

# Introducing ClimateWorks Australia



ClimateWorks Australia is a new non-profit organisation created by a partnership between The Myer Foundation & Monash University, focused on enabling practical projects to deliver emissions reductions in Australia



THE MYER  
FOUNDATION



MONASH University

Affiliations:



## Our methodology

Four stages:

- Updated the Australian cost curve using McKinsey methodology
- Translated to investor perspective
- Examined barriers to implementation, in particular in four focus areas
- Developed a roadmap

## Our rationale

- Understand the lowest cost opportunities to reduce emissions
- Take account of private cost of capital and taxes & subsidies
- Recognise that cost is not the only factor affecting the implementation of opportunities
- Specify the opportunities in practical detail, and integrate them into a roadmap according to their ease of implementation and risk of emissions lock-in

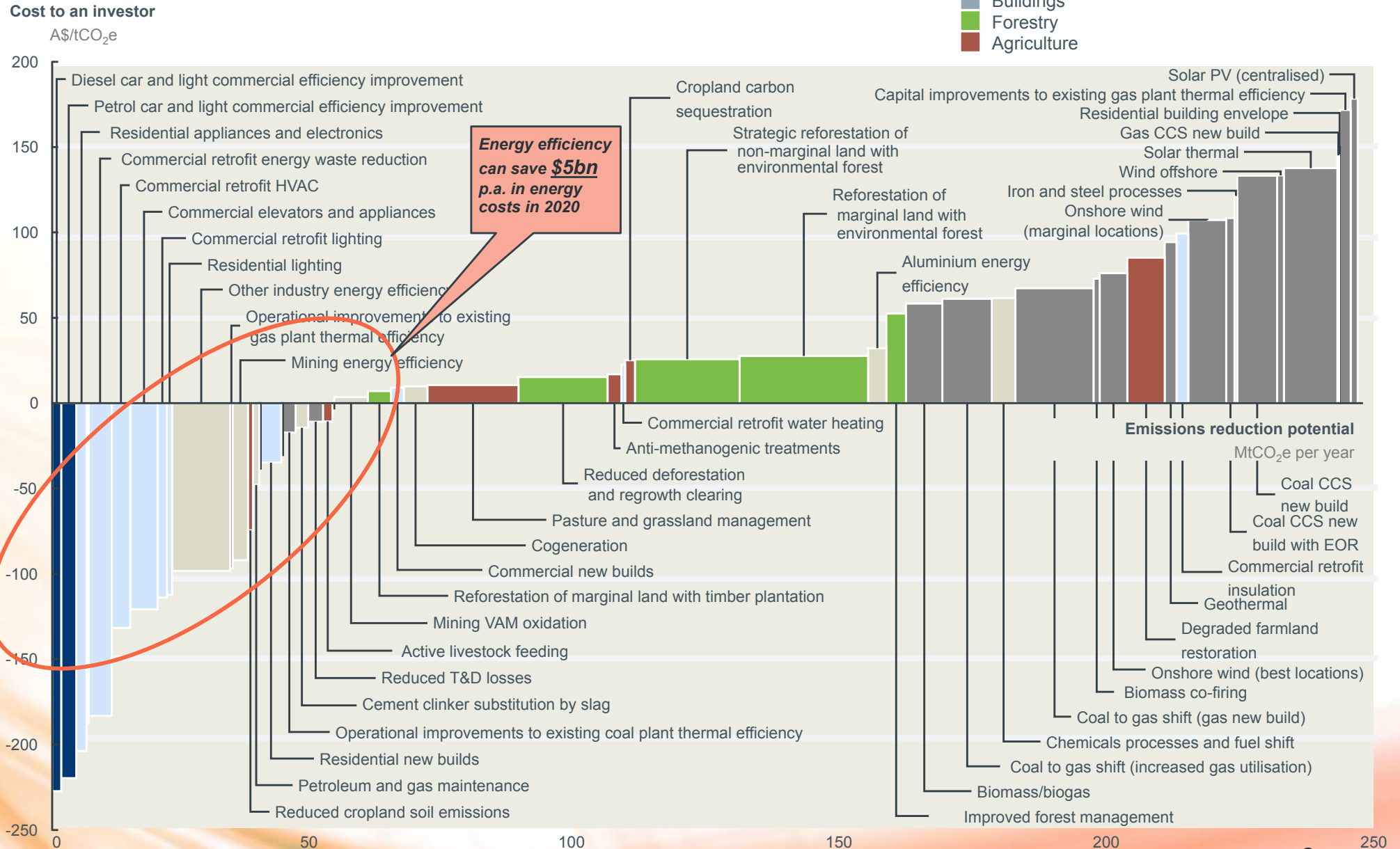
Working with world-leading consultants, in conjunction with secondees from Australian and Victorian Government as part of the project team

# 2020 GHG emissions reduction investor cost curve

Lowest cost opportunities to reduce emissions by 249 Mt CO<sub>2</sub>e<sup>1</sup>



- Power
- Industry
- Transport
- Buildings
- Forestry
- Agriculture



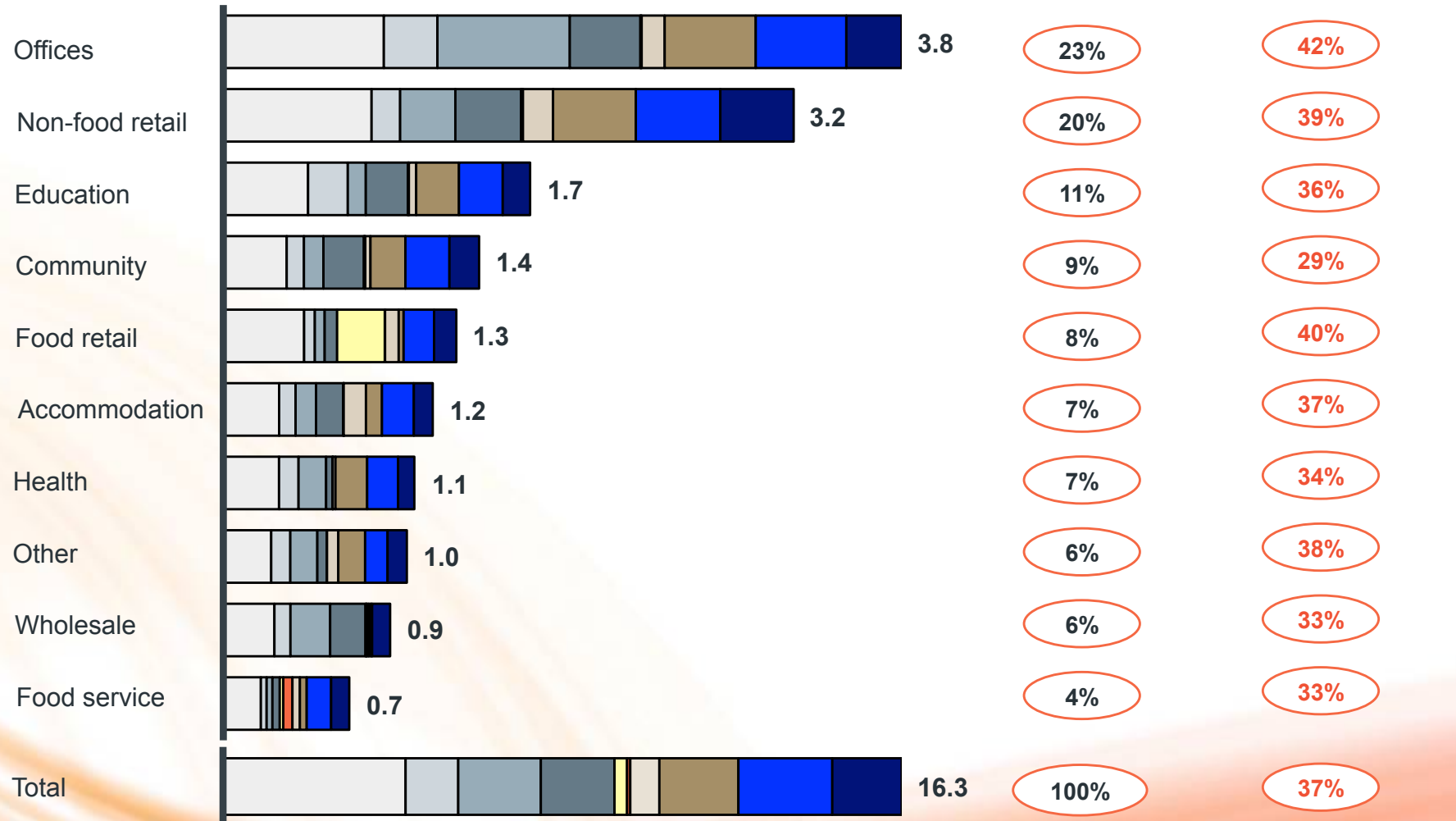
<sup>1</sup> Includes only opportunities required to reach emission reduction target of 249 Mtpa (25% reduction on 2000 emissions); excludes opportunities involving a significant lifestyle element or consumption decision, changes in business/activity mix, and opportunities with a high degree of speculation or technological uncertainty

SOURCE: ClimateWorks team analysis, derived from 2020 GHG emissions reduction cost curve (exhibit 4)

# In commercial buildings, existing technologies can reduce energy use by 37% on average, with over half controlled by the tenant/occupant

- Positive interaction HVAC
- Insulation
- HVAC
- Water heating
- Cooking
- Refrigeration
- Lighting
- Electronics
- Appliances
- Rationalisation

**Emissions reduction opportunity in commercial buildings retrofits**  
MtCO<sub>2</sub>e, 2020 estimates



Commercial buildings represent 58% of the total 28 MtCO<sub>2</sub>e opportunity in the Buildings sector, with residential new builds comprising the remaining 11.8 MtCO<sub>2</sub>e of the total opportunity

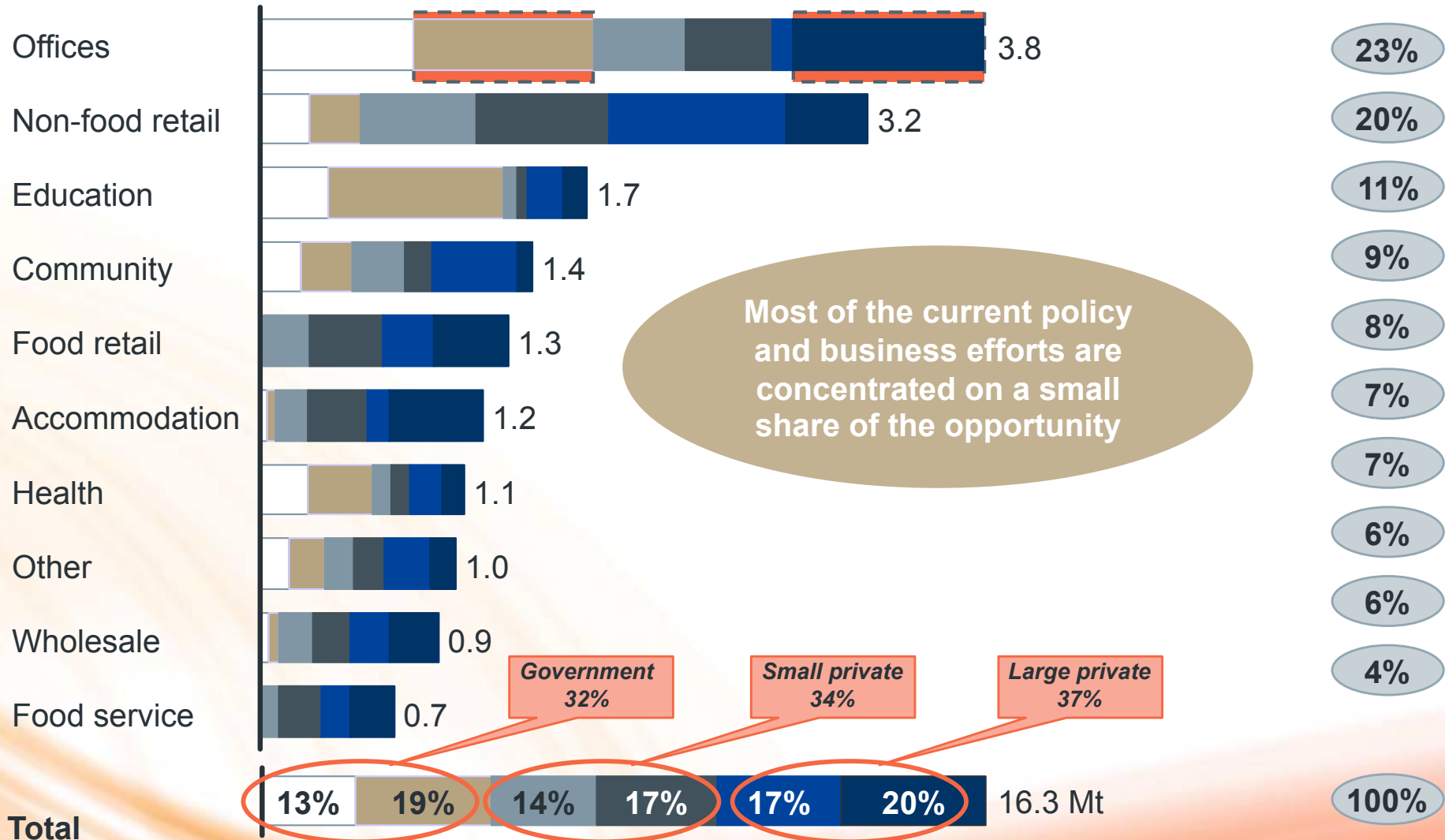
SOURCE: ClimateWorks team analysis, derived from 2020 GHG emissions reduction cost curve

# Further breakdown of the emissions reduction opportunity in commercial buildings shows we must focus on more than offices



Percent of total, 2020 estimates

- Tenanted large private business
- Owner-occupied large private business
- Tenanted small private business
- Owner-occupied small private business
- Large public organisation
- Small public organisation
- Focus of current policies: large offices



SOURCE: Australian Bureau of Statistics (2001 and 2008); Tertiary Education Facilities Management Association (2004); Australian Institute of Health and Welfare (2008); ClimateWorks team analysis

## Building sector abatement opportunities, barriers and tools to overcome barriers



- ▶ **Opportunities** – reducing oversized & unnecessary equipment; better management of control systems; replacing light bulbs; improving the energy efficiency of equipment; decreasing energy losses from open refrigeration, ovens and water mains; replacing water heaters with gas or solar
- ▶ **Barriers** – non-market electricity pricing; split incentives; lack of scale; lack of information; access to upfront capital.
- ▶ **Tools** to overcome barriers –
  - Awareness campaigns, improved labelling to promote consumer knowledge;
  - Sub-metering and removal of electricity price distortions;
  - ‘Pay as you save’ funding;
  - Increased facilitation services to reduce transaction costs;
  - Mandatory standards, rebates and tax incentives;
  - Leading by example through role modelling;

## Industrial abatement opportunities, barriers and tools to overcome barriers



- ▶ **Opportunities** – half the volume of abatement already offers net savings (excluding transaction costs), e.g. reduction of duplicated/oversized equipment; upgrade of motor systems; decrease energy losses in boilers and steam distribution systems; and waste heat recovery.
- ▶ **Barriers** – lack of carbon price; cheap energy prices; low demand for energy efficient equipment; limited access to alternative fuels; operational disruption; upfront capex and limited access to capital
- ▶ **Tools** to overcome barriers –
  - Promotion of energy management practices;
  - Targets and standards;
  - ‘Pay as you save’ funding;
  - Support for pilots;
  - Coordination of waste streams between industrial and commercial sites



**THANK YOU**

**Questions?**

**[www.climateworksaustralia.org](http://www.climateworksaustralia.org)**