



opportunities in a new climate

Building resilience & sustainability in the grape
and wine sector

viticulture@awri.com.au



The_AWRI

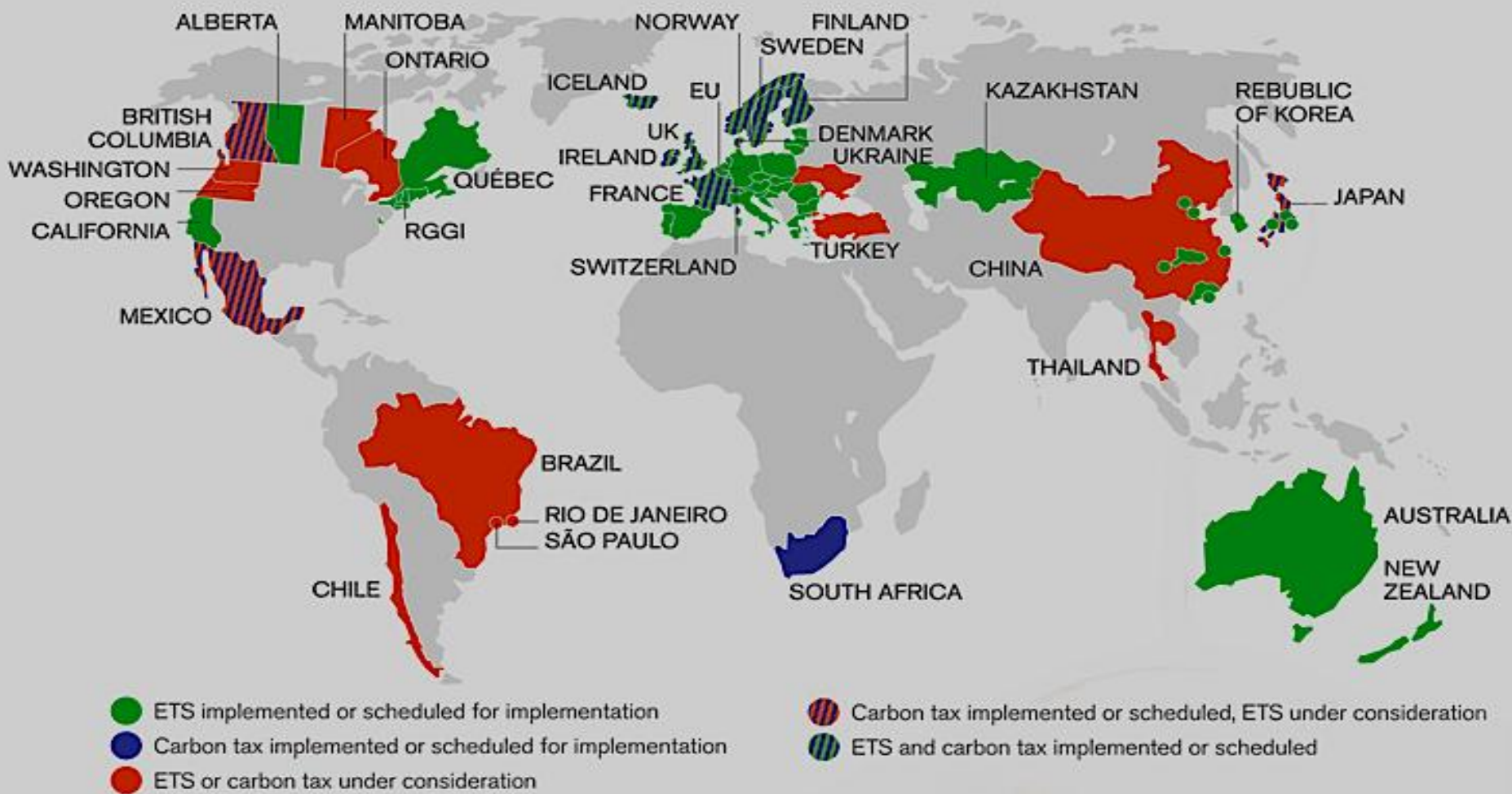


The_AWRI

Global Carbon Markets & Australia



The Australian Wine
Research Institute

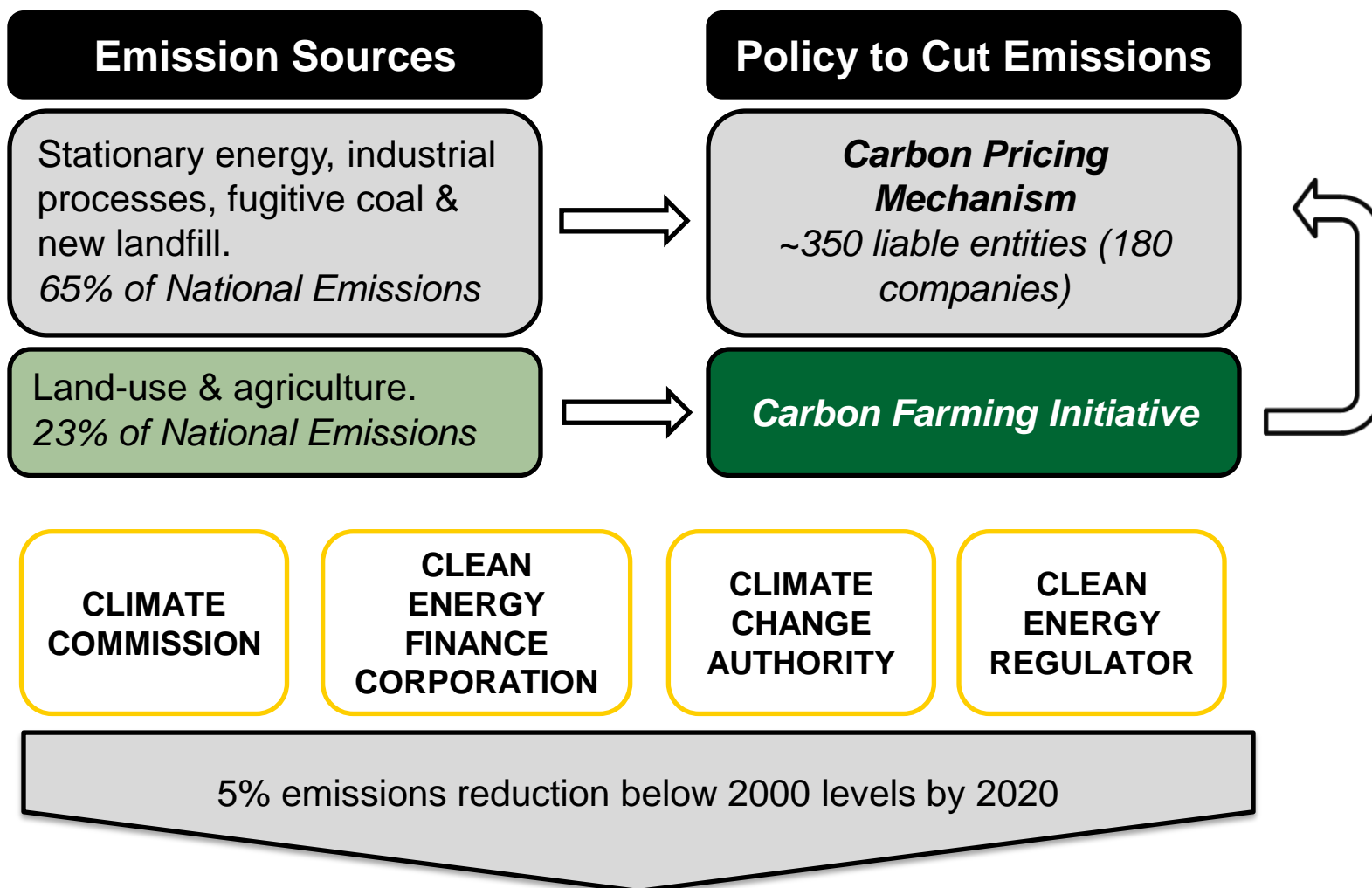


- 39 National + 23 sub-national jurisdictions have introduced cap & trade and/or carbon taxes
 - Cover 25% of global emissions, carbon markets valued at US\$30 billion
- Source: World Bank 2014

What is the CFI?



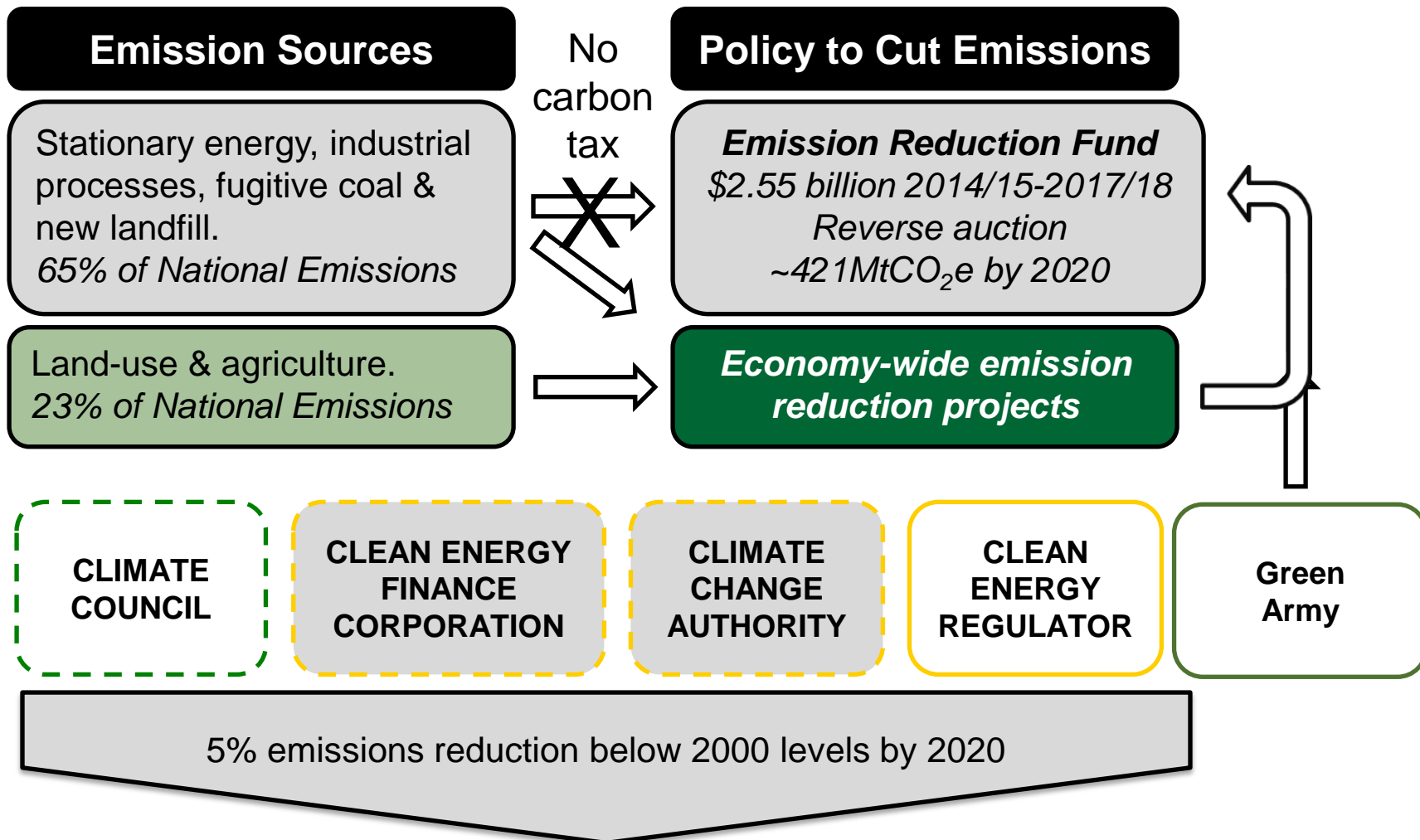
The Australian Wine
Research Institute



Direct Action and ERF



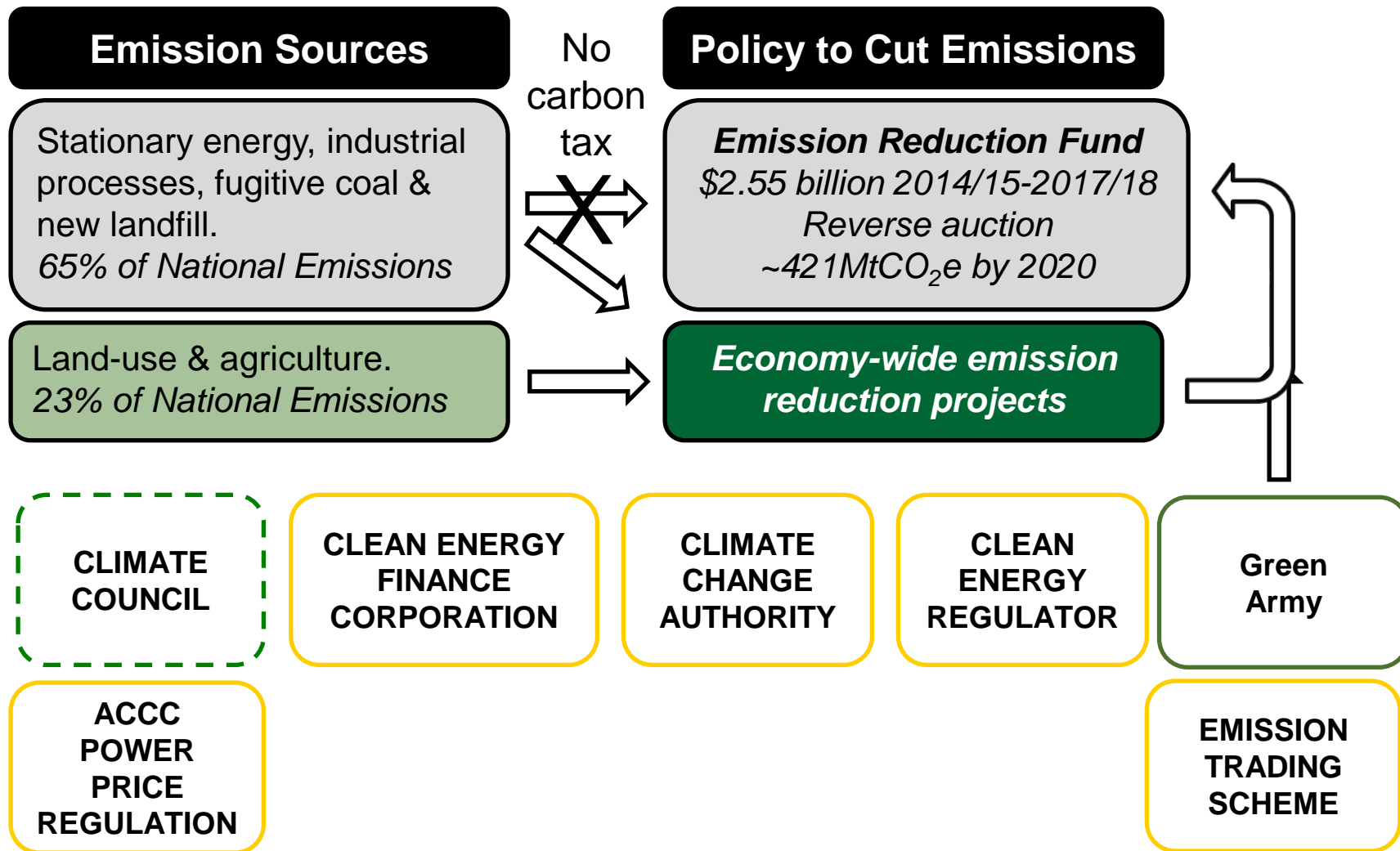
The Australian Wine
Research Institute



ERF & Palmer Amendments



The Australian Wine
Research Institute



- ❖ Financial incentives to develop projects that will reduce greenhouse gas emissions
- ❖ Energy, industrial processes, fugitive coal, landfill, waste treatment
 - Emissions capture, energy efficiencies, transport, waste
- ❖ Land Use and Agriculture
 - Previous CFI projects

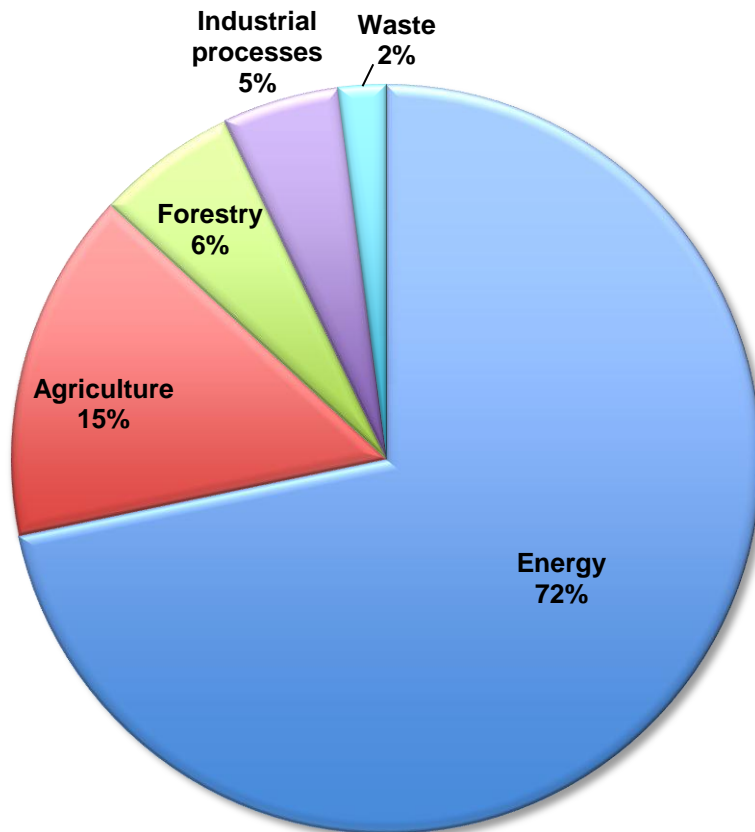
- ❖ Crediting of emissions reductions/improvements across the economy with carbon credits called Australian carbon credit units (ACCUs)
- ❖ 1 ACCU = 1 tCO₂e reduced or sequestered
- ❖ Reverse auctions to purchase emissions reductions by Clean Energy Regulator

Australia's carbon footprint

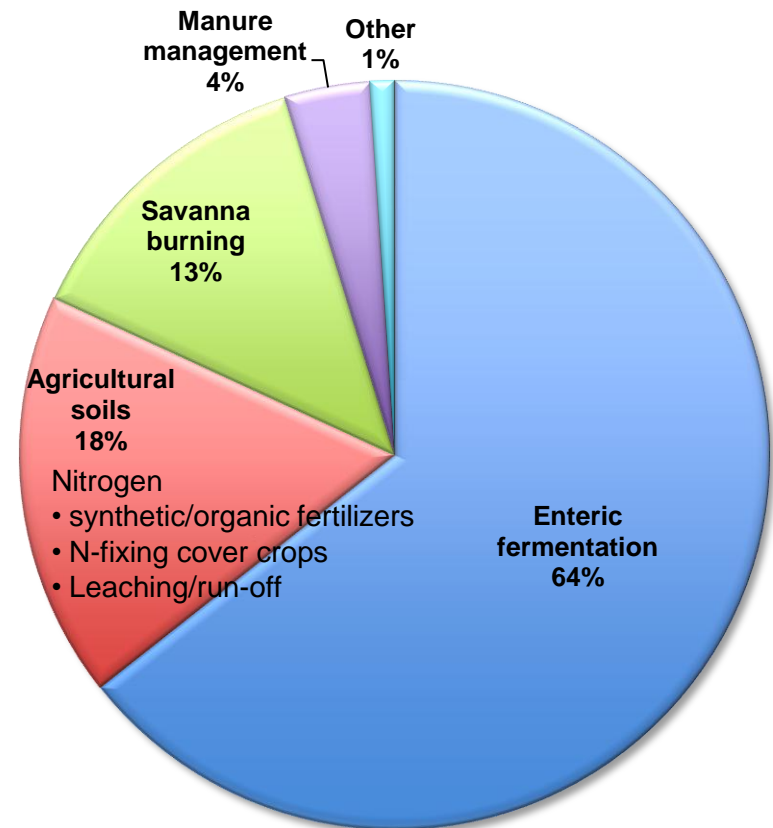


The Australian Wine
Research Institute

Australia's net greenhouse gas emissions by sector



Agriculture sector CO₂-e emissions



ERF projects in agriculture

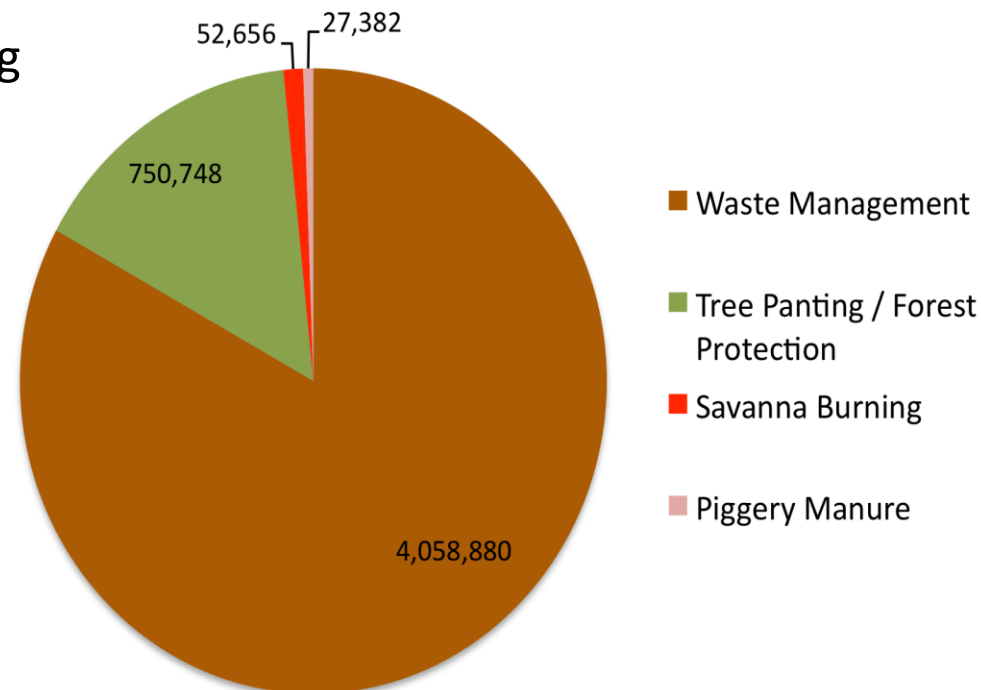


The Australian Wine
Research Institute

❖ 7 approved CFI projects out of 122 relate to agriculture

❖ 6 million ACCUs issued

- 4 million are landfill waste management
- 1.4 million tree plantings
- Piggeries manure methane flaring
- Savanna burning in North
- No approved projects for cropping or livestock operations



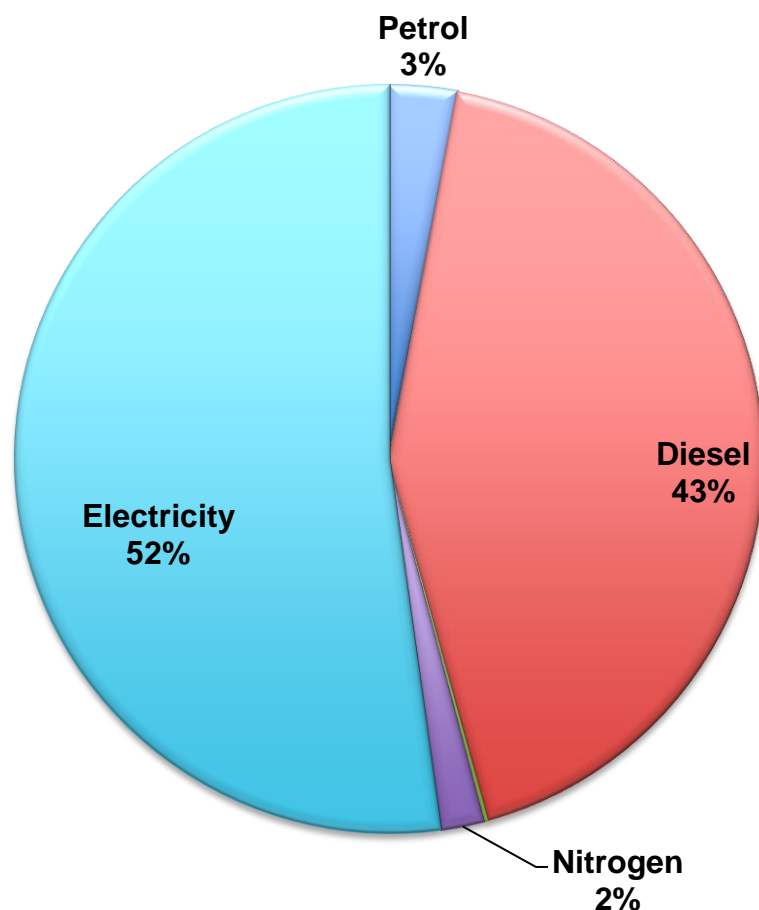
ACCU issuance as at 17th April 2014

Grape and wine footprint (WFA 2013)

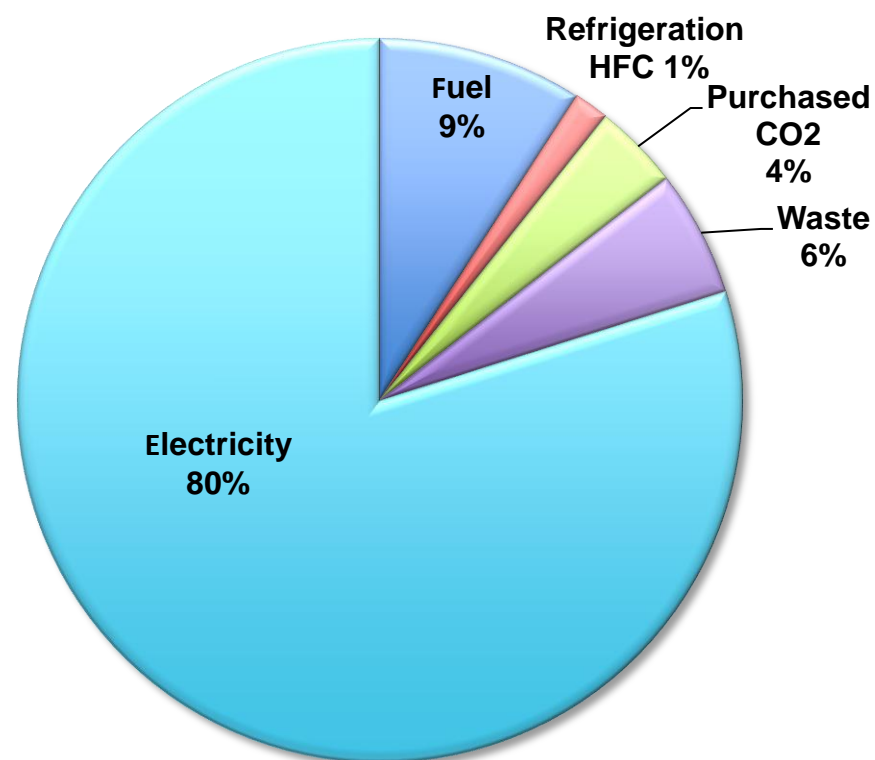


The Australian Wine
Research Institute

Vineyard



Winery



Opportunities for grape & wine



The Australian Wine
Research Institute

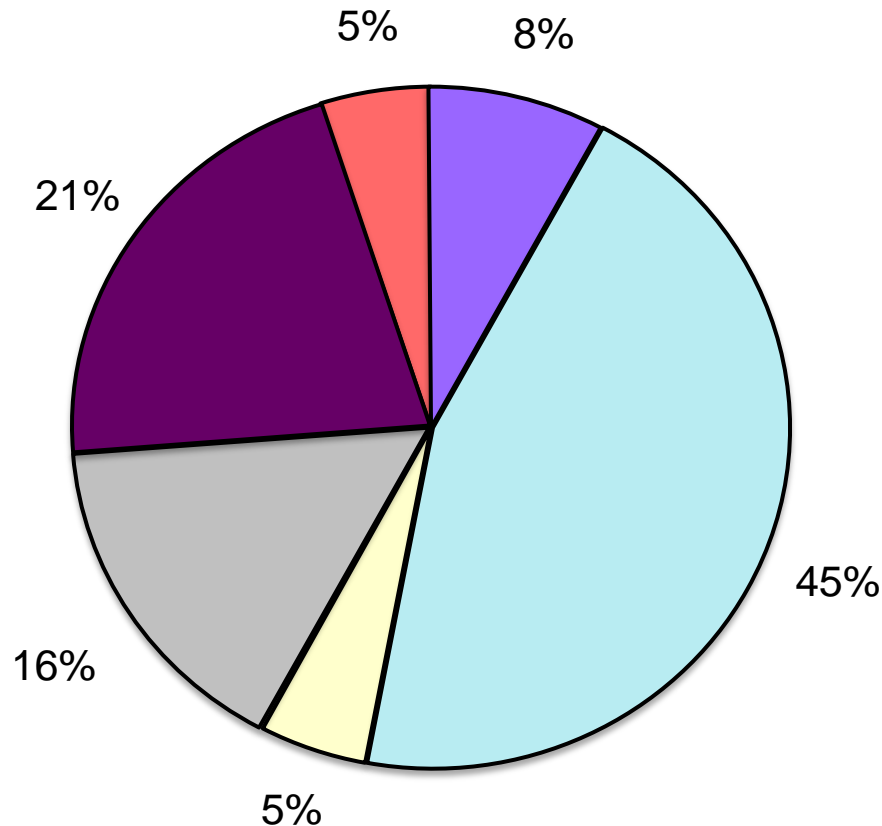
- ❖ Energy efficiencies
- ❖ Wastewater treatment + other renewables
- ❖ Fertiliser management
- ❖ Value-add products – grape marc methane inhibition in livestock
- ❖ Carbon neutral opportunities

Energy efficiency opportunities



The Australian Wine
Research Institute

- ❖ Refrigeration/Heating is 45-70% winery total electricity use
 - >20% savings through changed operational practices (AWRI energy audits)
 - Use of alternatives for juice clarification and cold stabilisation



Process areas for efficiency improvements

-  Pumping
-  Lighting
-  Compressed air
-  Winery equipment
-  Boilers
-  Refrigeration

AWRIs E&O role



The Australian Wine
Research Institute



Supporting Australia's
grapegrowers and
winemakers to adapt
to a new climate.



The project team **Matt Holdstock, Mardi Longbottom, Marcel Essling**
and **Geoff Cowey** from the Australian Wine Research Institute.

- ❖ Inform grape & wine sector:
 - GHG emissions
 - ERF
 - Policy
 - Opportunities/participation
- ❖ Support & advice
- ❖ Tools & resources
- ❖ GHG emission reduction strategies into farm management

Acknowledgements



The Australian Wine
Research Institute



Philip Cohn, RAMP Carbon

This project is supported by funding from the Australian Government
Filling the Research Gap
Action on the Ground
Extension and Outreach programs.

www.awri.com.au/industry_support/new_climate/

viticulture@awri.com.au



@The_AWRI



The AWRI