

## Submission on Safeguard Mechanism (Crediting) Amendment Bill 2022

### Summary

Australian Projections provides actuarial advice on issues of national policy, such as aged care, education, energy and climate. We are trying to help Australians and their politicians contribute to the redesign of the Safeguard Mechanism.

We recommend that

- Net emissions from Safeguard facilities should decline in line with Australia's international commitments, and the provisions of the Climate Change Act 2022
- Offsets should provide at least as much atmospheric cooling as the heating from the emissions being offset, in each year of the offset emissions
- There should be no caps on offset prices
- The Clean Energy Regulator should be responsible for ensuring that emissions reported by each Safeguard facility are consistent with scientific evidence.
- There should be no ownership of Statutory Mechanism Credits by the Commonwealth.

### **1. Net emissions from Safeguard facilities should decline in line with Australia's international commitments, and the provisions of the Climate Change Act 2022**

The Safeguard Mechanism (Crediting) Amendment Bill 2022 proposes that a new object 2(b) be added to the National Greenhouse and Energy Reporting Act 2007:

*"aggregate net covered emissions from the operation of designated large facilities decline"*

This seems too vague to be useful. We recommend that object 2(b) should be

*"aggregate net covered emissions from the operation of designated large facilities decline in line with Australia's international commitments, and the provisions of the Climate Change Act 2022"*

Australia's international commitments include the Paris Agreement, and the Global Methane Pledge.

### **2. Offsets should provide at least as much atmospheric cooling as the heating from the emissions being offset, in each year of the offset emissions**

In his foreword to the December 2022 report of the Independent Review of Australian Carbon Credit Units (ACCUs), Professor Ian Chubb said:

*"Methane and nitrous oxide are both many times more potent than CO<sub>2</sub> as a heat-trapping gas, although much lower in atmospheric concentration compared with CO<sub>2</sub>. Their removal from the atmosphere would likely have a significant impact on slowing temperature rise, in*

*both cases, however, drawdown is not yet feasible. Until suitable technology is available, avoiding emissions of methane and nitrous oxide is the only way to limit their impact.”*

Estimates of the duration of greenhouse gases in the atmosphere vary considerably. Chemical and Engineering News (2022) gives the estimated half-life of methane as about 9 years, compared with 100 years for carbon dioxide. On average, methane molecules released into the atmosphere will be active for 13 years, while carbon dioxide will be active on average for 140 years.

If a Safeguard facility is able to continue emitting methane by buying ACCUs, the heating of the atmosphere from the methane emission will occur over about 13 years. The cooling from the ACCUs will occur over at least 140 years. Nearly all the heating from the methane emission will occur before the ACCUs provide any useful cooling.

We recommend that offsets used by Safeguard facilities should provide at least as much atmospheric cooling as the heating from the emissions being offset, in each year of the offset emissions. This could be included as objective 2(c) of the National Greenhouse and Energy Reporting Act 2007.

A new class of offset units will be need to offset methane emissions, and might also be useful for other greenhouse gases with short durations in the atmosphere.

### **3. There should be no cap on offset prices**

The position paper on the Safeguard Mechanism reforms (DCCEEW 2023) says

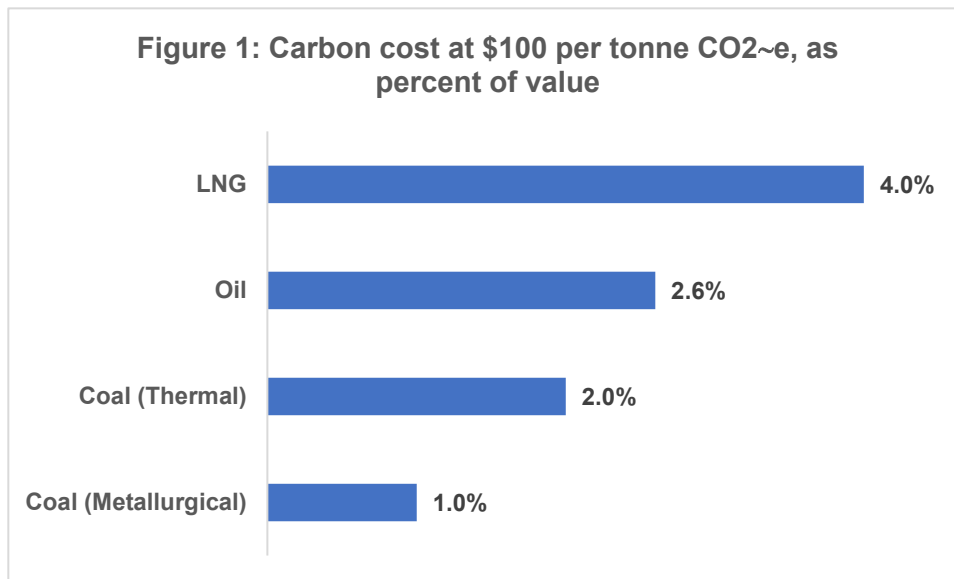
*“A cost containment measure would make Government-held ACCUs available at \$75 per tonne of CO<sub>2</sub>-e in 2023-24, increasing with the CPI plus 2 per cent.”*

The Safeguard amendments largely reflect proposals made by the Australian Labor Party in “Powering Australia” (December 2021). This document made no mention of a cap of ACCU prices.

Released at the same time was a RepuTex report on the economic impact of the ALP’s proposals. On the Safeguard proposals, the report said:

*“...fossil fuel sectors ... may utilise the least-cost combination of internal abatement opportunities and external offsets to meet their annual emissions reductions obligations. Other sectors of the economy are expected to make more transformational investments in low-emission technologies as they transition to net zero.” (RepuTex 2021 p23)*

The Grattan Institute’s estimates (Figure 1) of the low costs of offsets, relative to product values, also suggest that Safeguard fossil fuel facilities will choose to offset most of their emissions, rather than internally abate:



The above percentages are from Figure 5.1 of the Grattan Institute's submission to the Safeguard Mechanism reform consultation paper (DCCEEW 2022). They are based on the Institute's estimates of the value of one unit of export in 2027, so are inherently uncertain. The Institute assumed a carbon offset cost of \$100, higher than the \$75 initial maximum now proposed.

Our submission to the consultation estimated that gas, oil and coal together made up 57% of carbon dioxide equivalent emissions by Safeguard facilities in 20-21. A substantial part of their future use of offsets is likely to relate to methane rather than carbon dioxide emissions. Government-provided caps on fossil fuel offset prices may be strongly opposed by voters concerned about Australia's continuing contribution to global warming.

#### **4. The Clean Energy Regulator should be responsible for ensuring that emissions reported by Safeguard facilities are consistent with scientific evidence**

The International Energy Agency's "Global Methane Tracker 2022" said:

*"As more measured data becomes available, it becomes ever clearer that almost all the national inventories have been underreporting emissions... Globally, our analysis finds that methane emissions from the energy sector are about 70% greater than the sum of estimates submitted by national governments."*

In November 2022 Climate TRACE published emissions estimates for 70,000 of the world's highest emitting greenhouse gas sources:

*"Climate TRACE harnesses artificial intelligence and machine learning to analyze data from more than 300 satellites, more than 11,100 air-, land-, and sea-based sensors, and troves of additional public and commercial information, developing the first global, independent emissions inventory based primarily on direct observation"*

Several of the submissions to the DCCEEW Safeguard Mechanism consultation suggested that some facilities are significantly under-reporting their emissions. This could create fairness problems between facilities, and compromise Australia's greenhouse gas reports.

Under section 75A of the National Greenhouse and Energy Reporting Act 2007, the Clean Energy Regulator currently maintains the Register of Greenhouse and Energy Auditors. Audits are required to provide "reasonable" or "limited" assurance under section 28 of the Safeguard Mechanism Rule 2015.

We recommend that the Clean Energy Regulator should be responsible for checking that greenhouse gas emissions reported by each Safeguard facility are consistent with scientific evidence. To do this, the Regulator could draw upon public sources such as Climate TRACE, and could require individual facilities to collect relevant evidence.

Australia might obtain valuable data from MethaneSAT, the American/New Zealand satellite due to be launched in October 2023 (Wikipedia 2023).

## **5. There should be no ownership of Statutory Mechanism Credits by the Commonwealth**

Note 15 of the "Notes on Clauses" says

*"The Bill makes it possible to transfer a percentage of all SMCs issued into a Commonwealth Registry account. These SMCs could then be transferred to facilities to manage carbon leakage risks or for other purposes."*

This proposal was not included in the ALP's "Powering Australia". It was strongly criticized in the Grattan Institute's submission (DCCEEW 2022).

The proposed 22XNB(1) reads

*"If the Regulator decides to issue a safeguard mechanism credit unit to the Commonwealth in relation to a facility, the Regulator must make an entry for the unit in a Commonwealth Registry account."*

This appears to give the regulator power to deduct any percentage of the SMCs for any facility. This broad power, and the unlimited power to use Commonwealth SMC's for any purpose, seem a potential source of corruption.

We recommend that there be no ownership of SMCs by the Commonwealth.

## **Abbreviations**

ACCU	Australian Carbon Credit Unit
ALP	Australian Labor Party
CO2	Carbon dioxide
DCCEEW	Department of Climate Change, Energy, the Environment and Water
SMC	Statutory Mechanism Credit

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