



Australian Government

Department of Climate Change, Energy,  
the Environment and Water

# The NGER scheme: continuous improvement

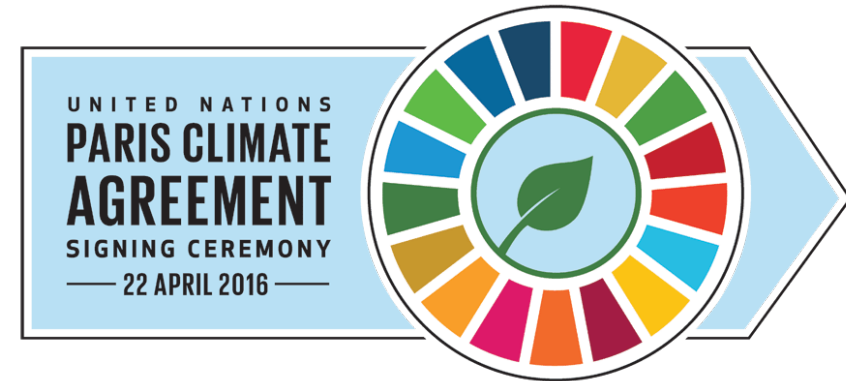
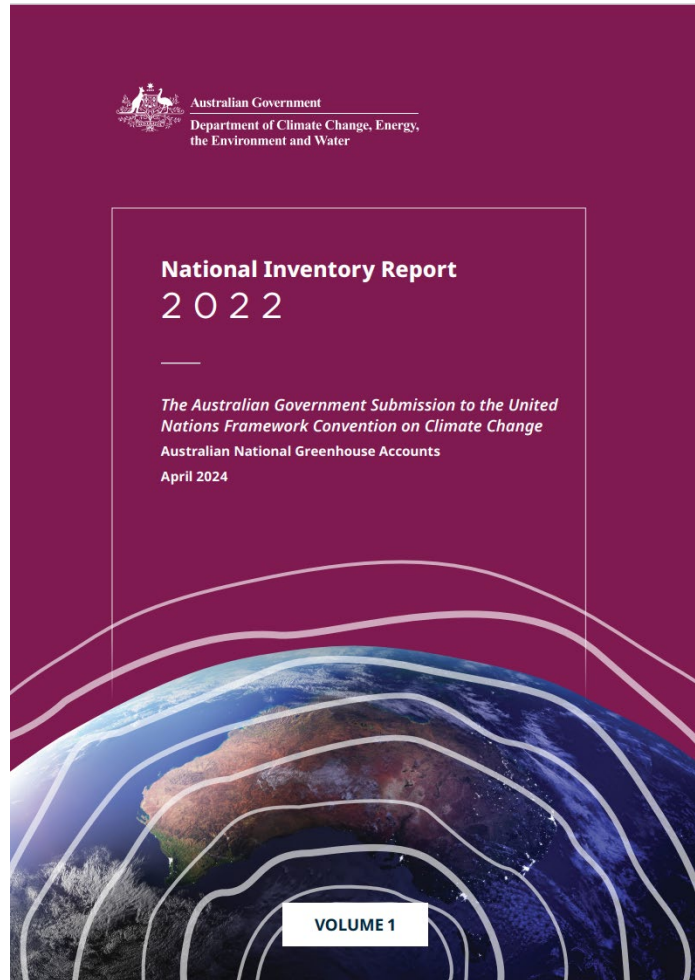
Methane Guiding  
Principles Masterclass

Brooke Perkins

20 May 2024



# Australia's national greenhouse gas inventory



**United Nations**  
Framework Convention on  
Climate Change



# Australia's National Greenhouse Accounts

The screenshot shows the website for Australia's National Greenhouse Accounts. The header includes the Australian Government logo and the Department of Climate Change, Energy, the Environment and Water. A search bar is present in the top right. The main navigation menu includes: Latest emissions data, Emissions inventories, Emissions projections, Datasets and API, and Help and support. The current page is titled "Emissions inventories" and includes a breadcrumb trail: Home > Emissions inventories. Below the title is a brief description: "Find information on Australia's greenhouse gas emissions, including inventories used to meet emissions reporting requirements under the Paris Agreement, UNFCCC and Kyoto Protocol. Emissions data is reported since 1990 and can be viewed by state and territory, economic sector and scope 2 emissions." The main content area features a grid of eight inventory categories, each with a title and a short description:

- Paris Agreement inventory**: National inventory used to track progress towards Australia's Paris Agreement targets.
- State and territory emissions**: National inventory disaggregated by Australian state and territory.
- National inventory by economic sector**: National inventory disaggregated using Australian and New Zealand Standard Industrial Classification (ANZSIC).
- National Greenhouse Inventory Quarterly Update**: The latest quarterly update of Australia's national greenhouse gas inventory.
- Scope 2 emissions by economic sector**: Estimates of indirect emissions from purchased electricity generation.
- Paris Agreement inventory memo items**: Additional emissions sources reported under the Paris Agreement (including international aviation and shipping).
- UNFCCC inventory**: National inventory used to report emissions under the UNFCCC.
- Kyoto Protocol inventory**: National inventory used to track progress against Australia's 2020 targets.

Fulfil international and domestic emissions reporting obligations

Official basis for tracking progress towards Australia's targets

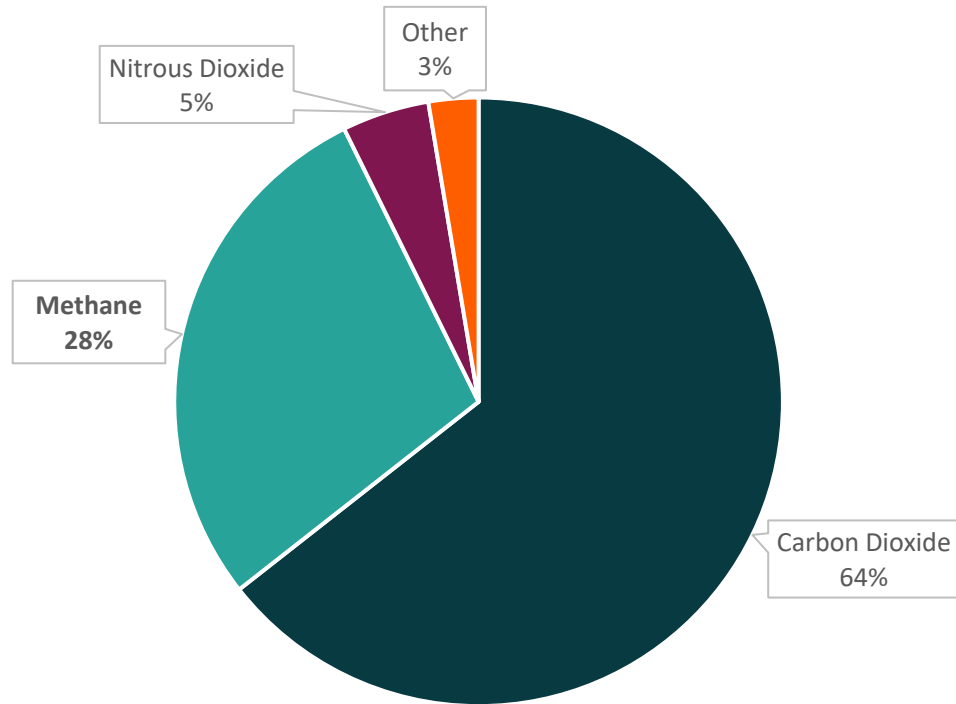
Support the design and implementation of domestic mitigation measures

Independently monitor policies and programs

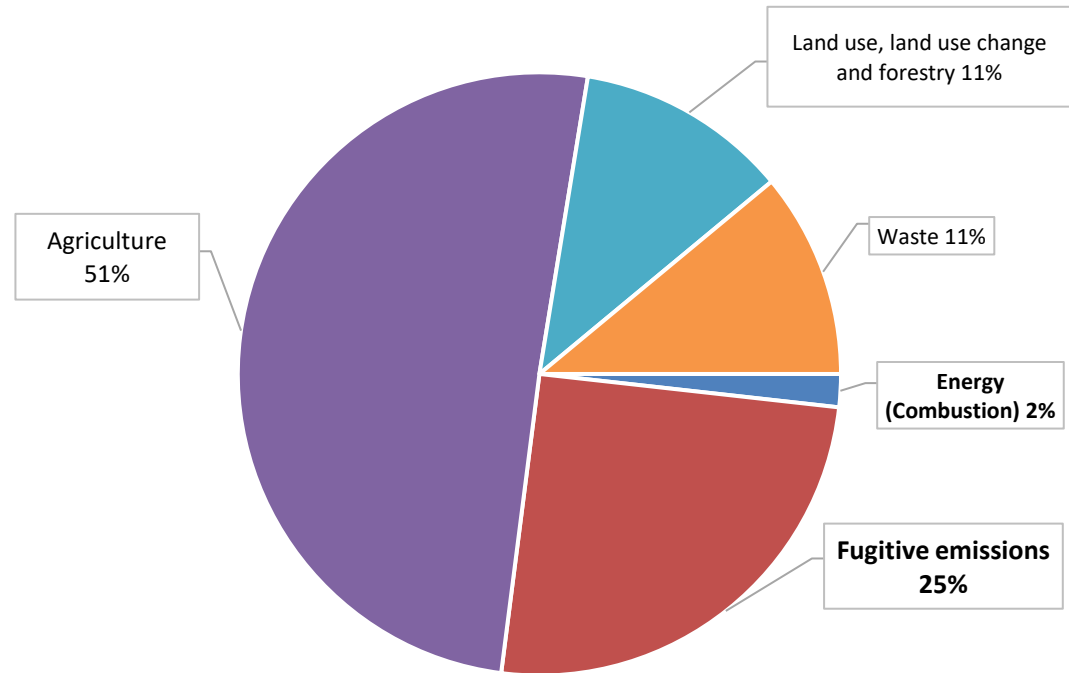
Inform Australia's future targets

# Snapshot: Australia's emissions: 2022

National emissions by gas (%)

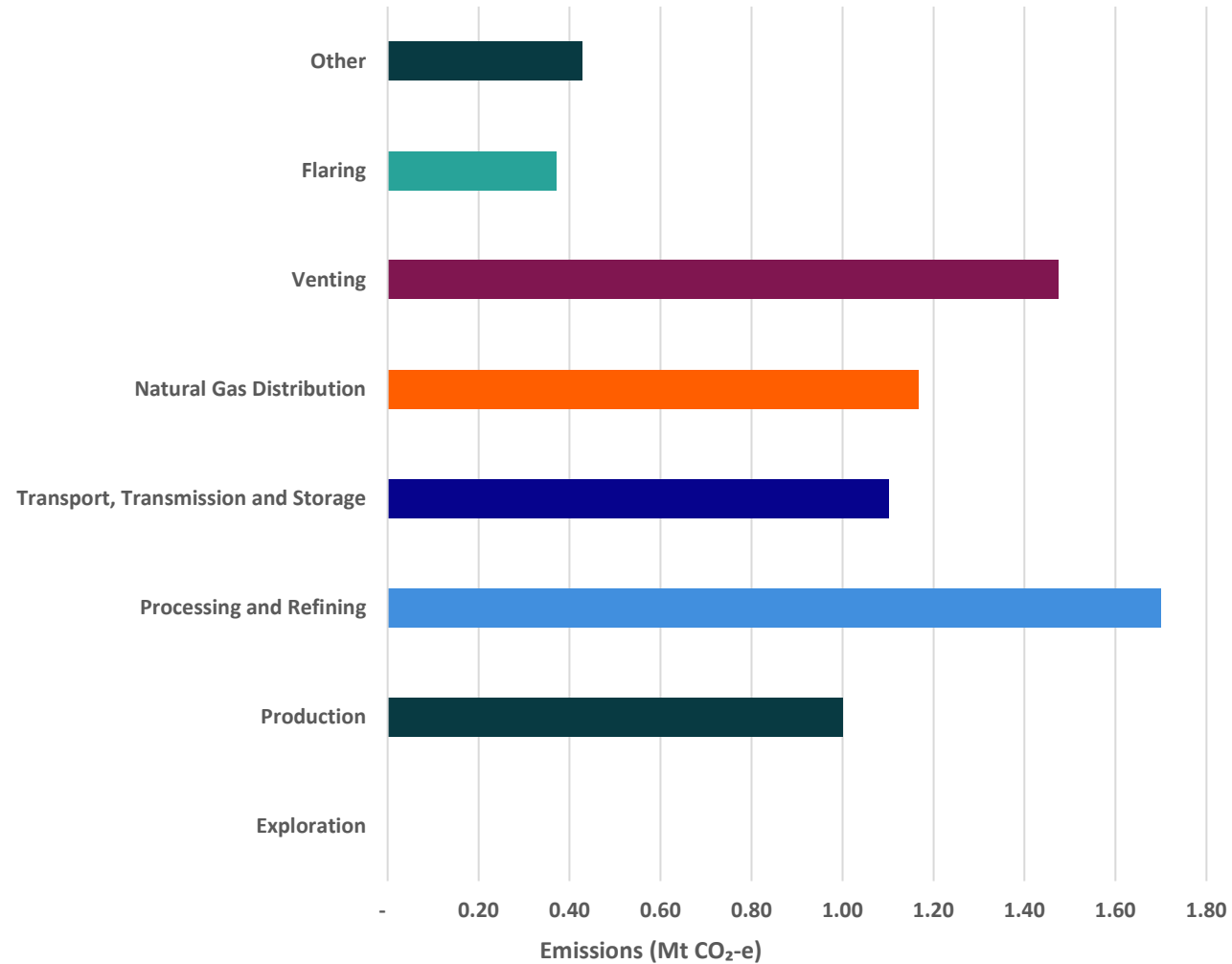


Methane emissions by sector\* (%)

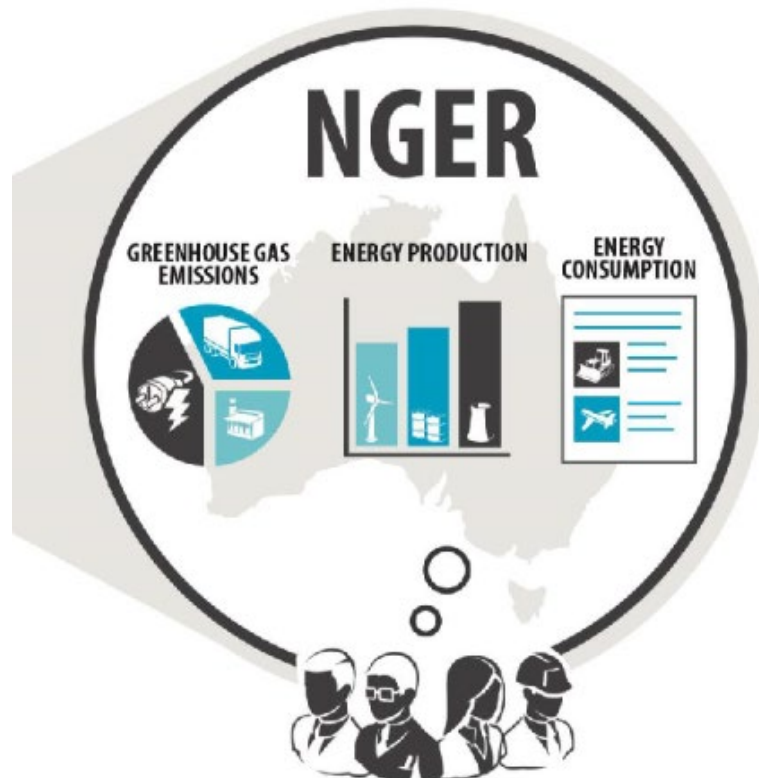


\* Industrial Processes & Product Use: <1%

# Oil and gas sector: Methane emissions by source 2022

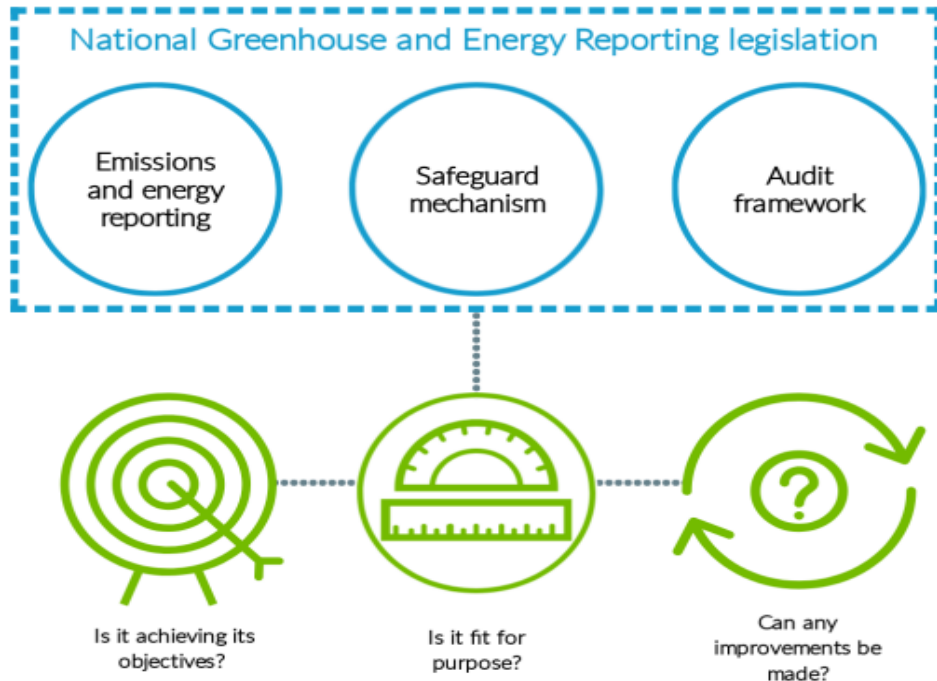


# National Greenhouse and Energy Reporting scheme



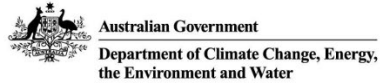
- Key data source for the National Inventory
- Australia was amongst the first countries in the world to legislate such a program
- Remains one of the world's most comprehensive company emissions reporting systems
- Subject to continuous improvement
  - ✓ Annual reviews by DCCEEW
  - ✓ 5-yearly reviews by the Climate Change Authority

# NGER scheme: 2023 Climate Change Authority review



- Performing well and compliance is high.
- 25 recommendations. 9 methane-related:
  - Phase out Method 1 options and establish higher order methods for all sources.
  - Review Integrated Gas Facility requirement to apply same methods across activities.
  - Develop a framework for facility-level use of top-down verification and reconciliation approaches, supported by further research.
  - Increase investment in methane detection/estimation infrastructure and capability.
  - Increase transparency of reported data.

# NGER scheme: 2024 proposed amendments



## National Greenhouse and Energy Reporting (NGER) scheme

2024 Proposed Amendments

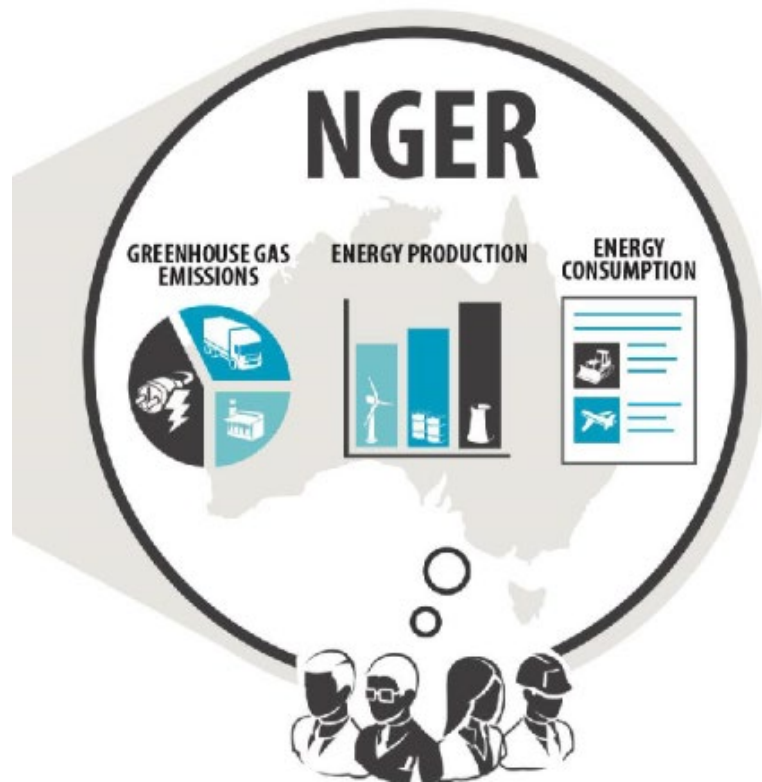


- Public consultation 29 April – 24 May 2024
- Includes proposals relating to methane emissions from the oil and gas sector:
  - Venting
  - Flaring
  - Mud-degassing
  - Produced formation water
  - Method transparency



# NGER scheme: What's next? Improved/new methods

## *Guiding principles*



Sound science and credible information

Regulatory best practice – clearly defined, implementable

Accurate emissions estimates – repeatable, verifiable, can inform the National Greenhouse Accounts

Estimates for a particular source are comparable between facilities

Minimises uncertainty

# NGER scheme: What's next? Improved/new methods

## *What are your views?*

### Method 1

- Measure activity data (eg. tonnes of coal)
- Use default factors (eg. state-based emission factors)

### Methods 2 & 3

- Requires greater level of sampling (e.g. methane content)
- Facility specific emission factor

### Method 4

- Directly measure emissions (eg. in stacks)

Existing barriers to moving to higher order methods?

How can methods better reflect onsite abatement?

What can we learn from international/domestic experience with new approaches?

How can we incorporate new tech in a way that's repeatable, comparable, verifiable and tech-neutral?

What Australia-specific research & analysis could support future improvements?

# Thank you

Contact us: [nationalgreenhouseaccounts@dcceew.gov.au](mailto:nationalgreenhouseaccounts@dcceew.gov.au)

