguard mechanism allow sufficient time to meet the obligations?

Q. 32 Does the Clean Energy Regulator have sufficient powers to encourage compliance with the National Greenhouse and Energy Reporting legislation?

Q. 33 What has been your experience of any compliance or enforcement activities by the Clean Energy Regulator?

Q. 34 Are there any opportunities for improvements in the Clean Energy Regulator's decision making and review process?

Q. 35 Are there any other matters relevant to this review you wish to raise?

CHAPTER 7. NEXT STEPS

The National Greenhouse and Energy Reporting legislation underpins important elements of Australia's response to climate change, creating a system for Australian businesses and other entities to measure, report and manage their emissions and energy use.

This review is an opportunity to reflect on how the legislation has been operating and identify potential improvements. It is timely to review the reporting scheme given it is now a decade old. By contrast the safeguard mechanism has only been in place for a couple of years.

This is also a chance to assess how the legislation can continue to deliver for governments, businesses and the Australian public as policies and expectations of companies and others evolve.

The Climate Change Authority has identified potential areas of focus throughout this consultation paper and is also interested in any other issues stakeholders have faced in meeting their obligations under the legislation.

The Authority will use feedback from stakeholders on this paper and other consultations to inform any recommendations for improvements to the legislation and its implementation. The Authority's final review report is due by the end of this year.

APPENDIX A: GUIDING PRINCIPLES FOR THIS REVIEW

The principles established in the *Climate Change Authority Act 2011* (Cth) guide all of the Authority's work. These include that measures to respond to climate change should:

- be economically efficient, environmentally effective, equitable and in the public interest
- support the development of an effective global response to climate change, and be consistent with Australia's foreign policy and trade objectives
- take account of the impact on households, businesses, workers and communities.

The Authority is required to review the operation of the National Greenhouse and Energy Reporting legislation. That legislation includes:

- the *National Greenhouse and Energy Reporting Act 2007* (Cth), which establishes the framework for the reporting scheme and safeguard
- the *National Greenhouse and Energy (Measurement) Determination 2008* (Cth), which describes how to measure greenhouse gas emissions, energy production and use
- the *National Greenhouse and Energy Reporting Regulations 2008* (Cth), which sets out the reporting and auditing requirements
- the *National Greenhouse and Energy Reporting (Audit) Determination 2009* (Cth), which sets outs the audit requirements
- the *National Greenhouse and Energy Reporting (Auditor Registration) Instrument 2017 (No. 2)* (Cth), which specifies the qualifications that auditors must have
- the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* (Cth), which sets out the compliance rules and procedures for administering the safeguard.

The *Clean Energy Regulator Act 2011* (Cth) establishes the Clean Energy Regulator and its functions and powers in regards to administering its schemes.

The objects of the *National Greenhouse and Energy Reporting Act 2007* (Cth) provide specific direction for this review. The first object is to introduce a single national reporting framework for the reporting and dissemination of information related to greenhouse gas emissions and projects, energy consumption and production of corporations to:

- inform government policy formulation and the Australian public
- meet Australia's international reporting obligations
- assist Commonwealth, state and territory government programs and activities
- avoid the duplication of similar reporting requirements in the states and territories.

The second object is to ensure net covered emissions of greenhouse gases from the operation of a designated large facility do not exceed the baseline applicable to the facility.

APPENDIX B: LIST OF CONSULTATION QUESTIONS

The Authority invites submissions from organisations and individuals on all issues relevant to the scope of this review. Those interested in making a submission should not feel constrained by the issues or questions in this paper.

Submissions can be emailed to submissions@climatechangeauthority.gov.au until 11 September 2018. A coversheet for submissions can be found on the Authority's website at: www.climatechangeauthority.gov.au/consultations.

While the Authority values public consultation highly and seeks to be transparent, it is under no obligation to publish submissions it receives and reserves the right not to publish submissions on its website that raise legal or other concerns. Confidential submissions will not be published.

Q. 1 Do the National Greenhouse and Energy Reporting scheme reporting thresholds balance coverage with administrative costs? Should thresholds be increased, decreased or kept as is?

Q. 2 Should the scope of reporting under the National Greenhouse and Energy Reporting scheme be expanded or reduced e.g. to include or exclude certain greenhouse gases, emissions sources, inventory sectors or types of entities who report?

Q. 3 Do you have any feedback on the annual policy and consultation process to update the measurement determination?

Q. 4 Are the methods for reporting emissions and energy in the measurement determination fit for purpose?

Q. 5 Does the frequency and timing for reporting cause any particular issues for companies?

Q. 6 Is the Emissions and Energy Reporting System tool easy to use and fit for purpose?

Q. 7 Are there emissions and energy data that companies would like to report through the Emissions and Energy Reporting System but are currently unable to? Would the development of a voluntary tool be useful for this information?

Q. 8 Are there opportunities to streamline emissions and energy reporting obligations under the National Greenhouse and Energy Reporting scheme and other programs?

Q. 9 How does the National Greenhouse and Energy Reporting scheme contribute to providing useful information for climate-related risk disclosure or other data users and are any enhancements to the reporting scheme desirable?

Q. 10 Is reporting of emissions and energy data meeting the needs of data users and inducing change in business operations? If so, how?

Q. 11 Are there learnings from international emissions and energy reporting schemes that could be applied in Australia?

Q. 12 Is the safeguard mechanism delivering on its objectives and fit for purpose?

Q. 13 Are the emissions thresholds under the safeguard mechanism efficient and effective or should they be changed so more or fewer emissions are covered?

Q. 14 Should the scope of the safeguard mechanism be expanded or reduced if changes are made to the emissions and energy reporting scheme?

Q. 15 Should the provision allowing baseline variations in response to a change in global warming potentials be extended to other changes that may occur in the measurement determination?

Q. 16 Is the single reporting rule for transport fit for purpose?

Q. 17 Should facilities be able to use the same emission reductions to meet safeguard mechanism and Emissions Reduction Fund contract obligations?

Q. 18 What actions are facilities taking to meet safeguard mechanism obligations and are the options available to facilities to manage their excess emissions effective and efficient?

Q. 19 Are the publication thresholds set at the right level?

Q. 20 Are any changes required to the data reported, when it is published or how it is published?

Q. 21 Do the rules for data publication and sharing balance the public interest with commercial or other interests or should they be changed?

Q. 22 Are the processes in place for accessing National Greenhouse and Energy Reporting data efficient and user-friendly?

Q. 23 How do you access and use emissions and energy data published or shared under the National Greenhouse and Energy Reporting legislation and are any improvements required?

Q. 24 How should the National Greenhouse and Energy Reporting scheme evolve over time to support changing data needs?

Q. 25 Is the audit framework in the National Greenhouse and Energy Reporting legislation effective and efficient at ensuring compliance?

Q. 26 Are there opportunities for improving the audit framework such as reducing the cost of audits or making the audits more effective?

Q. 27 What other government or non-government programs use the National Greenhouse and Energy Reporting audit framework?

Q. 28 Do the requirements for auditors effectively balance the cost and quality of audits?

Q. 29 Are there enough quality auditors available?

Q. 30 Is the guidance provided by the Clean Energy Regulator on its website, and through other channels such as by phone or email helpful in complying with National Greenhouse and Energy Reporting legislation obligations? How (if at all) could it be improved?

Q. 31 Does the timing of obligations for National Greenhouse and Energy Reporting and the safeguard mechanism allow sufficient time to meet the obligations?

Q. 32 Does the Clean Energy Regulator have sufficient powers to encourage compliance with the National Greenhouse and Energy Reporting legislation?

Q. 33 What has been your experience of any compliance or enforcement activities by the Clean Energy Regulator?

Q. 34 Are there any opportunities for improvements in the Clean Energy Regulator's decision making and review process?

Q. 35 Are there any other matters relevant to this review you wish to raise?

GLOSSARY OF TERMS

Term	Definition used
audit framework	The set of rules that govern how greenhouse and energy auditors and audits are managed, including the qualifications auditors are required to hold and maintain.
Australia's Paris Agreement target	Australia's emissions reduction target under the Paris Agreement is to reduce emissions by 26 to 28 per cent on 2005 levels by 2030.
Australian Carbon Credit Unit (ACCU)	A unit issued for verified emissions reductions under the Emissions Reduction Fund. One ACCU is equivalent to a reduction of 1 tonne CO_2-e.
controlling corporation	A corporation usually at the top of the corporate hierarchy that does not have a holding company incorporated in Australia. Reporting obligations under the National Greenhouse and Energy Reporting legislation apply to controlling corporations.
covered emissions (safeguard)	Covered emissions for the purpose of meeting the safeguard threshold are scope 1 emissions (excluding emissions from: landfill waste deposited before 1 July 2016, electricity generators covered by the electricity sectoral baseline; and the Greater Sunrise or Joint Petroleum Development Area).
corporate group	A corporate group is a group of companies owned or operated by a single controlling corporation. It may consist of a controlling corporation only or it may include several associated subsidiary companies with National Greenhouse and Energy Reporting obligations.
Energy Security Board	A board established to coordinate implementation of reforms to the National Electricity Market and provide whole of system oversight for energy security and reliability, including design of the National Energy Guarantee. The Board reports to the Council of Australian Governments Energy Council.
facility	A single enterprise comprised of an activity or series of activities that produce emissions or involve the production or consumption of energy.
global warming potential	Global warming potentials are used to convert masses of different greenhouse gases into a single carbon dioxide equivalent metric that would produce the same warming effect as carbon dioxide over a 100 year period.
group member	A subsidiary of a controlling corporation that may have operational control over a National Greenhouse and Energy Reporting facility.
hydrofluorocarbons (HFCs)	Synthetic greenhouse gases with very high global warming potentials.
measurement determination	The set of methods and criteria for calculating greenhouse gas emissions and energy data under the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (Cth).
Mt CO_2-e	Million tonnes of carbon dioxide equivalent. A measure used to compare emissions from greenhouse gases based on their global warming potential.
National Greenhouse Gas Inventory	An annual report presented to the United Nations Framework Convention on Climate Change that contains Australia's greenhouse gas emissions data.
net emissions (safeguard)	Reported covered emissions minus eligible offsets surrendered under the safeguard.
operational control	A company has operational control over a facility if it can introduce or implement operating, health and safety or environmental policies at a facility. The company with operational control of a facility, or its controlling corporation, is generally responsible for ensuring the facility meets its requirements under the National Greenhouse and Energy Reporting Act.
Paris Agreement	An international agreement adopted under the United Nations Framework Convention on Climate Change in 2015. A key outcome of the Agreement is a global goal to hold average temperature increase to well below 2°C and pursue efforts to keep warming below 1.5°C above pre-industrial levels.
perfluorocarbons (PFCs)	Synthetic greenhouse gases with very high global warming potentials.
reporting scheme	The National Greenhouse and Energy Reporting scheme.
reporting transfer certificate	A certificate that allows reporting obligations under the National Greenhouse and Energy Reporting scheme to transfer from a controlling corporation with operational control over the facility to the corporation that has financial control over the facility.
responsible emitter	Person with operational control over a safeguard facility that is required to keep its net emissions at or below its safeguard baseline. Responsible emitters may be an individual, a company, a trust or a local council.

safeguard baseline	An emissions limit on safeguard facilities. There are different types of baselines (described in Table 2).
safeguard entity	A general term that refers to an entity with safeguard obligations.
safeguard facility	A facility that emits more than 100,000 tonnes of carbon dioxide equivalent per year of scope 1 covered emissions and has safeguard obligations.
safeguard mechanism	A mechanism that establishes regulatory emissions limits for facilities. Safeguard facilities must keep their emissions at or below their baseline.
safeguard obligations	Facilities with safeguard obligations are required to report their scope 1 emissions to the Clean Energy Regulator and keep their emissions below a safeguard baseline.
scope 1 emissions	Emissions released as a direct result of an activity.
scope 2 emissions	Indirect emissions that are associated with the generation of electricity used at a facility.
threshold	An emissions or energy limit that triggers reporting, publication or safeguard obligations under the National Greenhouse and Energy Reporting legislation.
United Nations Framework Convention on Climate Change	An international treaty that commits signatory countries to stabilise greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous human-induced interference with the climate system.

ABBREVIATIONS

ACCU	Australian Carbon Credit Unit
APRA	Australian Prudential Regulation Authority
ASX	Australian Securities Exchange
Authority	Climate Change Authority
CO_2-e	carbon dioxide equivalent
COAG	Council of Australian Governments
Department	Department of the Environment and Energy
EERS	Emissions and Energy Reporting System
kt	kilo tonne (a thousand tonnes)
LULUCF	land use, land-use change and forestry
Mt	mega tonne (a million tonnes)
NEM	National Electricity Market
NGER	National Greenhouse and Energy Reporting
NPI	National Pollutant Inventory
PJ	petajoule (10^{15} joules)
Regulator	Clean Energy Regulator
t	tonnes
TJ	terajoule (10^{12} joules)
UNFCCC	United Nations Framework Convention on Climate Change

REFERENCES

Clean Energy Regulator (CER) 2018a, *2016-17 Safeguard facilities reported emissions*, CER, Canberra, viewed 26 July 2018, http://www.cleanenergyregulator.gov.au/NGER/National%20greenhouse%20and%20energy%20reporting%20data/safeguard-facility-reported-emissions/safeguard-facility-emissions-2016-17.

CER 2018b, *2016-17 Safeguard facility data*, viewed 28 June 2018, CER, Canberra, http://www.cleanenergyregulator.gov.au/DocumentAssets/Pages/2016-17-Safeguard-facility-data.aspx.

CER 2018c, *Baseline variation*, CER, Canberra, viewed 6 July 2018, http://www.cleanenergyregulator.gov.au/NGER/The-safeguard-mechanism/Baselines/Baseline-variation.

CER 2018d, *Baselines*, CER, Canberra, viewed 6 July 2017, http://www.cleanenergyregulator.gov.au/NGER/The-safeguard-mechanism/Baselines.

CER 2018e, *Complying with NGER*, CER, Canberra, viewed 26 July 2018, http://www.cleanenergyregulator.gov.au/NGER/Reporting-cycle/Complying-with-NGER.

CER 2018f, *Current enforceable undertakings*, CER, Canberra, viewed 6 July 2018, http://www.cleanenergyregulator.gov.au/About/Compliance-and-Enforcement/Compliance%20and%20enforcement%20action/enforceable-undertakings/Current-enforceable-undertakings

CER 2018g, *Greenhouse and energy information for designated generation facilities 2016-17*, viewed 28 February 2018, CER, Canberra, http://www.cleanenergyregulator.gov.au/NGER/National%20greenhouse%20and%20energy%20reporting%20data/electricity-sector-emissions-and-generation-data/electricity-sector-emissions-and-generation-data-2016-17

CER 2018h, *Managing excess emissions*, CER, Canberra, viewed 6 July 2018, http://www.cleanenergyregulator.gov.au/NGER/The-safeguard-mechanism/Managing-excess-emissions.

CER 2018i, *Multi-year monitoring period*, CER, Canberra, viewed 6 July 2018, http://www.cleanenergyregulator.gov.au/NGER/The-safeguard-mechanism/Managing-excess-emissions/multi-year-monitoring-period.

CER 2018j, personal communication, 10 July 2018.

CER 2018k, personal communication, 11 May 2018.

CER 2018l, personal communication, 15 May 2018.

CER 2018m, personal communication, 16 July 2018.

CER 2018n, *Register of Greenhouse and Energy Auditors*, viewed 21 May 2018, CER, Canberra, http://www.cleanenergyregulator.gov.au/DocumentAssets/Pages/Register-of-Greenhouse-and-Energy-Auditors.aspx.

CER 2018o, *Reporting thresholds*, CER, Canberra, viewed 11 May 2018, http://www.cleanenergyregulator.gov.au/NGER/Reporting-cycle/Assess-your-obligations/Reporting-thresholds

CER 2018p, *Safeguard baselines table*, viewed 28 June 2018, CER, Canberra, http://www.cleanenergyregulator.gov.au/NGER/National%20greenhouse%20and%20energy%20reporting%20data/Safeguard-baselines-table.

CER 2017a, *Clean Energy Regulator Client Portal - Facility Totals Report for EERS 2016-2017*, CER, Canberra, viewed 26 July 2018, http://www.cleanenergyregulator.gov.au/OSR/CP.

CER 2017b, *Compliance Priorities 2017*, CER, Canberra, viewed 6 July 2018, http://www.cleanenergyregulator.gov.au/About/Compliance-and-Enforcement/compliance-priorities-2017.

CER 2017c, *Compliance, education and enforcement policy*, CER, Canberra, viewed 6 July 2017, http://www.cleanenergyregulator.gov.au/About/Policies-and-publications/Compliance-education-and-enforcement-policy.

CER 2016a, *Register and deregister*, CER, Canberra, viewed 11 May 2018, http://www.cleanenergyregulator.gov.au/NGER/Reporting-cycle/Register-and-deregister.

CER 2016b, *Report*, CER, Canberra, viewed 13 June 2018, http://www.cleanenergyregulator.gov.au/NGER/Reporting-cycle/Report.

CER 2015, *Internal review of decisions*, CER, Canberra, viewed 6 July 2017, http://www.cleanenergyregulator.gov.au/About/Internal-Review-of-Decisions.

CER n.d.a, *Guideline: Manner and Form: Sections 19, 22G and 22X reports*, CER, Canberra, http://www.cleanenergyregulator.gov.au/DocumentAssets/Documents/Guideline%20-%20Manner%20and%20Form%20Sections%2019%2022G%20and%2022X%20reports.pdf.

CER n.d.b, *Safeguard mechanism workshop*, CER, Canberra, http://www.cleanenergyregulator.gov.au/DocumentAssets/Documents/Safeguard%20mechanism%20workshop%20presentation%202017.pdf.

Climate and Clean Air Coalition (CCAC) 2016, *Marrakech Communiqué,* CCAC, Marrakech, http://www.ccacoalition.org/en/resources/marrakech-communique.

Climate Change Authority, (CCA) 2016, *Towards a climate policy toolkit: special review on Australia's climate goals and policies*, Commonwealth of Australia, Canberra, http://www.climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/files/Special%20review%20Report%203/Climate%20Change%20Authority%20Special%20Review%20Report%20Three.pdf.

Commonwealth of Australia 2014, *Emissions Reduction Fund White Paper*, Commonwealth of Australia, Canberra, http://environment.gov.au/system/files/resources/1f98a924-5946-404c-9510-d440304280f1/files/emissions-reduction-fund-white-paper_0.pdf.

COAG Energy Council 2018, *Energy Security Board National Energy Guarantee – Draft Detailed Design Consultation Paper*, COAG Energy Council, Canberra.

Department of the Environment and Energy (DoEE) 2018a, *Consultation on amendments to the National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015*, DoEE, Canberra, viewed 30 July 2018, http://www.environment.gov.au/climate-

change/government/emissions-reduction-fund/consultation/safeguard-mechanism-legislative-amendments-2018.

DoEE 2018b, *National Inventory Report 2016 Volume 1*, Commonwealth of Australia, Canberra, http://www.environment.gov.au/system/files/resources/02bcfbd1-38b2-4e7c-88bd-b2b7624051da/files/national-inventory-report-2016-volume-1.pdf.

DoEE 2017a, *2017 Review of Climate Change Policies*, Commonwealth of Australia, Canberra, viewed 2 July 2018, http://www.environment.gov.au/system/files/resources/18690271-59ac-43c8-aee1-92d930141f54/files/2017-review-of-climate-change-policies.pdf.

DoEE 2017b, *Australian Energy Update 2017,* Commonwealth of Australia, Canberra, https://www.energy.gov.au/sites/g/files/net3411/f/energy-update-report-2017.pdf.

DoEE 2017c, *Quarterly Update of Australia's Greenhouse Gas Inventory: June 2017,* Commonwealth of Australia, Canberra. http://www.environment.gov.au/climate-change/climate-science-data/greenhouse-gas-measurement/publications/quarterly-update-australias-national-greenhouse-gas-inventory-jun-2017.

DoEE 2015, *Safeguard mechanism design consultation paper*, Commonwealth of Australia, Canberra, http://www.environment.gov.au/system/files/pages/dbabd13c-f8f1-49cd-ab40-621f056de35a/files/safeguard-mechanism-consultation-paper.pdf.

DoEE n.d.a, *A better energy future for Australia*, viewed 6 July 2018, https://www.energy.gov.au/government-priorities/better-energy-future-australia.

DoEE n.d.b, *About the NPI, Commonwealth of Australia*, Canberra, viewed 6 July 2018, http://www.npi.gov.au/about-npi.

Explanatory Memorandum, National Greenhouse and Energy Reporting Bill 2007 (Cth).

Explanatory Statement, National Greenhouse and Energy Reporting (Measurement) Amendment Determination 2011 (No. 1) (Cth).

Intergovernmental Panel on Climate Change (IPCC) 2006, *2006 IPCC guidelines for National Greenhouse Gas Inventories - Volume 1: General Guidance and Reporting,* IPCC, Geneva, https://www.ipcc-nggip.iges.or.jp/public/2006gl/vol1.html.

National Greenhouse and Energy Reporting Act 2007 (Cth).

National Greenhouse and Energy Reporting (Measurement) Determination 2008 (Cth).

National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015 (Cth).

Price, J 2018, *Keynote address by John Price, Commissioner, Australian Securities and Investments Commission, Centre for Policy Development: Financing a Sustainable Economy, Sydney, Australia, 18 June 2018*, viewed 11 July 2018, http://www.asic.gov.au/about-asic/media-centre/speeches/climate-change/.

Summerhayes, G 2017, 'Australia's new horizon: Climate change challenges and prudential risk', Presentation to the Insurance Council of Australia Annual Forum, Sydney, 17 February 2017.

Task Force on Climate-related Financial Disclosures (TCFD) 2017, *Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures (June 2017)*, Financial Stability Board, https://www.fsb-tcfd.org/publications/final-recommendations-report/.