



Transitioning regions to a low carbon future

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Introducing ClimateWorks Australia



THE MYER
FOUNDATION



MONASH University

Affiliations:



What is a low carbon growth plan? (LCGP)

- Internationally recognised tool
- Least cost opportunities (bang for buck)
- *Low Carbon Growth Plan for Australia*
 - Eureka prize and wide recognition



Low Carbon Growth Plan
for Australia
March 2010



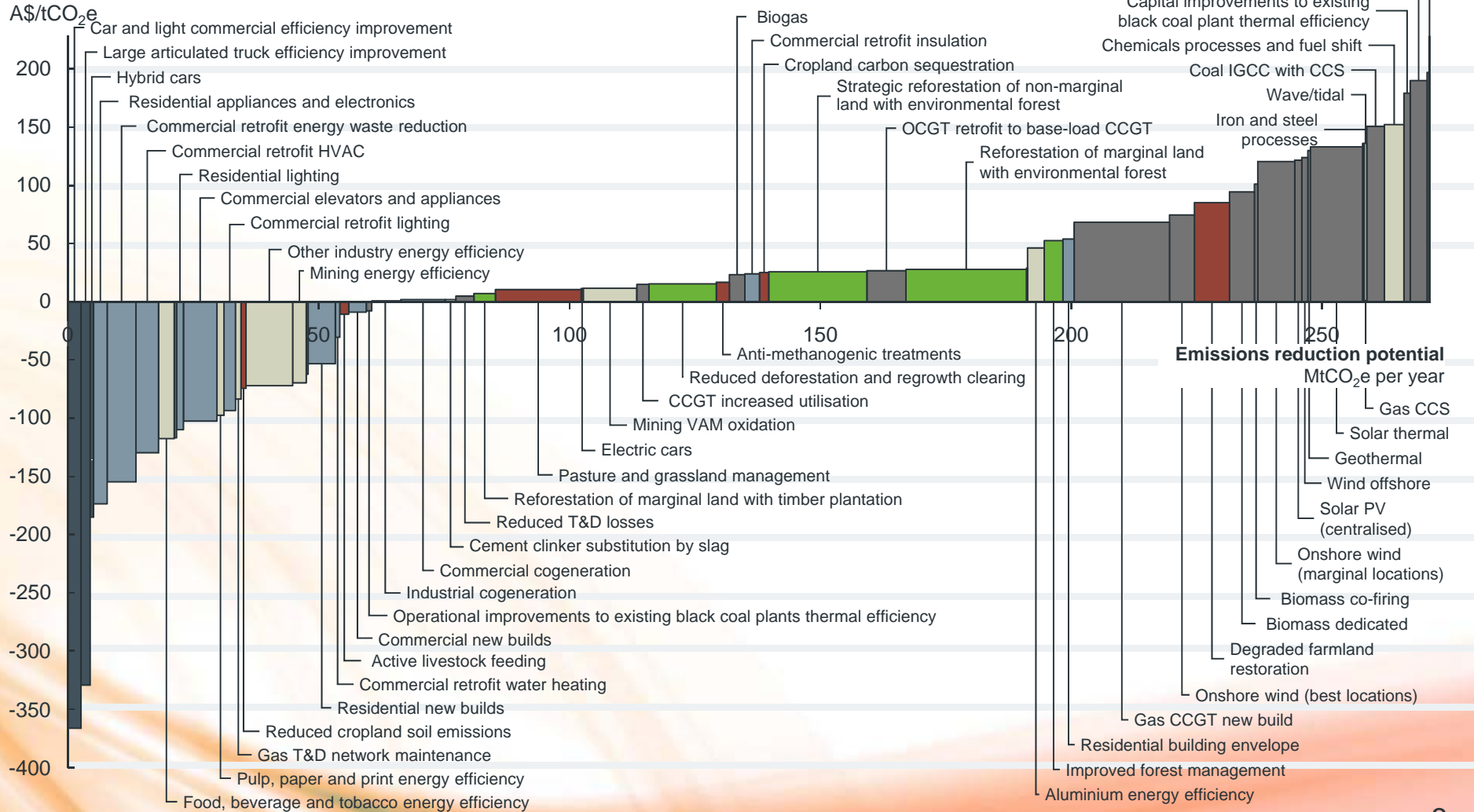
In the LCGP for Australia, ClimateWorks identified 62 opportunities to achieve a 25% emissions reduction target by 2020¹



■ Buildings ■ Industry ■ Transport ■ Agriculture ■ Forestry ■ Power

2020 Australia GHG emissions reduction investor cost curve (from Jan. 2012 on)

Emissions reduction cost to an investor



¹ Assuming that no significant action is taken in 2011, and that 2011 projections for business-as-usual emissions in 2020 will stay stable in 2012

SOURCE: ClimateWorks team analysis, derived from 2020 GHG emissions reduction cost curve (exhibit 5)

Opportunities can be divided into 3 'theme's of actions to reduce carbon emissions using existing technologies available domestically



**energy
efficiency**



land



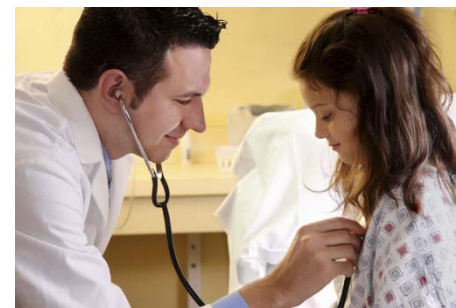
**cleaner
power**



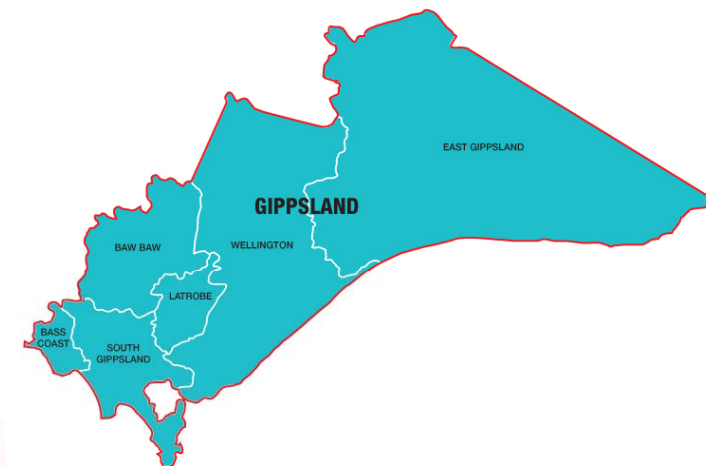
Strong interest from business and government for LCGPs at a 'local' level



Business



Government



Our methodology is defined by key parameters



In developing a regional LCGP, we follow a 6 step process



Estimate the BAU emissions

Develop a cost curve using scaled-down national data

Engage locally to refine cost curve with local data

Identify barriers and tools to overcome

Develop Action Plan, based on local strategic priorities

Present the findings

Support implementation

6 step process to develop LCGP– local engagement is key

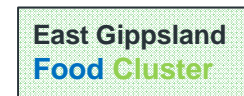
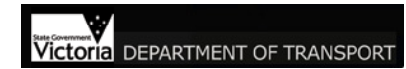


In Geelong, local engagement was key to the quality of the research and its successful implementation



In Gippsland, the consultation process was even more extensive

Snapshot of the key businesses we met with (not exhaustive).

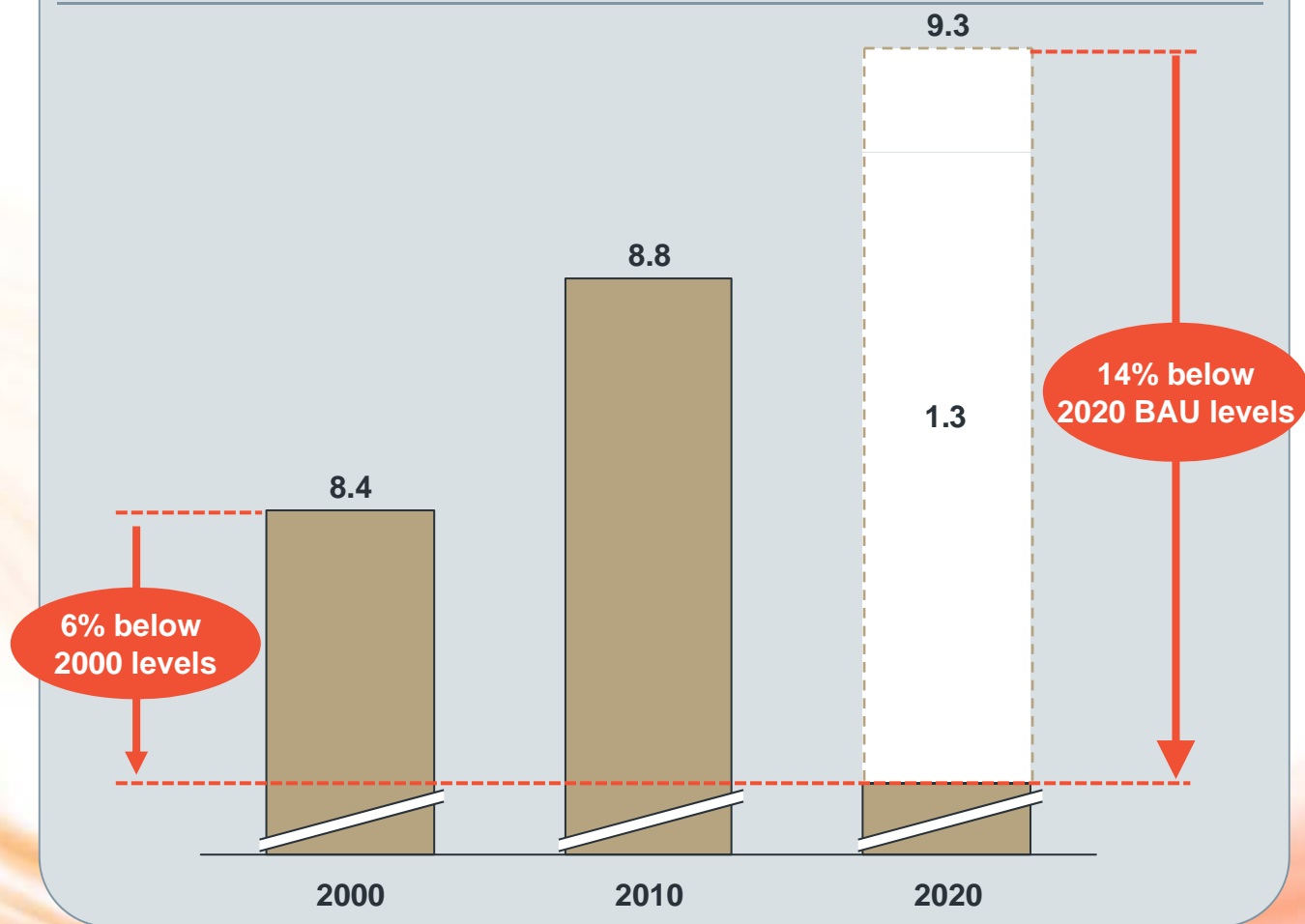


Findings: Geelong can reverse the growth in its emissions by 2020

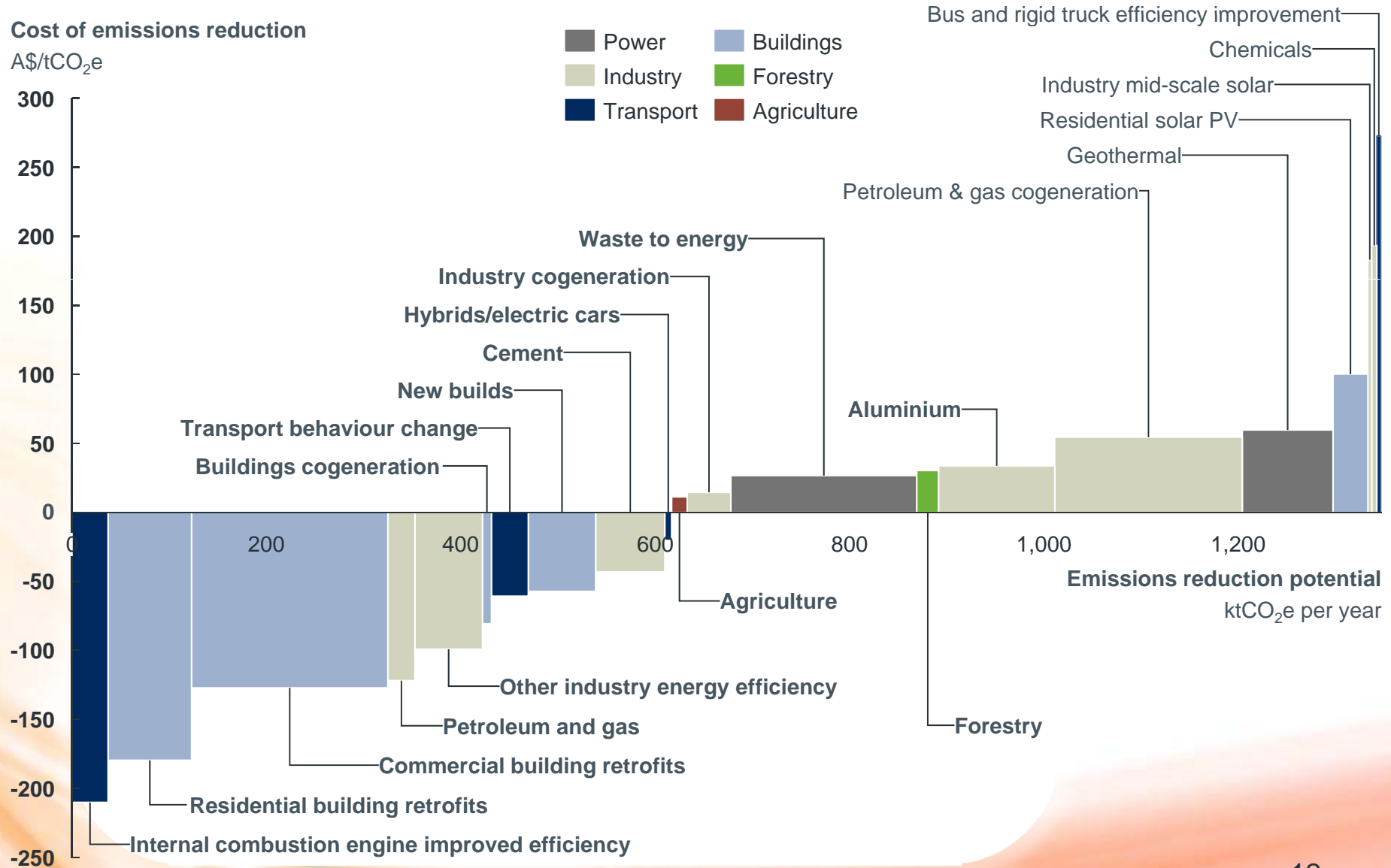


Reducing Greater Geelong's emissions by 1.3 million tonnes achieves a 14% reduction compared to BAU, or 6% below 2000 levels

Million tCO₂e

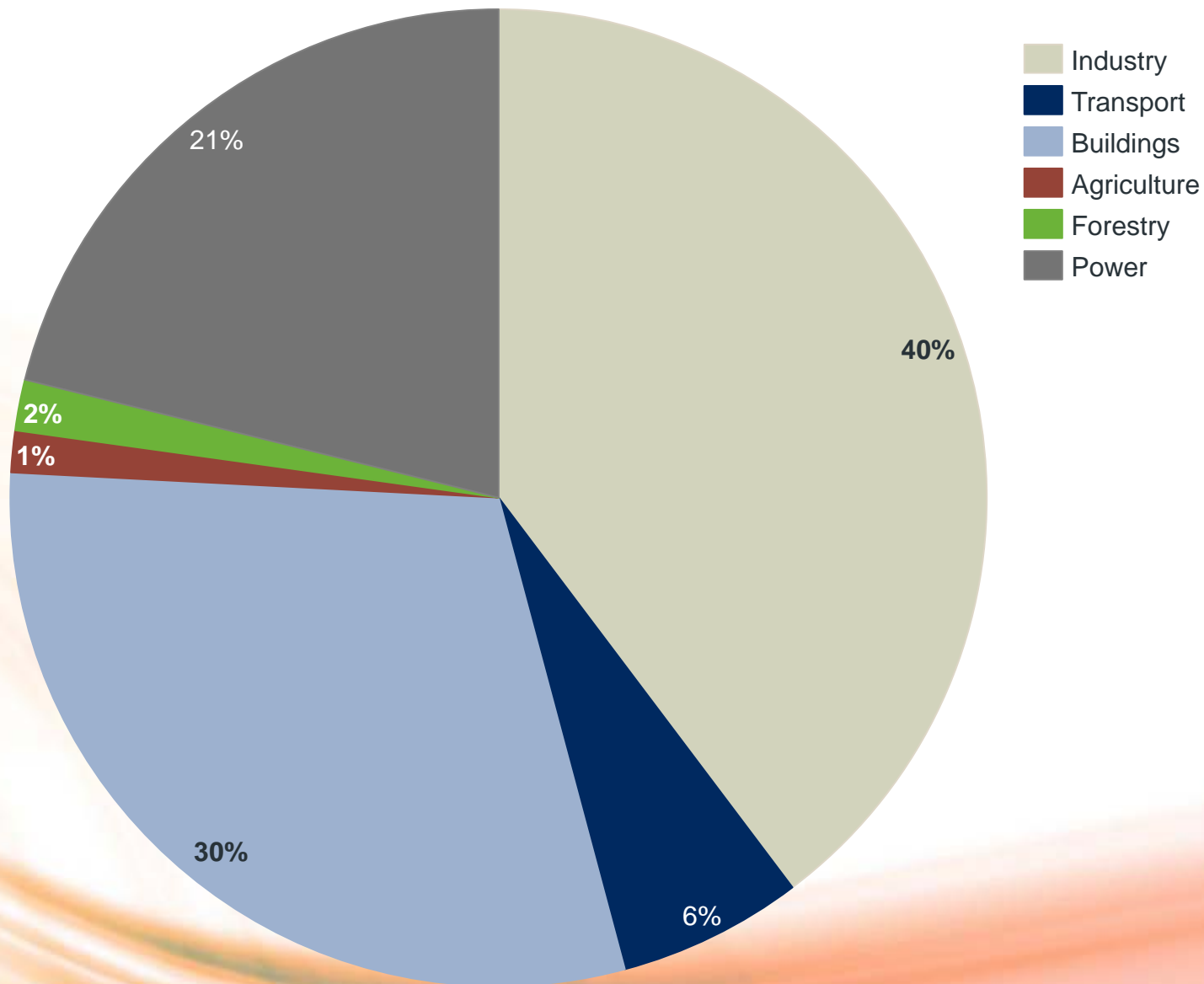


Geelong can reduce its emissions by 6% below 2000 levels, saving \$33 million across the local economy each year



SOURCE: ClimateWorks 2020 Greater Geelong emissions reduction investor cost curve (simplified for illustration)

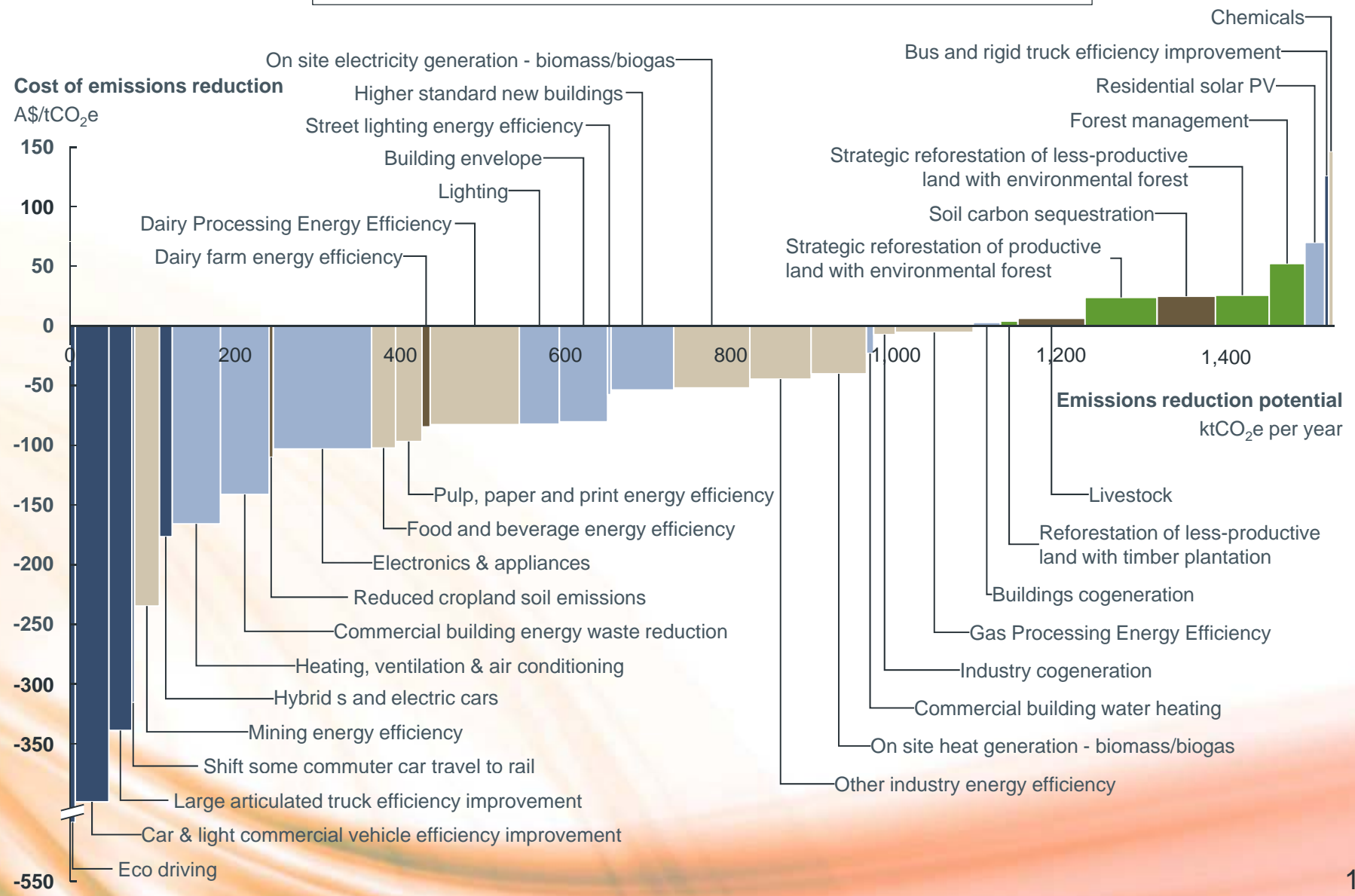
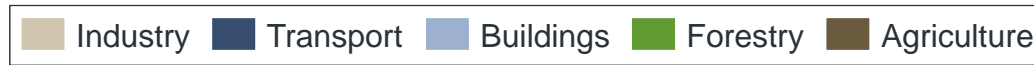
The largest overall opportunities by sector in Geelong are in improved energy efficiency in industry and buildings



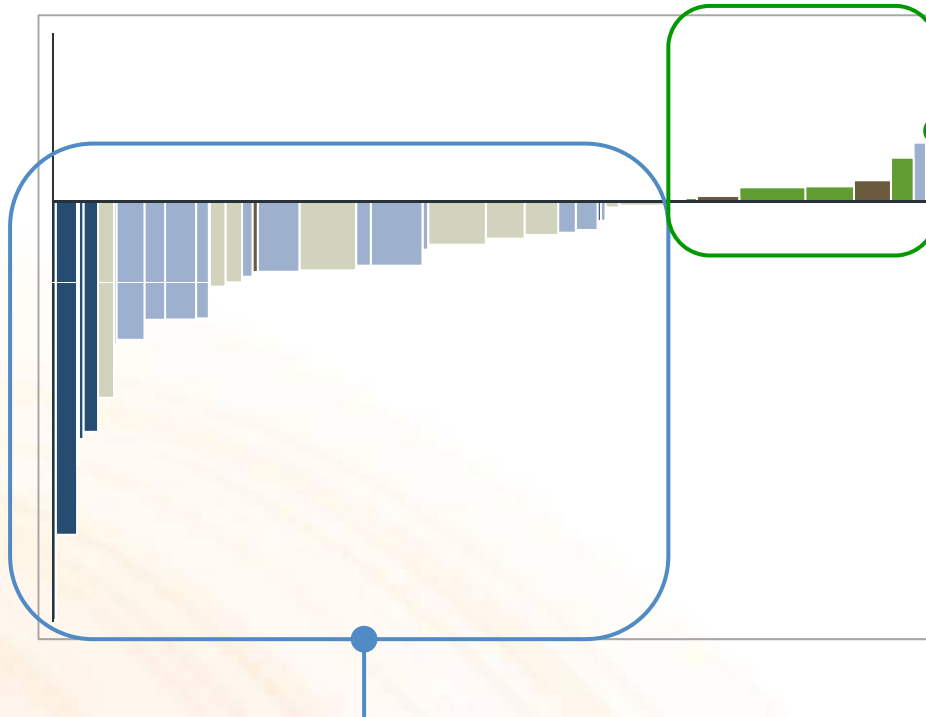
By 2020, Gippsland can reduce its emissions by 1.5 million tonnes per year while saving almost \$100 million annually.



Excluding the power sector



70% of all opportunities identified in the Plan are already profitable yet are not being taken up, indicating that a range of barriers exist.



Opportunities that come at a net cost, focused on agriculture and forestry, can be captured for an average of \$26/tonne (before CFI credits factored in)

Gippsland's households and businesses could save \$110 million each year through improved energy efficiency

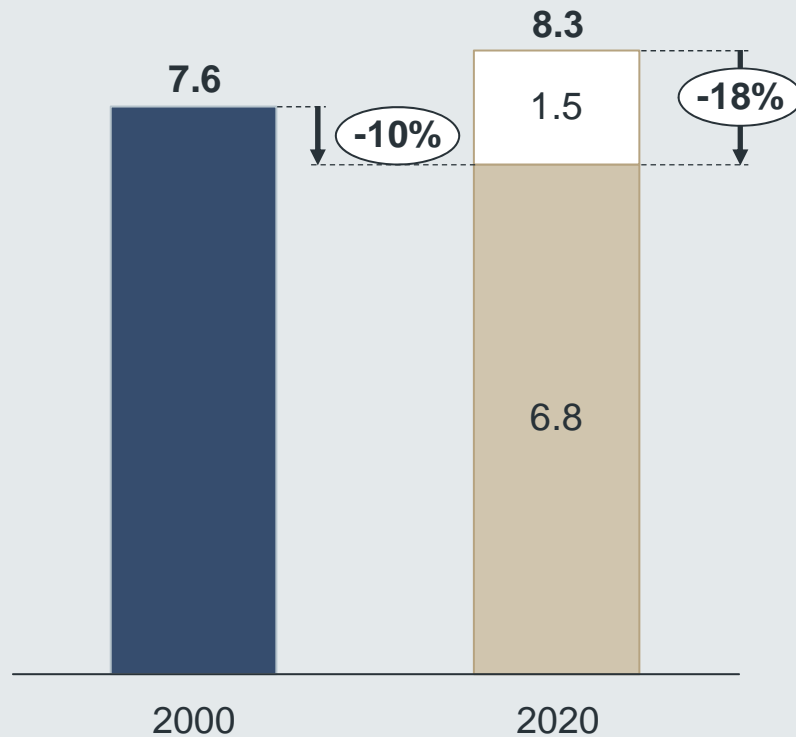
Capturing these opportunities would generate over \$800 million in inward investment to the region, helping to stimulate the local economy

Under business-as-usual, Gippsland's emissions are expected to rise by 9% from 7.6 million tonnes to 8.3 million tonnes by 2020.



Reducing Gippsland's emissions by 1.5 million tonnes achieves an 18% reduction compared to BAU, or 10% below 2000 levels

Million tCO₂e



By implementing the opportunities identified in this Plan, Gippsland could reduce its emissions to 10% below 2000 levels

All sectors can benefit from reducing emissions



Excluding the power sector

e.g. Reducing emissions from dairy cattle; environmental plantings

On the land

26%

e.g. Bioenergy, Improved energy efficiency

Manufacturing, mining & freight

38%

Households

12%

e.g. Choosing more efficient appliances; building new homes to a higher standard

Commercial & services

24%

e.g. Retrofitting existing buildings, downsizing equipment

Opportunities to reduce emissions are often hindered by a combination of price and non-price barriers.



| Barrier type | Example barriers |
|---|--|
| Is the opportunity profitable? | <ul style="list-style-type: none"> • Capturing the opportunity doesn't generate a profit, even factoring in any savings from efficiencies |
| How hard is it to access the capital needed? | <ul style="list-style-type: none"> • Limited access to capital means emissions reduction projects are low priority • Difficult to access loans for energy efficiency projects or projects with higher risk • Payback period is too long |
| Is the opportunity poorly understood? | <ul style="list-style-type: none"> • Lack of awareness of potential financial or productivity benefits • Emissions reduction projects are not core business • Staff don't have required skills |
| Does the structure of the market prevent the opportunity from being captured? | <ul style="list-style-type: none"> • Split incentives mean the person who invests in the opportunity does not reap the benefits (e.g. building owner vs. tenant) • Without aggregation, the project is too small for an individual business • Difficult to access energy efficient equipment through existing supply channels • There are not enough workers with the skills to roll out opportunities |

In regional areas, SMEs dominate the commercial, industrial and agricultural sectors and face additional challenges in reducing emissions



Reducing emissions in the SME sector is critical to regional success

- The City of Greater Geelong is home to 10,000 SMEs (small to medium sized enterprises) employ 70% of the local workforce.
- The Gippsland region has 23,000 SMEs who control most of the abatement potential identified in commercial buildings, industry and agriculture

Additional challenges for SMEs

- SMEs face higher borrowing rates than large businesses, reducing the financial benefits of energy efficiency.
- SMEs incur higher transaction costs relative to the size of a project than large organisations.
- It is more difficult for SMEs to balance pursuing energy efficiency opportunities with core business, and energy efficiency can be a low priority.
- Unlikely to have dedicated energy management staff

Overcoming barriers to emissions reduction actions in regions requires innovative thinking and increased collaboration



| Barrier type | Example ways to overcome barriers |
|------------------------------------|---|
| Profitability | <ul style="list-style-type: none"> • A carbon price will improve the profitability of some opportunities • Grants, loans, equity investments or loan guarantees can improve profitability |
| Capital constraints | <ul style="list-style-type: none"> • Government has a role to play a role in overcoming capital constraints through grants, loans, equity investments or loan guarantees • Innovative financing structures such as ‘pay-as-you-save’ through LCA in partnership with traditional lenders |
| Information/skills barriers | <ul style="list-style-type: none"> • Industry/business networks, local govt can work with local business to share relevant information re. financial or productivity benefits • Recruitment of central resource to aggregate projects, develop business case, RFQs, identify funding/financing • Education providers can develop tailored training to address local needs |
| Market structure | <ul style="list-style-type: none"> • Environmental Upgrade Agreements help to overcome split incentives • Aggregating opportunities can enable more cost effective access to professional services and non-standard equipment, and provide incentive for local businesses to develop required skills/expertise • Coordination of waste streams between industrial and commercial sites can reduce the supply constraint on alternative energy sources. |



THANK YOU

Questions?

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