

A wide-angle photograph of a rural landscape. In the foreground, there is a field of golden-brown hay with several large hay bales scattered across it. In the middle ground, a line of green trees separates the field from a small village with red-roofed houses. The background is a vast blue sky filled with large, white, fluffy clouds.

## **CLIMATE POLICY & CARBON MARKETS**

**AWRI – Opportunities in a new climate**

November 2014

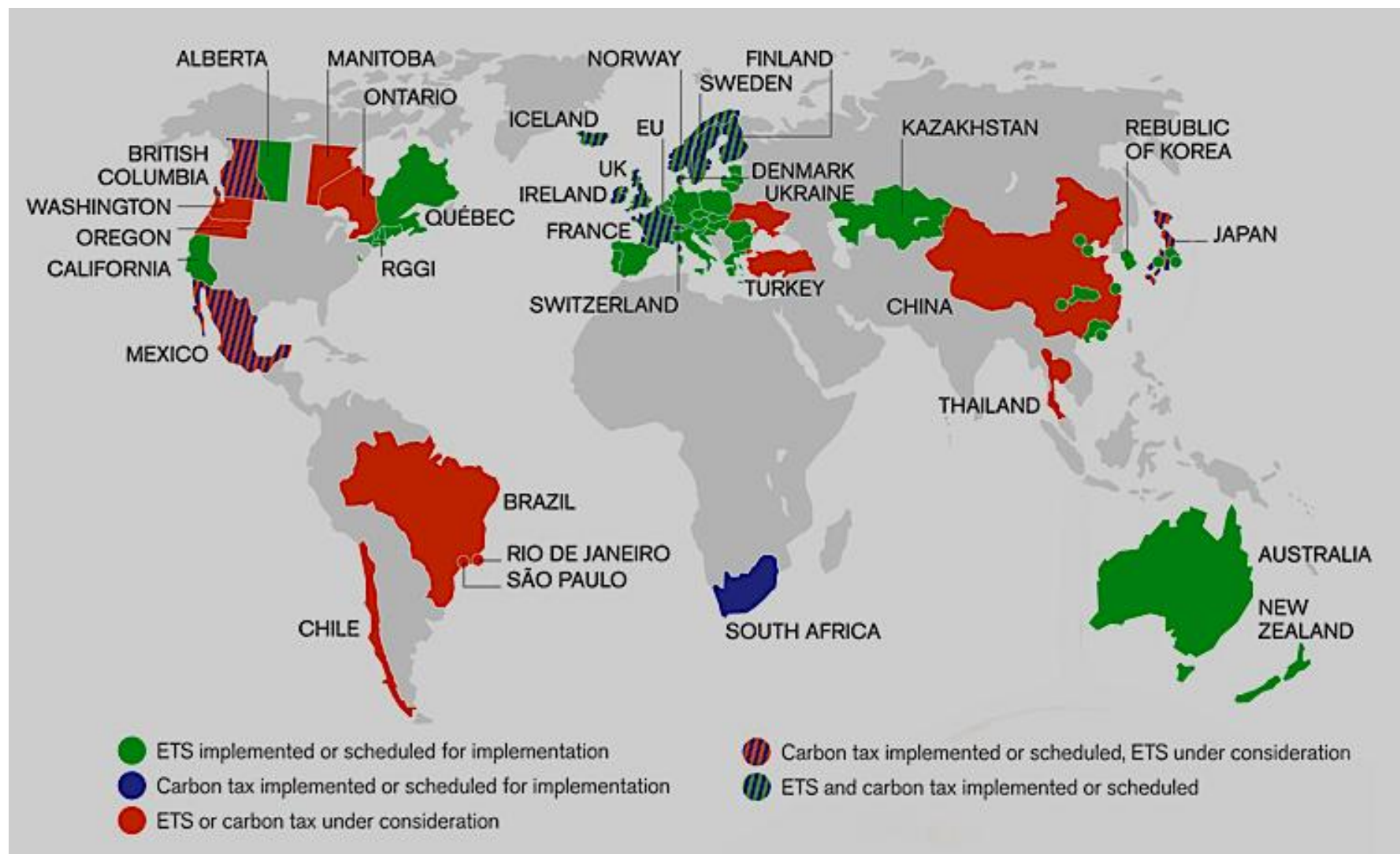
# Why is reducing agricultural emissions important?

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1. **LEADERSHIP:** No industry is more exposed to the impacts of a changing climate – if we won't cut emissions, why should anyone else?
  
1. **PUSH:** Climate policy, carbon markets & regulation
  - Global Alliance on “Climate Smart Agriculture”
  - Carbon Farming Initiative / Emission Reduction Fund
  
2. **PULL:** Sustainable supply chains
  - Corporate commitments
  - Consumer attitudes to food/beverage

- Food production needs to increase by 60% to feed 9 billion by 2050.
- Climate change effects food security AND land-use contributes 25% of global emissions.
- Global Alliance for Climate Smart Agriculture:
  - 500 million farmers targeted by 2030: increase productivity + income, resilience & mitigation.
  - 20+ countries to promote CSA by 2020 along with 35+ organisations, including:
    - McDonald's
    - Kellogs
    - Yarra
    - Walmart

# Global Carbon Markets

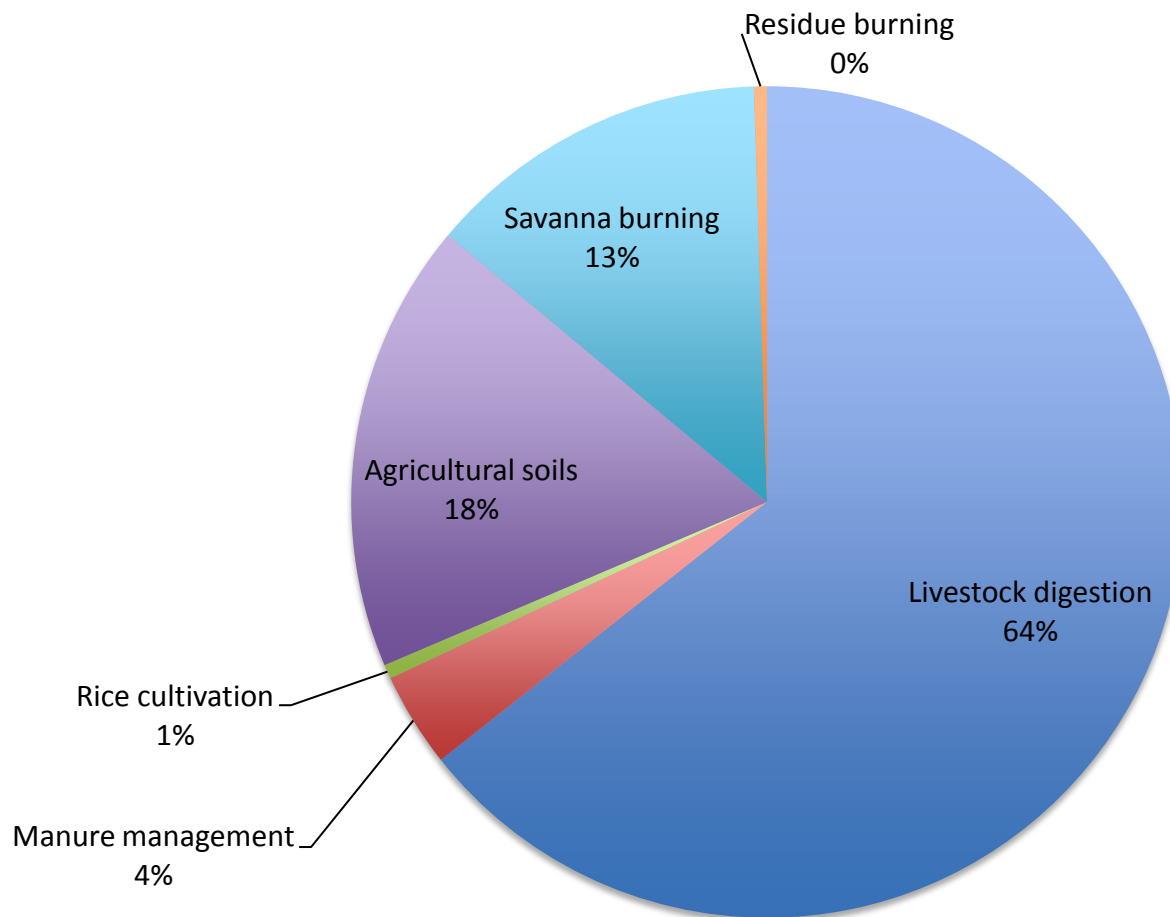


- 39 National + 23 sub-national jurisdictions have introduced cap & trade and/or carbon taxes
  - Cover 25% of global emissions, carbon markets valued at US\$30 billion
- Source: World Bank 2014

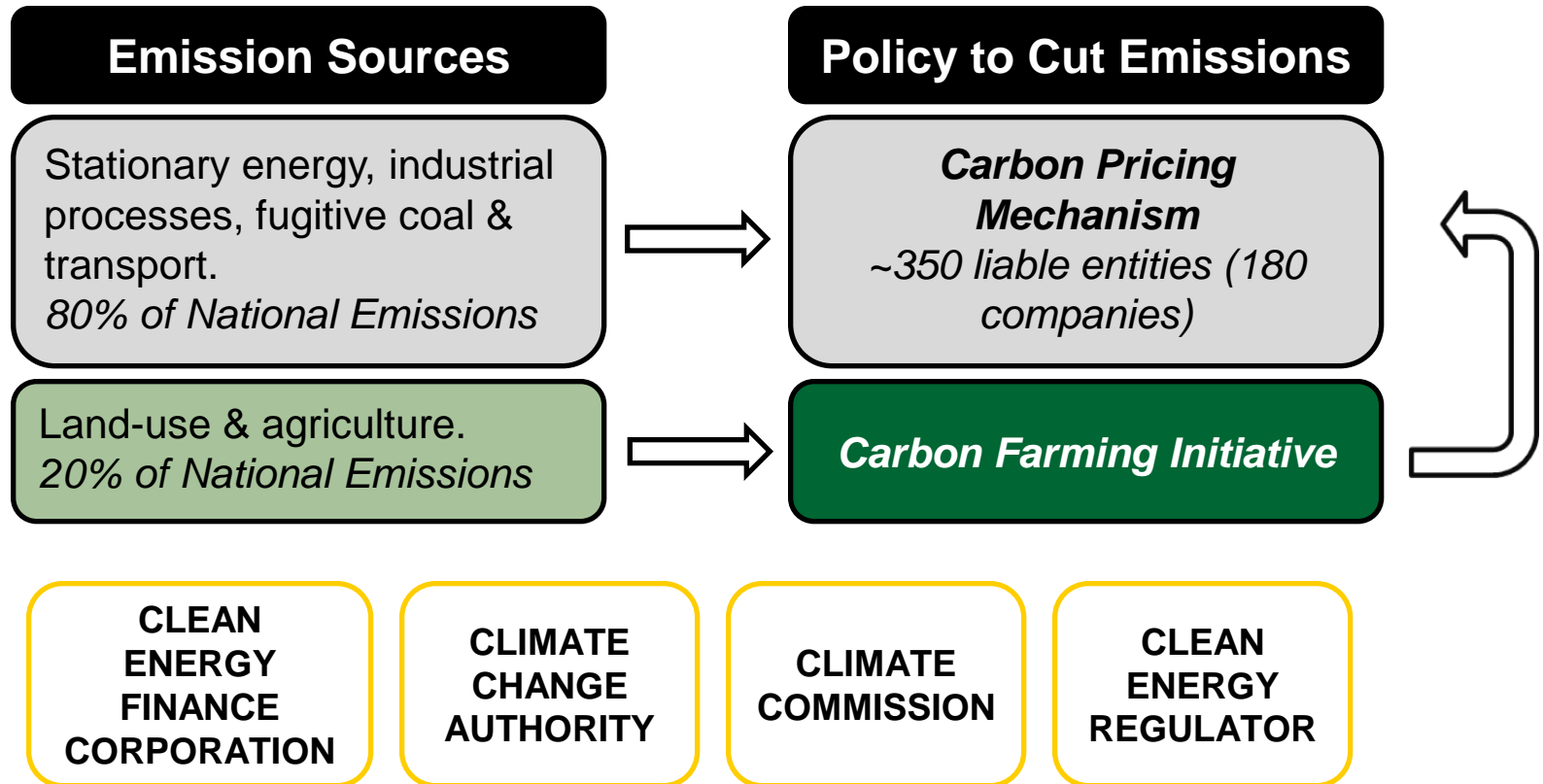
# Australia's Emissions Inventory

Sector	Total (MtCO <sub>2</sub> e)	Share of Total
Electricity Generation	283.2	50.7%
Transport	90.2	16.1%
<b>Agriculture</b>	<b>87.4</b>	<b>15.6%</b>
Fugitive Emissions	39.9	7.1%
Industrial Processes	31.2	5.6%
Land use, land use change and forestry	15.2	2.7%
Waste	11.7	2.1%
<b>TOTAL</b>	<b>558.8</b>	

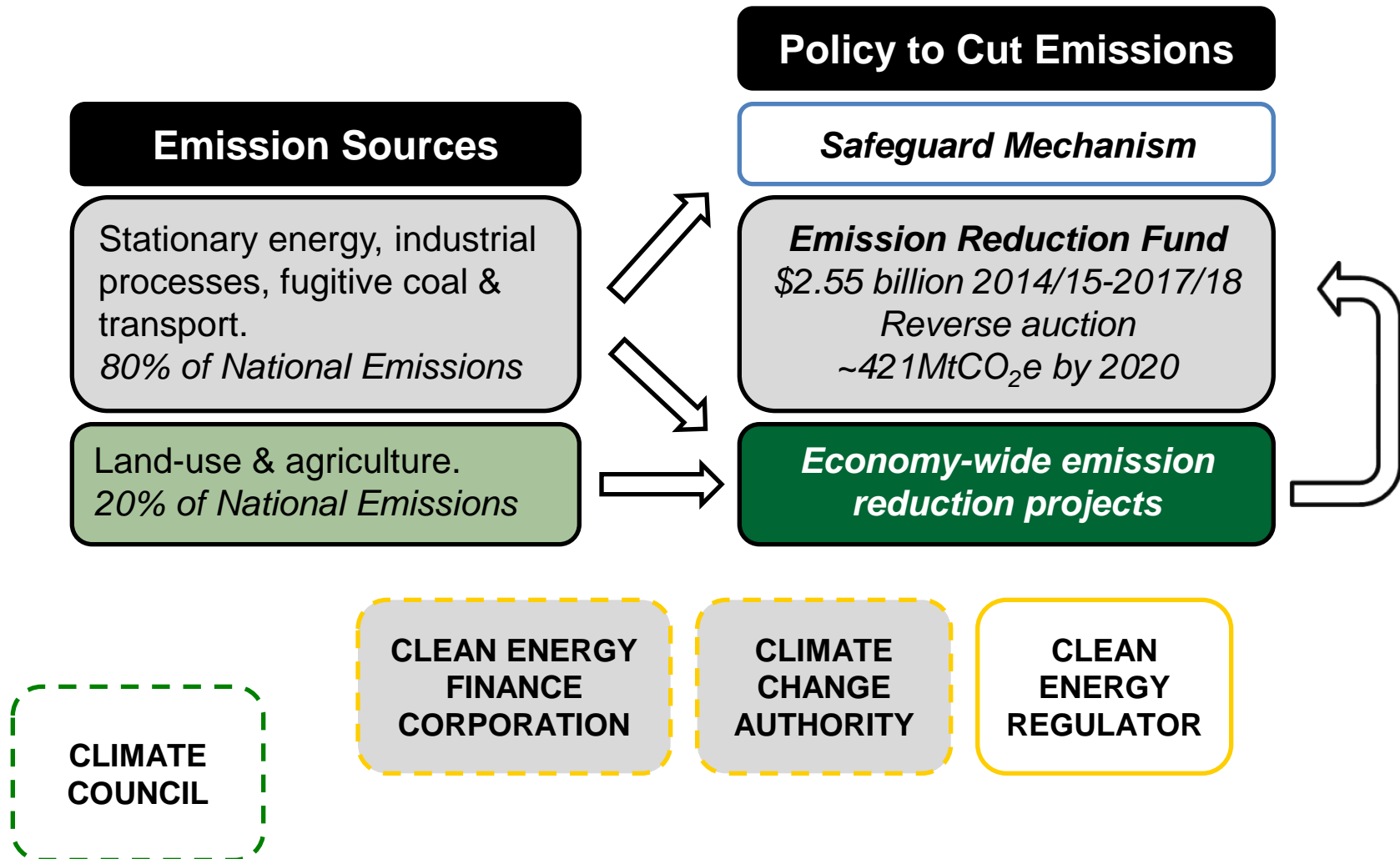
# Emissions from Agriculture



# CFI & Carbon Pricing Policy



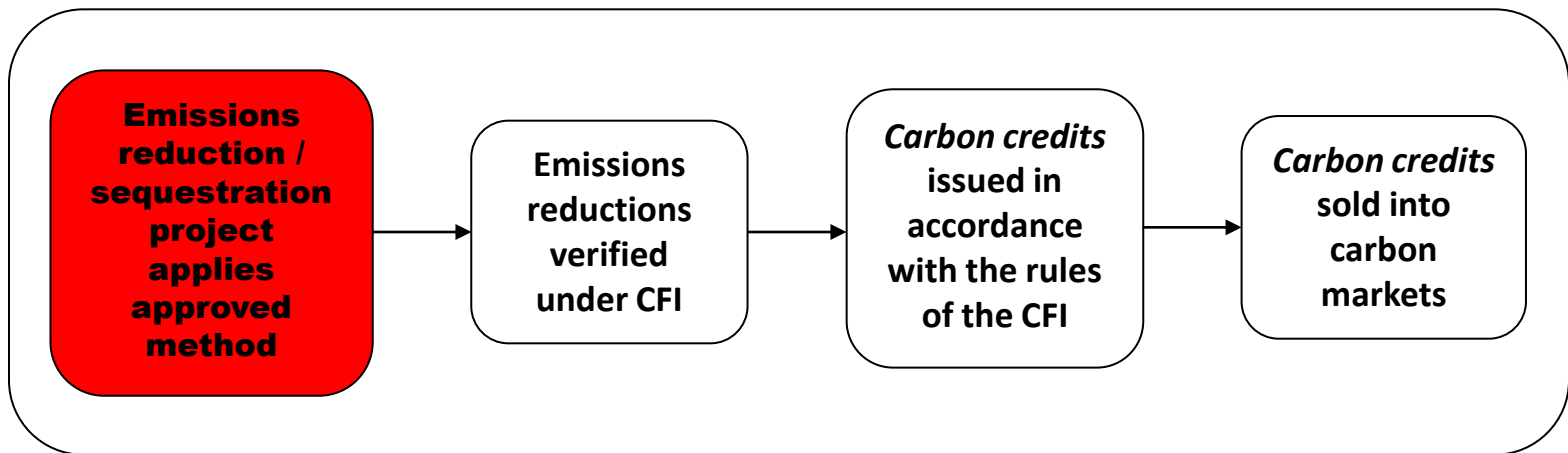






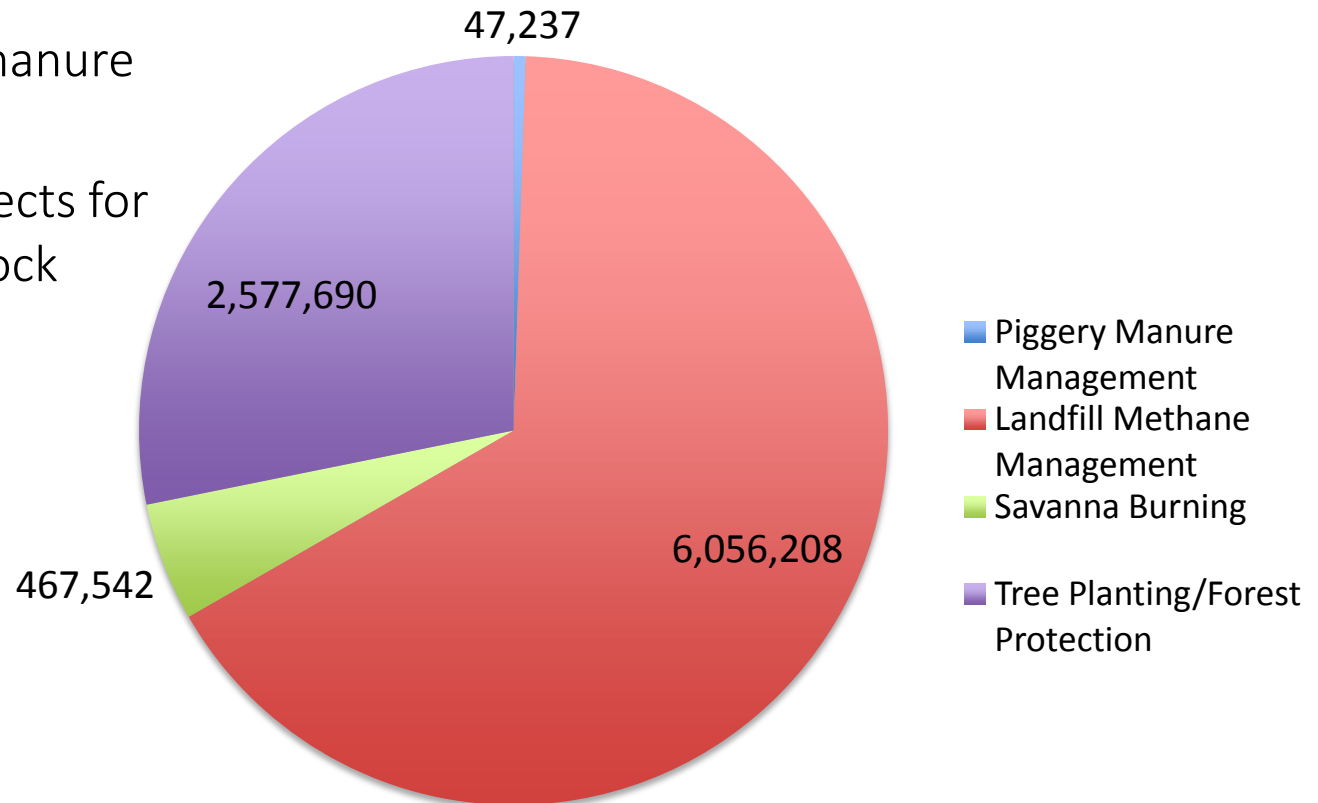
# About the CFI

- The CFI aims to provide financial incentives for landholders and landfill operators to develop projects that will reduce greenhouse gas emissions.
- CFI projects issued with carbon credits called Australian carbon credit units (ACCUs).
- 1 ACCU = 1 tCO<sub>2</sub>e reduced or sequestered



- Projects

- 9 million ACCUs issued
- 7 approved projects out of 171 relate to agriculture
- All are piggeries manure methane flaring
- No approved projects for cropping or livestock operations





SMH: Penny Bradfield



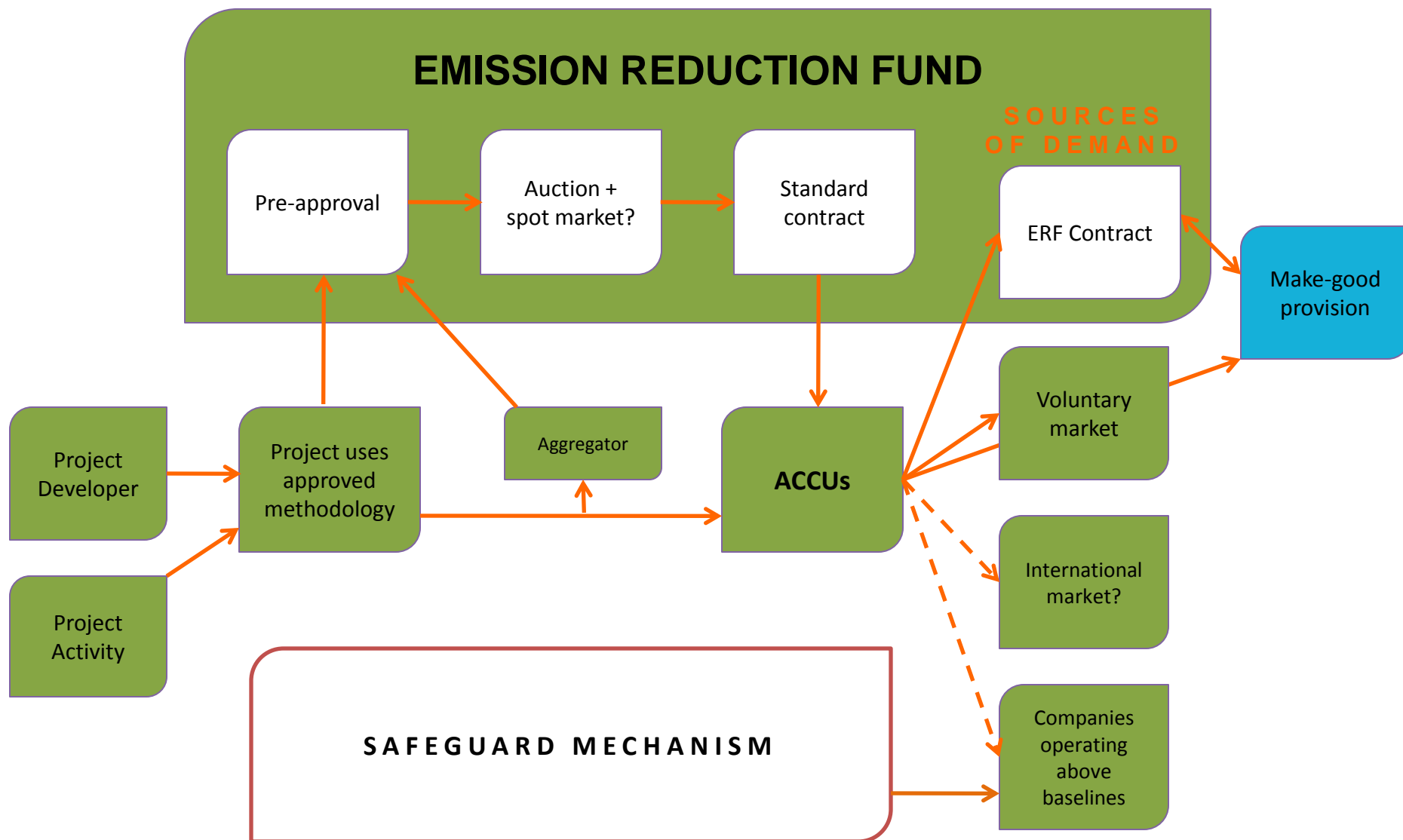
AAP: Alan Porritt

# What Changes Under the ERF?

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- CFI will be folded into the ERF creating one programme.
- All existing CFI projects and methodologies will be recognized under the ERF legislation.
- Extends coverage of the CFI to allow crediting of emissions reductions across the economy.
- Reverse auctions to purchase emissions reductions by Clean Energy Regulator.
- Crediting improvements in emissions intensity.
- Safeguard Mechanism baselines prevent emissions growth.

# Creating & Selling Carbon Credits



- Energy efficiency
  - Refrigeration + air conditioning
  - Water heating + heat recovery
  - Air compressor performance
- Wastewater treatment + other renewables
- Fertiliser management
- Value-add products – grape marc methane inhibition in livestock

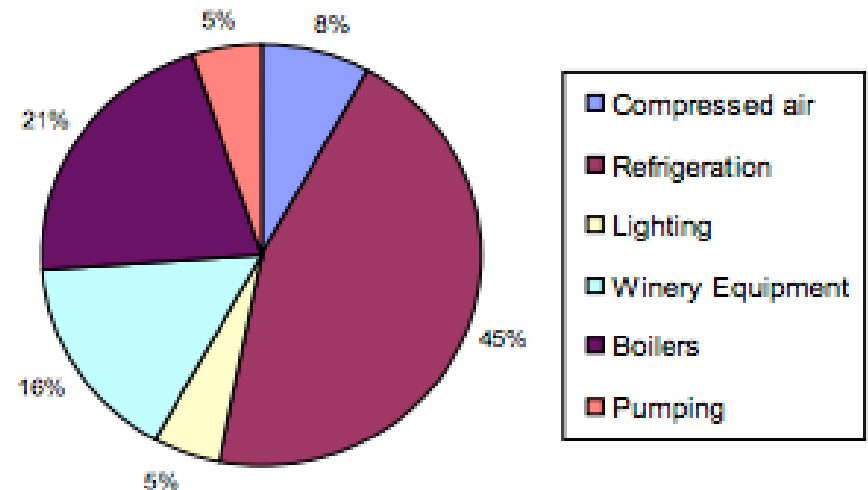


Figure 1: Winery energy use by process area

Source: AWRI Energy Audit fact sheet

- Current challenges
  - Policy uncertainty
  - Lack of available/applicable methodologies
  - Aggregation to overcome transaction costs
  - Price signal is not clear (yet)
- Opportunities
  - Emissions sources often represent lost energy or waste
  - So, cutting emissions = productivity improvement
  - Major R&D + E&O effort into emissions reducing techniques
  - Improved efficiency + carbon credits = increased profitability & climate leadership



# Thank you

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