Australian Government

Department of Climate Change, Energy, the Environment and Water

# Carbon Leakage Review

## Consultation Paper

Professor Frank Jotzo

Edwina Johnson

We acknowledge the Traditional Owners of Country throughout Australia and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past and present.

# Consultation Paper

Released 13 November 2023

Submissions close 12 December 2023

https://consult.dcceew.gov.au/

# Section 1 – Review Context

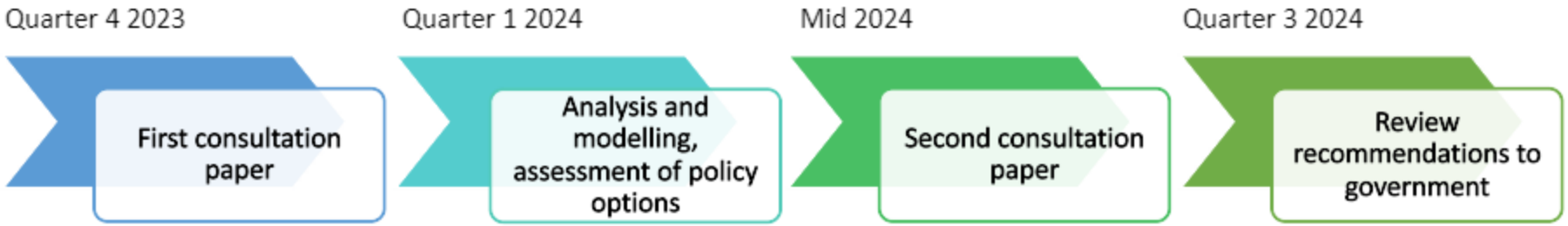
# Background & timeline

## Background

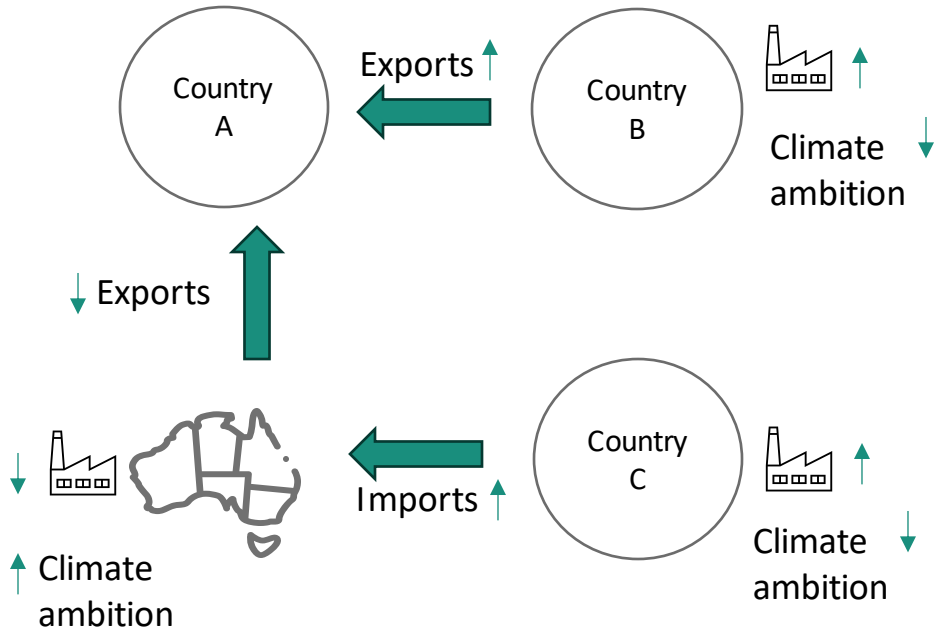
- Australia has legislated emissions reductions targets of **43 per cent below 2005 levels by 2030 and net zero by 2050**.
- Australia has **strengthened its industrial emissions reduction policy**, the Safeguard Mechanism.
- Australia's Carbon Leakage Review will:
  - **Assess the risk** of carbon leakage; and
  - **Consider policy options**, including a border carbon adjustment.

## Review Timelines

- **First phase** focuses how to identify carbon leakage risks for Australia.
- **Second phase** will assess identified leakage risk and the policy options to address it.
- **A second consultation paper** to be released in mid 2024.
- **Final advice to** be provided to the Government by 30 September 2024.



# What is ‘carbon leakage’?

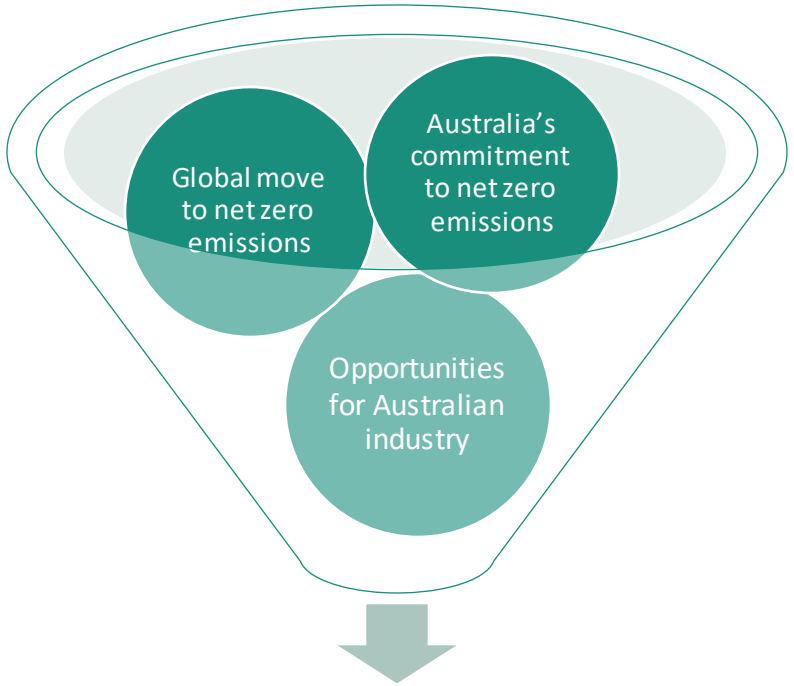



- Carbon leakage refers to production of emissions intensive trade exposed goods and commodities shifting from countries with more ambitious emissions reduction policies to those with weaker (or no) emissions reduction policies solely because of different policy settings.
- Leakage may undermine global emission reduction efforts.
- It may affect both import and export exposed industry.
- Two main channels:
  - **Trade** – Climate policies make traded products from jurisdictions with less stringent policies more competitive.
  - **Investment** – Future investments could occur in countries with less stringent climate policies.

**1.1 Carbon Leakage**

- Is the description of carbon leakage appropriate for the purpose of this review?

# Context and purpose of the review

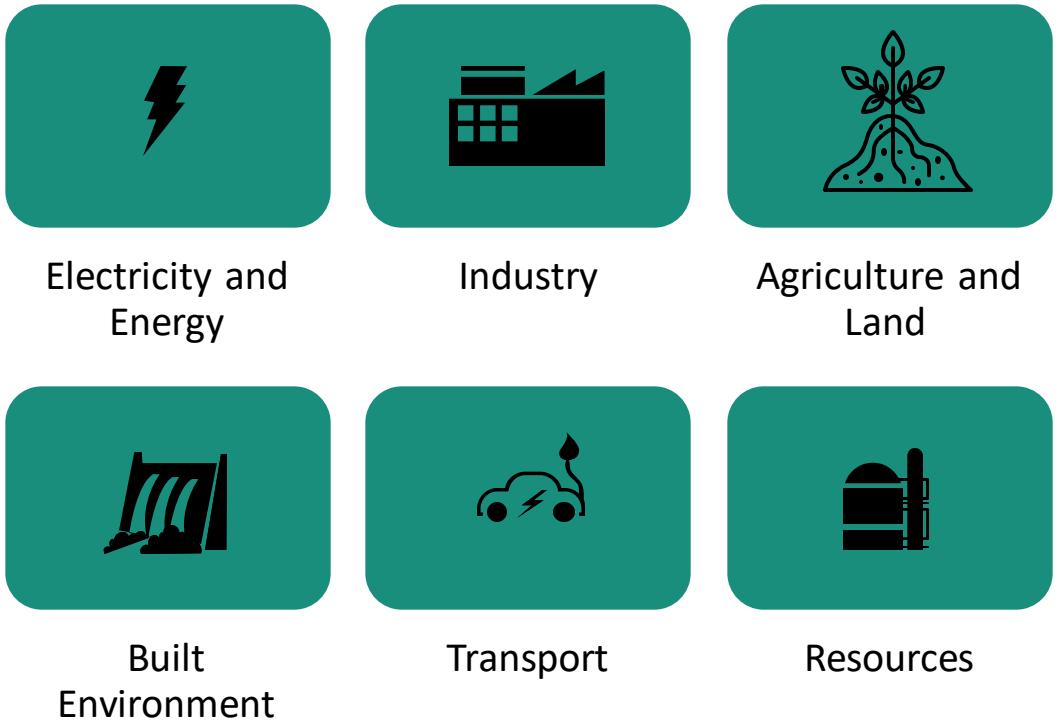



Policies to support industrial decarbonisation and competitiveness in a net zero world.

- A global move to net zero emissions.
- Increased climate ambition in Australia, including decarbonisation of industry.
- Significant opportunities for Australia in a net-zero world.
- A short to medium term risk of carbon leakage due to global policy differences on the path to net zero.
- A desire to support industry to make investments and commitments to green industry in Australia.

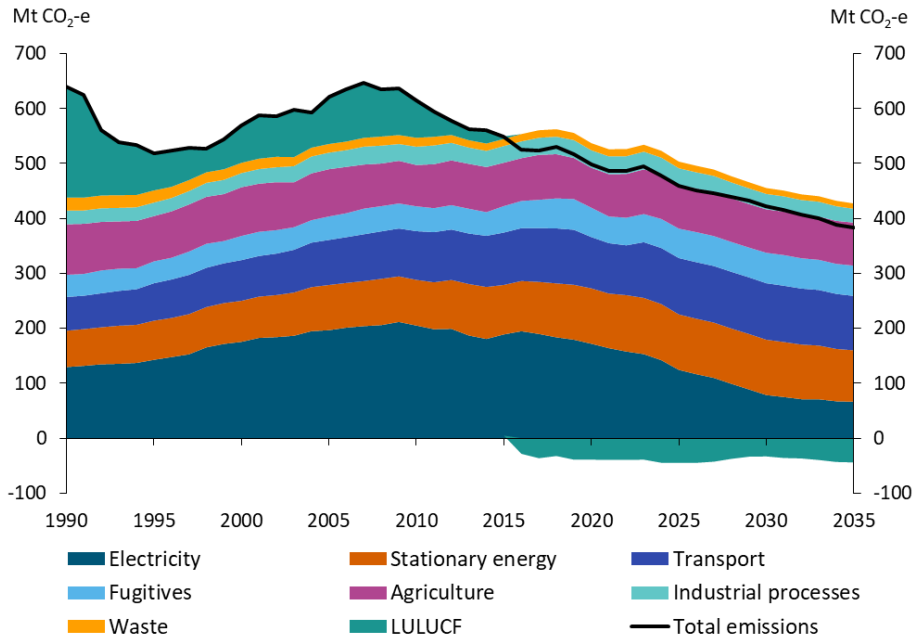
# Australia's sectoral decarbonisation plans

- The Australian Government is developing a national plan to achieve net zero by 2050.
- This includes six sectoral specific net zero plans.
- These plans will inform Government decisions on Australia's 2035 target.
- Net zero plans will be informed by analysis and advice from the independent Climate Change Authority.



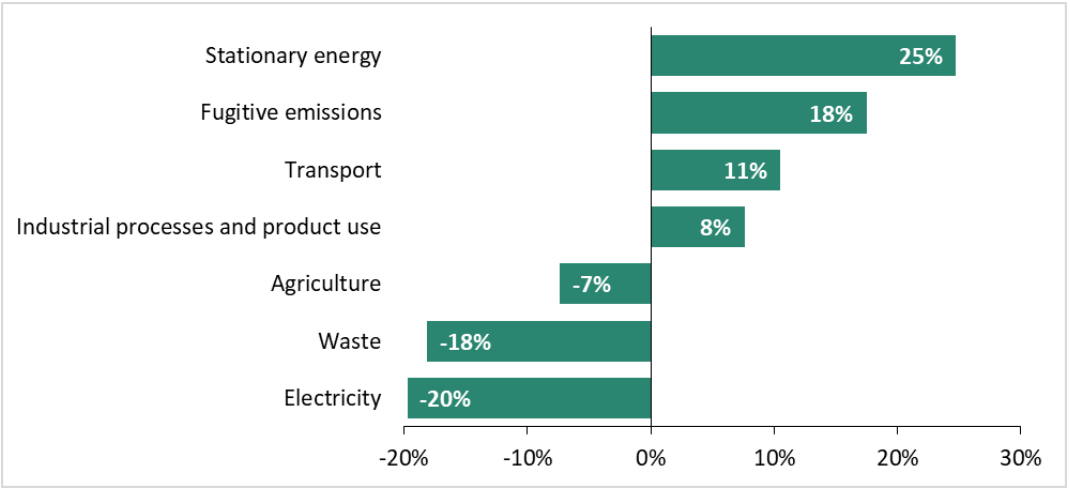
# Australia's emissions by sector

Projections




*Source: Australia's emissions projection 2022 report, Department of Climate Change, Energy, the Environment and Water.*

- To-date, industrial sector emissions have been among the fastest growing across the Australian economy.

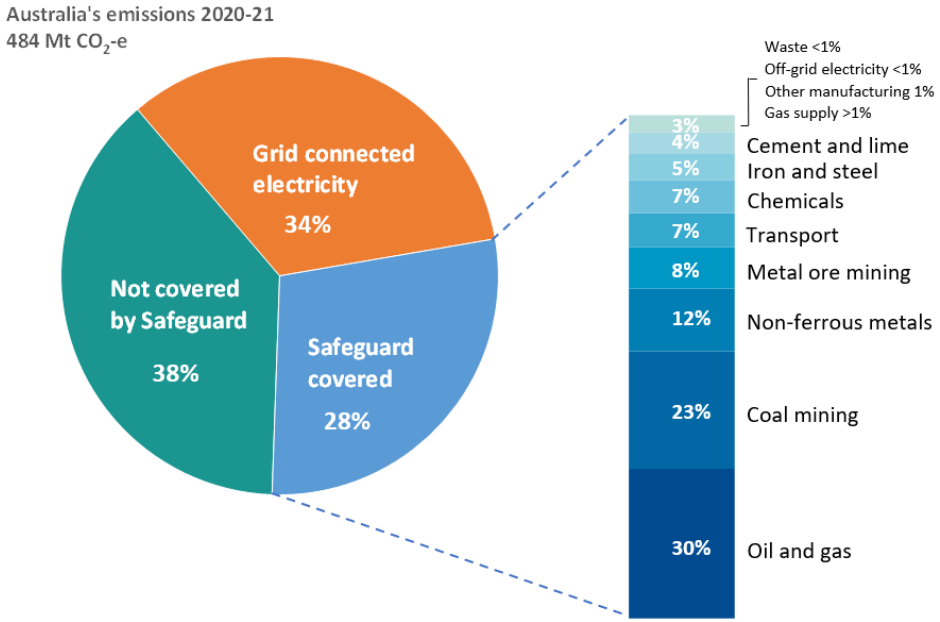



*Changes in Australia's emissions between 2005 and 2022 by sector*
*Data from the Quarterly update of the Australian National Greenhouse Gas Inventory, June 2022*

# Australia's Safeguard Mechanism

## Safeguard Mechanism coverage

Large industrial facilities
Scope 1 emissions >100,000 t $CO_2$-e
Around **215 facilities** covered



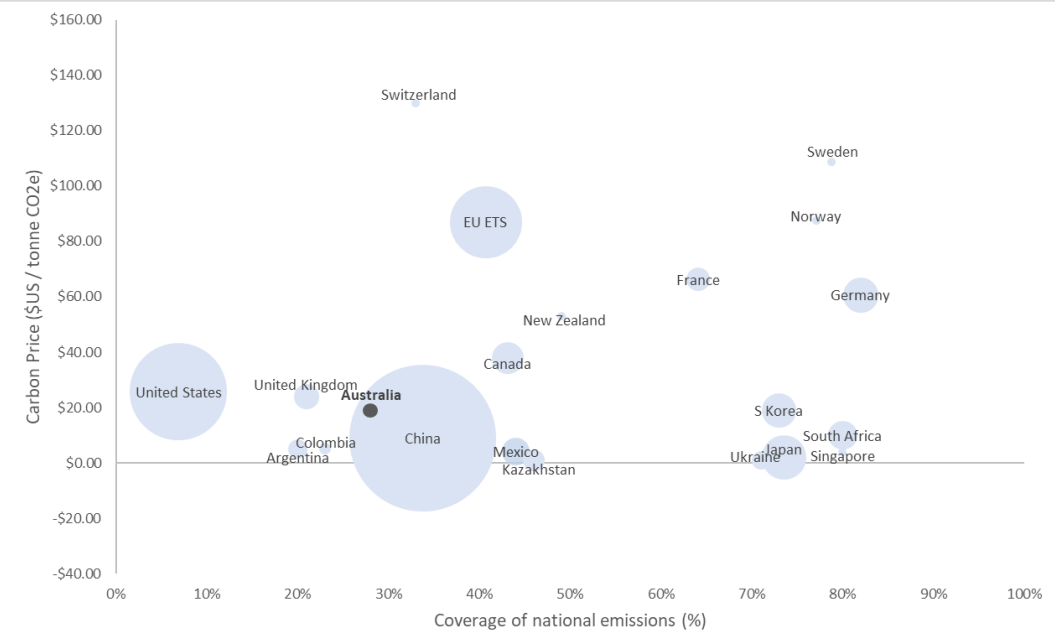

- The Safeguard Mechanism is Australia's primary policy for reducing emissions at large industrial facilities.
- It sets legislated limits—known as baselines—on the direct (Scope 1) emissions of covered facilities.
- If the facility emits above their baseline, they must surrender domestic emissions credits.
- The 'baseline' is equivalent to production-based free allocation of emissions allowances in ETS.
- Eligible 'Trade Exposed Baseline Adjusted' (TEBA) facilities have slower baseline decline rates.
- Trade exposed facilities are eligible for funding to decarbonise via a public investment fund called Powering the Regions.

**1.2 The Safeguard Mechanism**

- What is your view on how your business or industry could be affected by carbon leakage?

# International context

- Global ambition to limit climate change is growing.
- Approximately 23% of global greenhouse gas emissions are subject to a carbon price.
- Differences in climate ambition continue and may result in carbon leakage.
- Jurisdictions with high climate ambition are considering policies to address carbon leakage.
- The EU has recently commenced its transitional reporting-only phase of its Carbon Border Adjustment Mechanism.
- The UK and Canada have also publicly consulted on carbon leakage policies, including a CBAM.

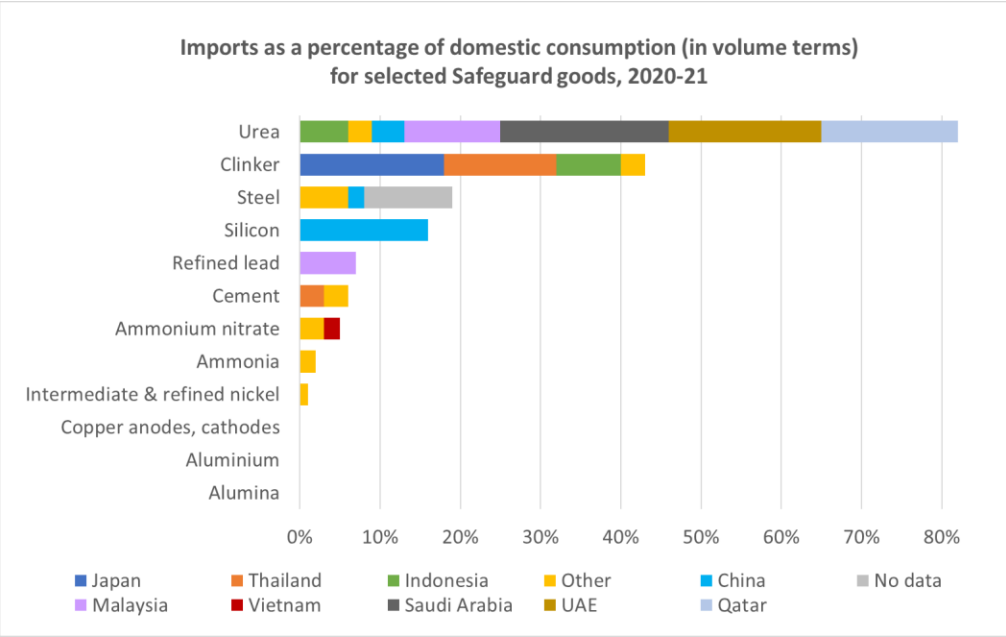



*Global carbon pricing and coverage of national emissions comparison. The size of the circle indicates the country's share of global emissions. Data from World Bank Carbon Pricing Dashboard 2022 and the European Energy Agency adapted from Clausing and Wolfram (2022). Australian data from the National Inventory using an ACCU price of A$30 and an exchange rate of A$1.50 AUD/USD.*

# Section 2 - Assessment Methods

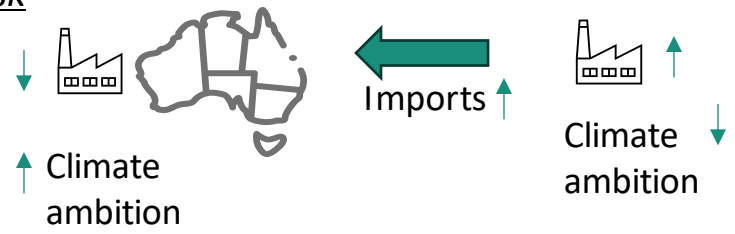
# Relevant goods and commodities - Imports

**Import trade statistics in trade exposed Safeguard Mechanism sectors**




*Import data from ABS and production data from DISR's Resources and Energy Quarterly and the Australian Industry Energy Transitions Initiative.*

- The starting point for relevant goods is trade exposed industries under the Safeguard Mechanism.
- Import competing facilities compete with goods that are cheaper due to lower climate ambition overseas.
- *<u>High imports does not necessarily mean high import leakage risk</u>*

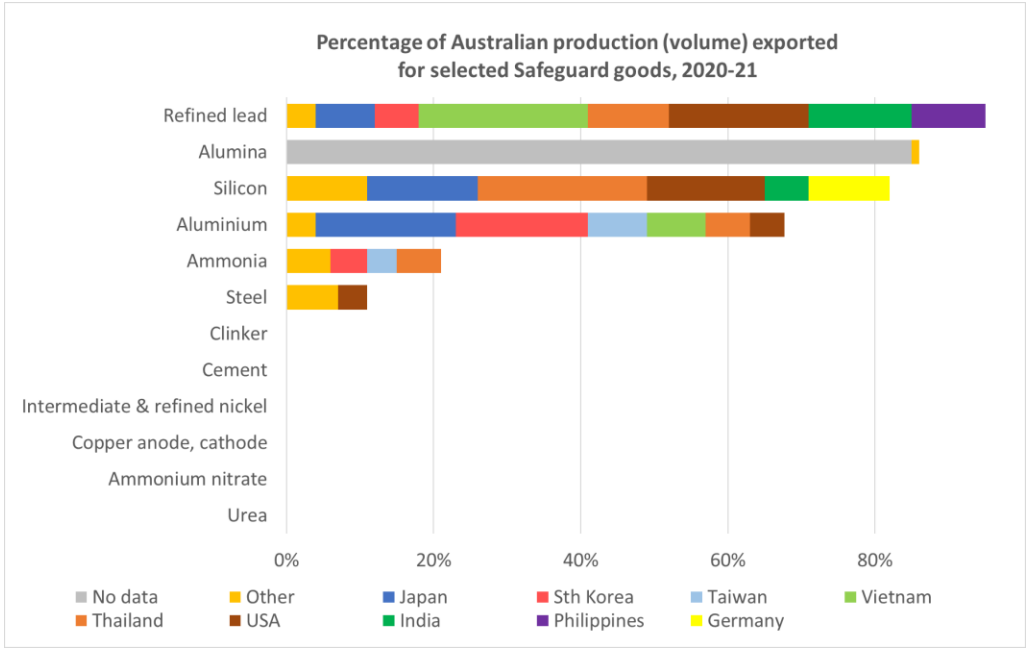



**2.1 Relevant goods and commodities**

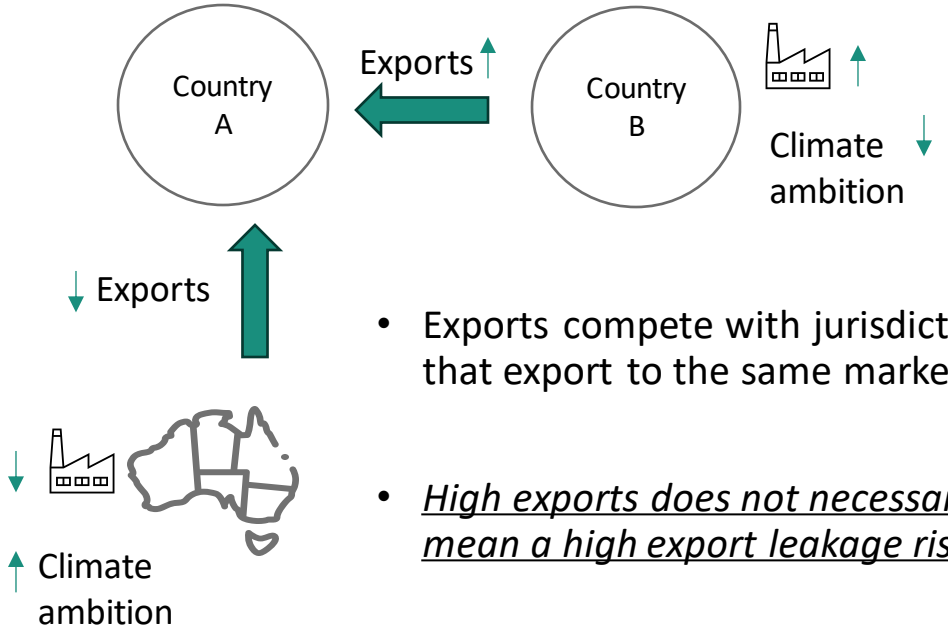
- Are there other goods or commodities beyond those identified as trade exposed under the Safeguard Mechanism that should be included in the assessment?

# Relevant goods and commodities - Exports

**Export trade statistics in trade exposed Safeguard Mechanism sectors**




*Export data from ABS and production data from DISR's Resources and Energy Quarterly and the Australian Industry Energy Transitions Initiative.*



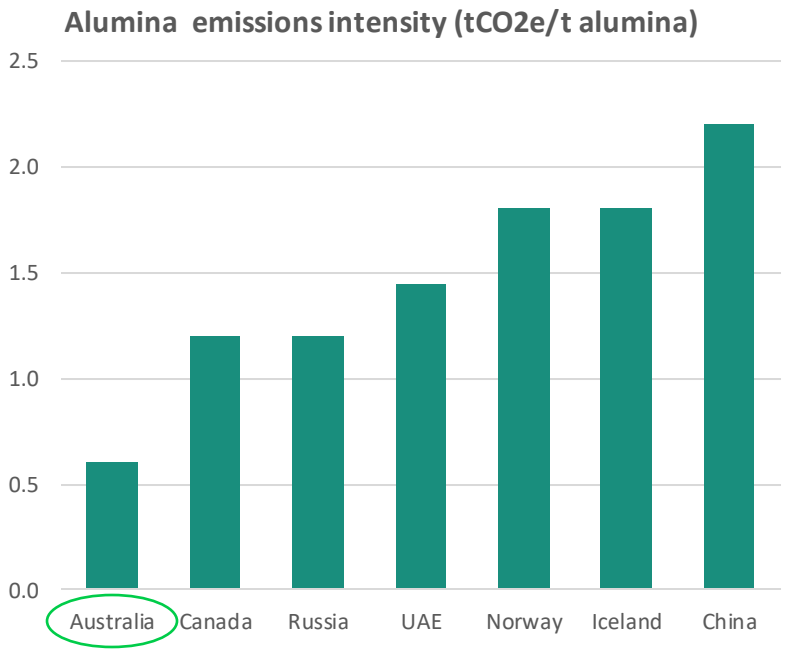

- Exports compete with jurisdictions that export to the same market
- *High exports does not necessarily mean a high export leakage risk.*

**2.1 Relevant goods and commodities**

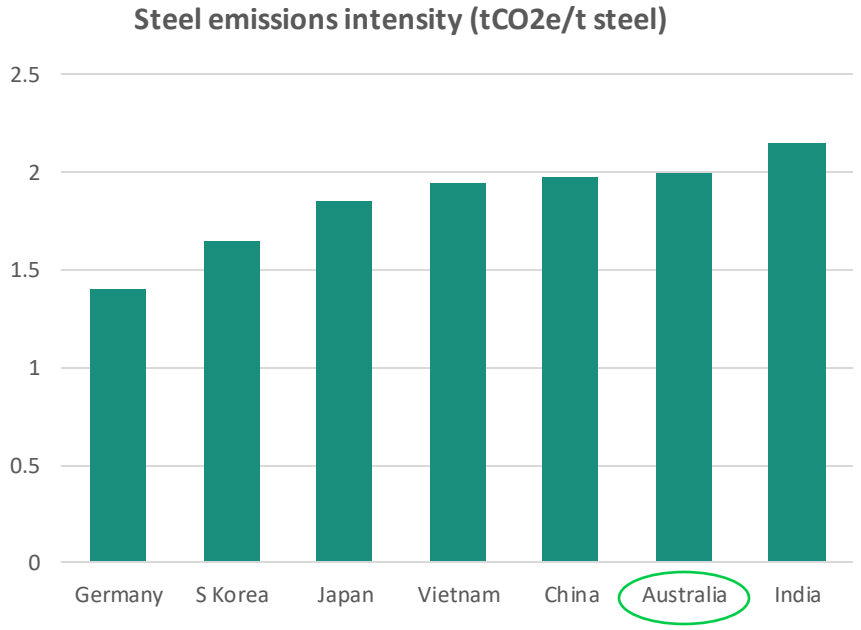
- Are there other goods or commodities beyond those identified as trade exposed under the Safeguard Mechanism that should be included in the assessment?

# Assessing impacts of carbon leakage

- Differences in emissions intensity relative to other jurisdictions helps inform carbon leakage risk.
- Emissions intensity for Australian goods relative to other jurisdictions varies.



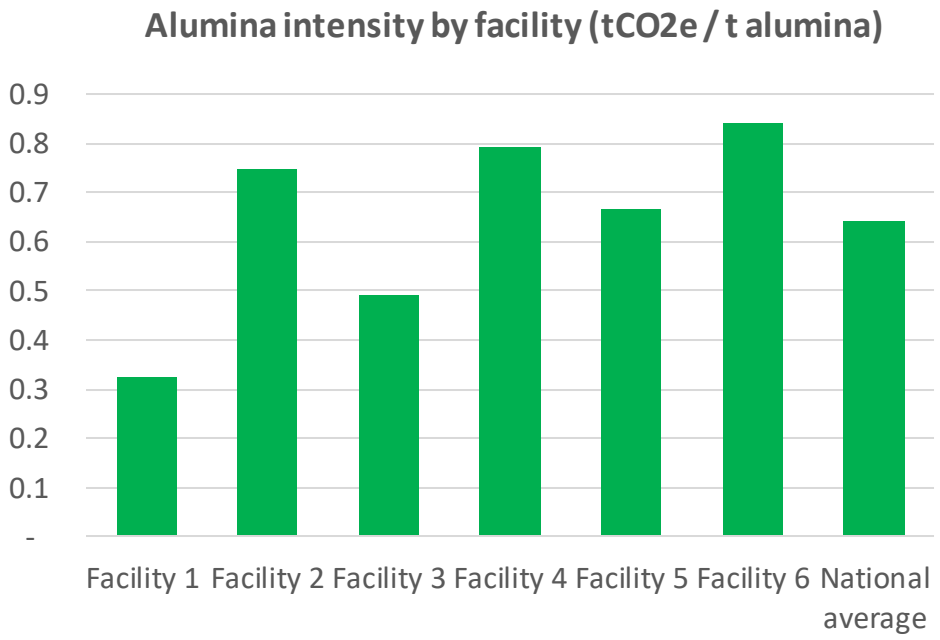

- Emissions intensity will be reduced due to the Safeguard Mechanism.
- Assessing carbon leakage risk requires an assessment of future intensity both here and overseas.




*Data from Global Efficiency Intelligence 2022; Global Efficiency Intelligence 2019; DCCEEW 2022; Climate Transparency 2020.*

# Assessing impacts of carbon leakage

- Facility level emissions intensity can vary considerably in Australia and in other jurisdictions.




- Variation in facility-level emissions may matter under some policy approaches to carbon leakage risk.
- Where facility level emissions differ, policies to address carbon leakage may result in 'resource shuffling'.
- 'Resource shuffling' refers to where producers direct lower emissions products to countries with border adjustments or product standards.
- Such reshuffling would not achieve a global emissions reduction and might give rise to bilateral trade tensions.

**2.2 Assessing impacts of carbon leakage and policy instruments**

- Is this characterisation of the potential impacts of carbon leakage and instruments to address it appropriate for the purpose?
- Are there other aspects that should be considered?

*Alumina data from ARENA 2022 and Clean Energy Regulator.*

# Analytical approach

## Sector specific analysis

- Identify production activities at risk of carbon leakage.
- Estimate effects of carbon cost differentials and leakage policies on production, demand, trade and emissions intensity of production of specific goods.

## Domestic economic analysis

- Effects on the Australian economy:
  - substitution effects on use and demand
  - macroeconomic variables
  - emissions.

## International economic analysis

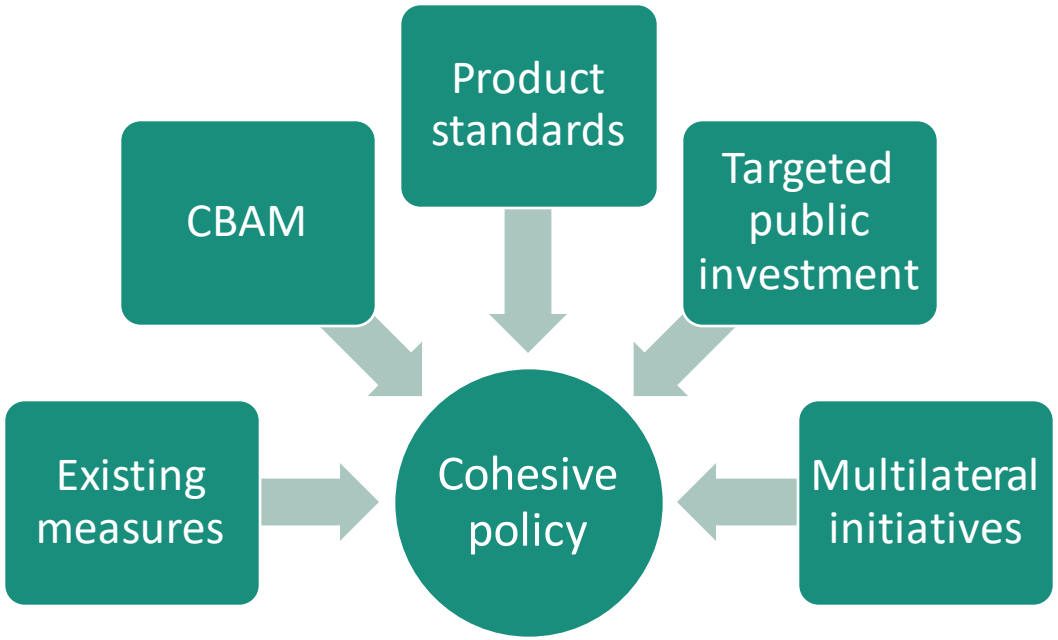
- Effects on trading partners and trade flows.
- Effects on global emissions.

**2.4 Analytical Approach**

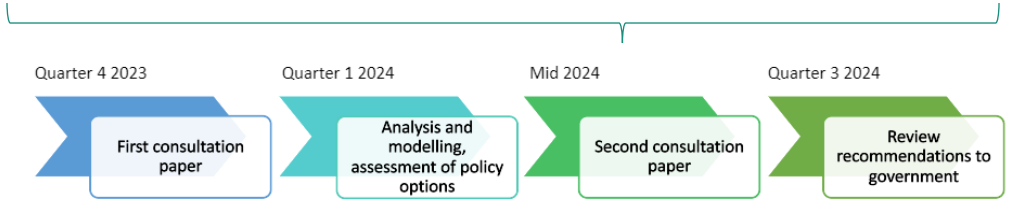
- What domestic economic effects from carbon leakage and policy approaches to address it are of particular importance for analysis and modelling?
- Would the analysis benefit from an assessment of impacts on bilateral trading partners and net global emissions?

# Section 3 - Policy options

# Policy options being considered



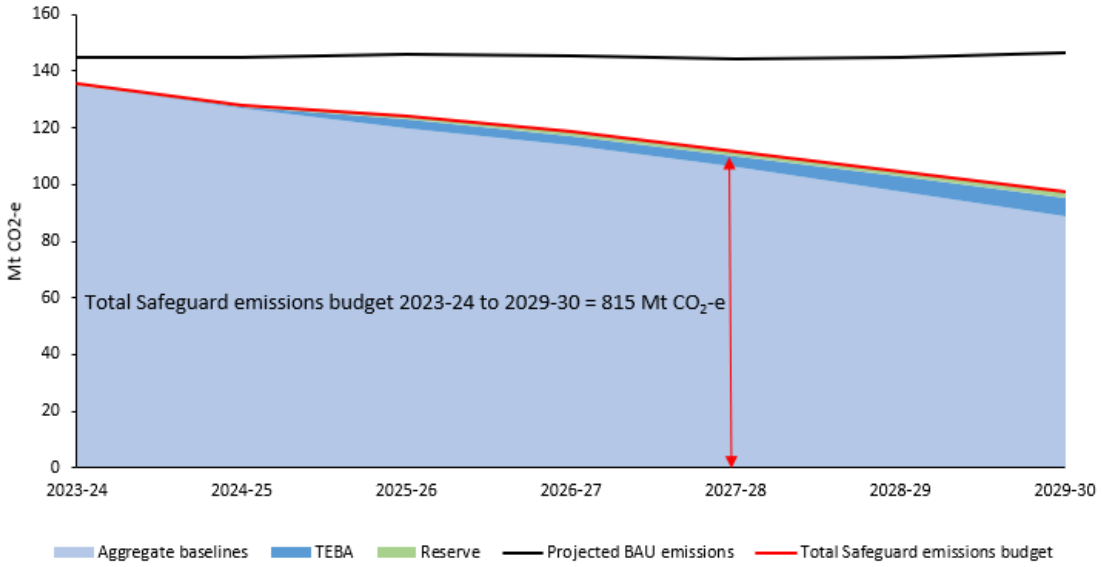

- Different policy options may be appropriate for different goods/industries.
- Policies are not mutually exclusive and different combinations of policies will be considered.
- A second paper on policy options will be published in mid-2024.




**Section 3 – Policy options**

- Are there additional policy options that should be considered alone or as part of a portfolio of approaches to carbon leakage?

# 3.1 Existing measures under Safeguard



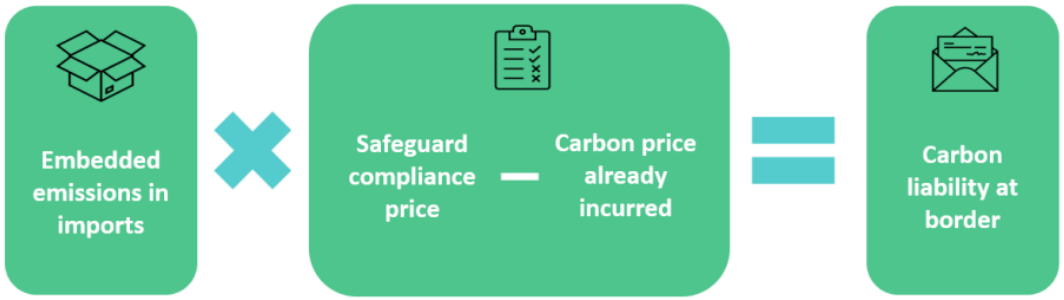

*Aggregate emissions baselines (light blue shading), TEBA allocations (dark blue shading) and the reserve (light green shading) in the Safeguard emissions budget. Note data is consistent with Australia's emissions projections 2022 and the September 2023 production variable update.*

- The Safeguard reforms included measures to reduce carbon leakage risk, including:
  - capacity to emit up to their baseline without cost
  - adjusted baselines for trade-exposed industries and
  - funding through the Powering the Regions Fund.
- Safeguard arrangements are a baseline for comparison against other policy mechanisms.

**3.1 Existing measures under the Safeguard Mechanism**

- What is the capacity of current policy settings of the Safeguard Mechanism to mitigate carbon leakage risk into the future?

# 3.2 Border carbon adjustment




- A border carbon adjustment seeks to equalise carbon costs across jurisdictions.
- A border carbon adjustment can create an equal competitive footing across jurisdictions.
- Emissions monitoring, reporting and verification is a major issue in the design and implementation of a CBAM.
- Design would have to consider WTO compliance.

**International examples**

- **EU CBAM** – Only jurisdiction to pass a CBAM. Transitional phase until 1 January 2026 when it will come into full effect.
- **UK** – Consulted on a CBAM in March 2023, decision expected this year.
- **Canada** – Consulted on a border carbon adjustment in 2021.

**3.2 Australian carbon border adjustment mechanism**

- Is an Australian carbon border adjustment mechanism desirable? If so, which design features should be considered?

# 3.3 Emissions product standards

- A regulatory intervention that could set a minimum standard for high intensity goods.
- May mitigate leakage risks by levelling emissions reductions requirements between jurisdictions.
- Mandatory Product Standards can regulate the maximum emissions-intensity of products that can be sold.
- May focus on phasing out a particular type of inefficient production or set a benchmark on overall emissions intensity.

**International examples**

- **EU and US** – Currently negotiating an arrangement regarding green steel and aluminium under the *Global Arrangement on Sustainable Steel and Aluminium*.
- **ResponsibleSteel** – A private sector standard which signatories of SteelZero follow.

| 3.3 Emissions product standards |
| --- |
| • What is the appropriate role for emissions product standards to mitigate carbon leakage? |

# 3.4 Targeted public investment

- Public investment in low emissions technology and long-term decarbonisation.
- De-risks investment decisions and helps develop decarbonisation technologies.
- Part of the current interventions following Safeguard (Powering the Regions Fund).
- A need to consider long-term sustainability and efficiency.
- Distributional impacts also need to be considered.

**International examples**

- **US Inflation Reduction Act** – Substantial support (largely via tax credits) for green industries.
- **UK Industrial Decarbonisation Strategy** – £100 million for industrial decarbonisation and carbon capture, use and storage
- **South Korea** – 30.1 trillion won ($35 billion) to renewable energy, green infrastructure and industry

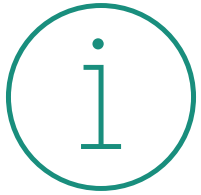
**3.4 Targeted public investment in firms' decarbonisation**

- What is the appropriate role for public investment measures to mitigate carbon leakage?

# 3.5 Multilateral and plurilateral initiatives

Common climate ambition

Harmonising jurisdictional approaches



Information sharing and common toolkits

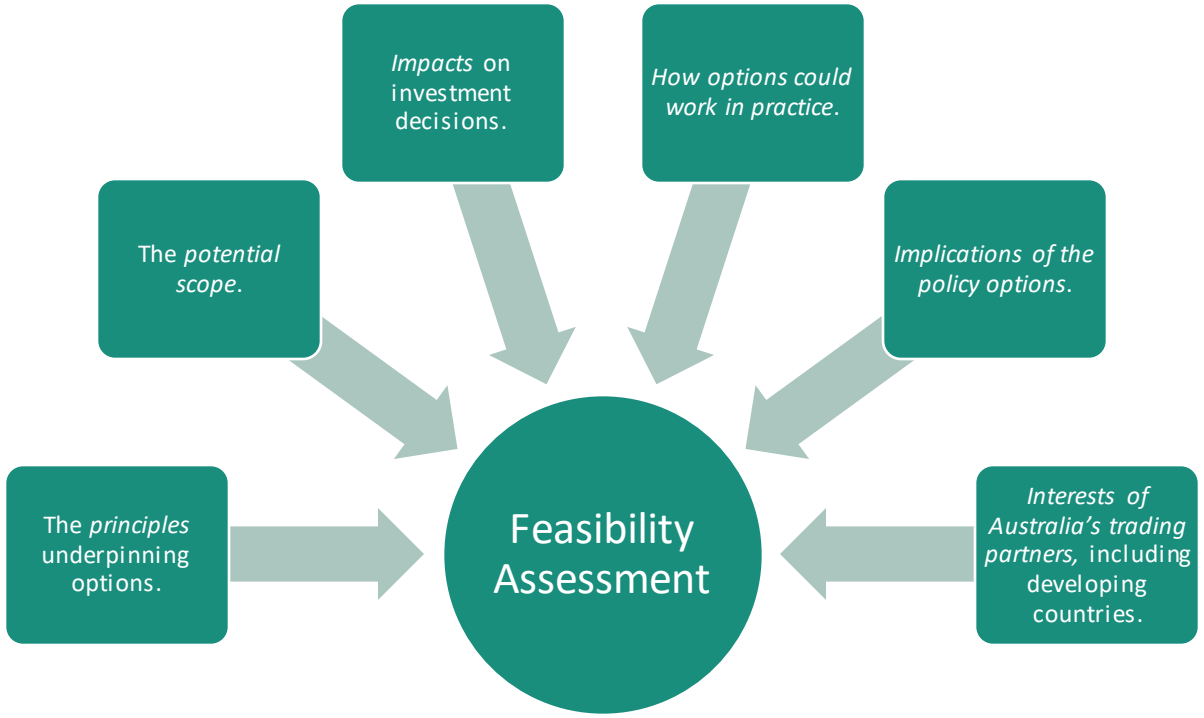
## International examples

- **G7 initiated Climate Club** – Focus on decarbonisation of industry, including reducing carbon leakage.
- **OECD/IEA, including the Inclusive Forum on Carbon Mitigation Approaches (IFCMA)** – Improve emissions reduction through better data & information sharing.
- **Coalition of Trade Ministers on Climate** – Forum for Trade Ministers to cooperate on climate-related trade policy issues.
- **WTO Committee on Trade and Environment** – Forum to discuss trade/climate nexus.

| 3.5 Multilateral and plurilateral initiatives |
| --- |
| •What is the appropriate role for multilateral and plurilateral initiatives to help to mitigate carbon leakage, and the impact of unilateral measures taken to address carbon leakage? |

# Section 4 - Feasibility of policy options

# Feasibility of policy options




- Each of the factors will be considered as part of the policy suite.
- This is a multi-factorial analysis that will be applied to each policy and combinations thereof.
- The assessment will be underpinned by scenario analysis.

**4. Feasibility of policy options**

- What principles should guide Australian policies to prevent carbon leakage?
- Should other factors be considered to assess the feasibility of potential policies?

# Consultation Paper

Released 13 November 2023

Submissions close 12 December 2023

https://consult.dcceew.gov.au/

# Contact us

**Carbon Leakage Review**
carbonleakagereview@dcceew.gov.au

dcceew
gov.au