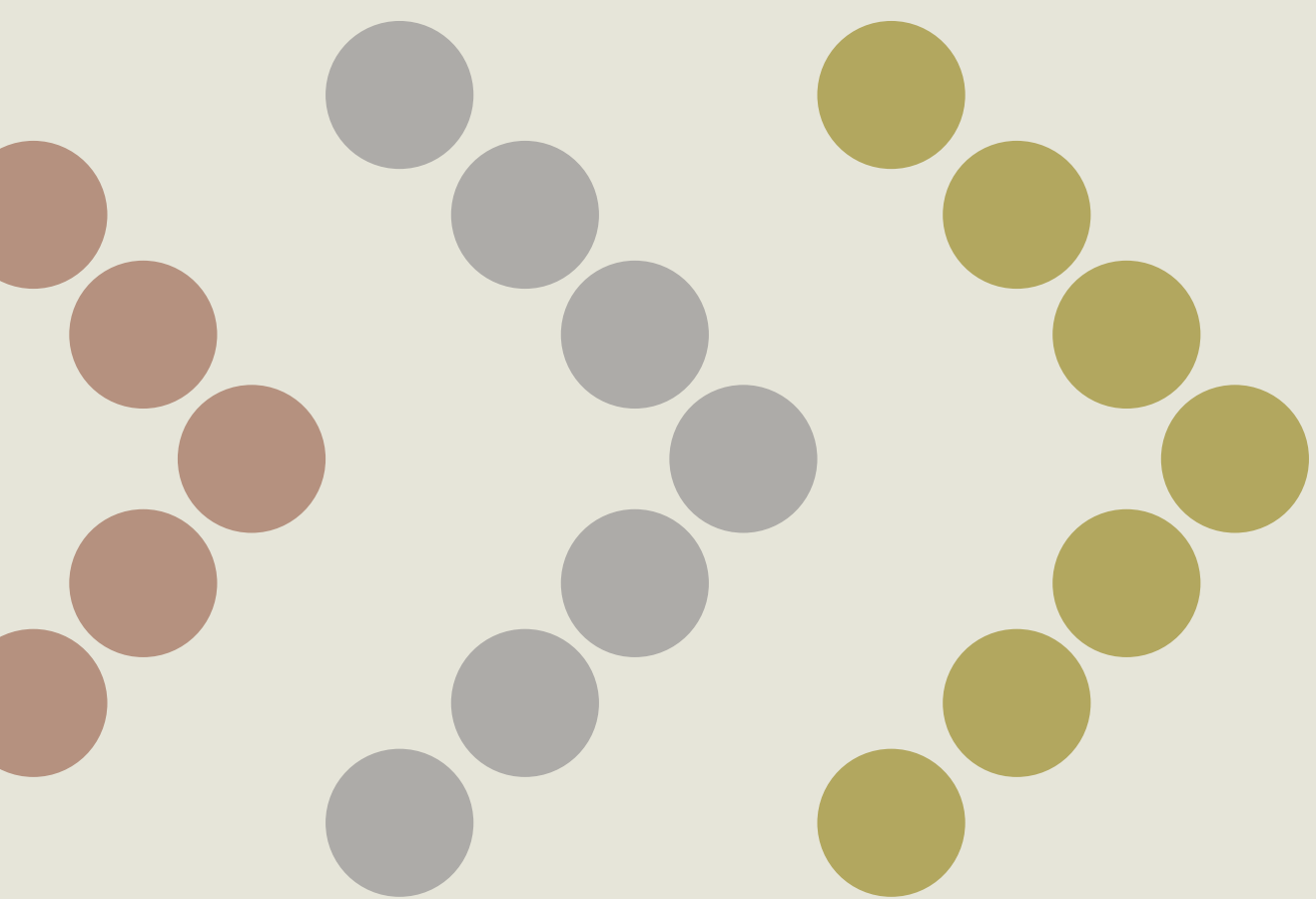


# DEVELOPING A NEW CLIMATE CHANGE ACTION PLAN FOR TASMANIA

 OPPORTUNITIES PAPER 2021





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Cover photo: Chris Crerar



# » A MESSAGE FROM THE MINISTER



**THE HON PETER GUTWEIN MP**  
Premier  
Minister for Climate Change

## Introduction

As Premier and Minister for Climate Change I recognise climate change is an important issue. As we recover from the COVID-19 pandemic and rebuild a stronger Tasmania, my Government is committed to taking practical action on climate change.

It is important Tasmania has a robust and practical action plan to respond to climate change, and manage the challenges and opportunities it presents.

This Opportunities Paper is intended to help you provide written input as we develop the next climate change action plan for Tasmania.

At the same time as developing our next Climate Action Plan, my Government is also conducting an independent review of the *Climate Change (State Action) Act 2008*, aiming to strengthen our legislation and investigate whether we can set a more ambitious emissions reduction target for Tasmania. Consultation with the Tasmanian community is currently underway, and the recommendations of the independent review will feed into the development of the new climate change action plan.

## Advantages

Tasmania has an impressive record on climate action. In 2015, we were the first Australian jurisdiction to achieve net zero emissions and we have achieved this commitment four years in a row.

The latest figures show we have the lowest emissions per person in the country.

Our State is now 100 per cent self-sufficient in renewable energy and continues to lead Australia's transition to a low emissions economy. This includes a commitment to generate 200 per cent of our energy needs from renewable energy by 2040, and fast-tracking a renewable hydrogen industry in Tasmania.

Tasmania is also fortunate to have world-class climate science capability and detailed climate change projections to inform our decisions.

These characteristics enhance our brand and competitiveness, both nationally and internationally, and put Tasmania in the best position to take advantage of opportunities as the world transitions to a low carbon economy.

## Challenges

Despite our strong advantages, Tasmania is not immune to the impacts of a changing climate. In the past five years we have seen extreme flooding, fires, drought, biosecurity concerns and marine heatwaves. These events have had an environmental, economic and social impact on government, business, communities and households.

Extreme weather events are projected to increase in frequency and intensity over time. As the world moves to a low carbon economy there are increasing risks and opportunities associated with that transition.

This transition will require commitment, innovation and leadership. Moving toward a climate positive Tasmania is an economic, social, and cultural opportunity for Tasmania.

## Opportunities

Since 2017, Tasmania's action on climate change has been guided by *Climate Action 21: Tasmania's Climate Change Action Plan 2017-2021* (Climate Action 21), which was developed in consultation with the community.

In the last five years we have made significant progress on climate change action. We have:

- achieved net zero emissions four years in a row
- delivered a statewide electric vehicle charging network;
- announced a target to transition the Government fleet to 100% Electric Vehicles by 2030, and supported the integration of electric vehicles into fleets;
- helped businesses improve resource efficiency and reduce waste;
- delivered a Climate Change Health Roundtable and three Climate Change Symposiums;
- assisted businesses to understand and find ways to reduce their energy use;
- delivered the Climate Resilient Councils project;
- supported financial counsellors to better assist vulnerable clients to manage their energy use and power bills; and
- funded many new priority climate research projects.

Climate Action 21 is due to conclude in 2021, so now is the time to build on our achievements to develop a new five-year climate change action plan for Tasmania.

## Your feedback

Your contribution is vital as we develop the next Climate Action Plan and I encourage all Tasmanians, including individuals, non-government organisations, business and industry, academia, and government, to have your say on this important issue.



## » HOW TO HAVE YOUR SAY

### Key dates

#### OPPORTUNITIES PAPER RELEASED

Thursday 25 March 2021

#### WRITTEN SUBMISSIONS CLOSE

Thursday 29 April 2021

### How can you have your say?

You can make a submission by writing to us or by completing your submission online.

#### EMAIL

[climatechange@dpac.tas.gov.au](mailto:climatechange@dpac.tas.gov.au)

#### POST

Tasmanian Climate Change Office  
Department of Premier and Cabinet  
GPO Box 123, HOBART TAS 7001

#### ONLINE

[www.climatechange.tas.gov.au](http://www.climatechange.tas.gov.au)

If you are making a written submission, please include the name and contact details of the person or organisation making the submission.

All submissions are welcome and valued.

We encourage you to read this Opportunities Paper before you make a submission.

You may also wish to review Climate Action 21, which is available on the Tasmanian Climate Change Office website ([www.climatechange.tas.gov.au](http://www.climatechange.tas.gov.au)).

### Publication

Submissions will be published on the Tasmanian Climate Change Office website ([www.climatechange.tas.gov.au](http://www.climatechange.tas.gov.au)). Your name or the name of the organisation making the submission will be made public. Please tell us if you want to keep your submission private. Defamatory or offensive material will not be published.

### Contact

For more information about this work, or making a submission, please contact the Tasmanian Climate Change Office on 03 6232 7173 or by email at [climatechange@dpac.tas.gov.au](mailto:climatechange@dpac.tas.gov.au).



Photo: Chris Crerar

# DEVELOPING A NEW CLIMATE CHANGE ACTION PLAN

## The need for a new action plan

*Climate Action 21: Tasmania's Climate Change Action Plan 2017-2021* (Climate Action 21) is due to conclude in 2021.

Now is the time to reflect on what we have achieved, what has changed since Climate Action 21 was released, and what action we can take to continue to reduce the State's greenhouse gas emissions and adapt to a changing climate.

The new action plan will guide the Tasmanian Government's response to climate change for the next five years.

## Guiding principles

To develop the next action plan we will build on the themes and outcomes of Climate Action 21 and:

- seek the views of others to inform the scope and delivery of projects;
- consider recent developments at a state, national and international level;
- consider the best available evidence as we develop projects;
- be informed by a contemporary understanding of climate science;
- assess and respond to risks and opportunities;
- establish effective methods and timeframes for evaluation and review;
- monitor and report publicly on progress; and
- share information and learnings with others.

## Purpose of this Opportunities Paper

The purpose of this Opportunities Paper is to inform individuals and organisations about Tasmania's climate change action and help you prepare written submissions as we develop the next climate change action plan for Tasmania, to:

- reduce the State's greenhouse gas emissions; and
- support government, business, industry and the community to adapt to a changing climate, by understanding and managing the risks and opportunities.

We encourage submissions from a broad range of stakeholders, including individuals, non-government organisations, business and industry, academia, and government. This inclusive feedback is essential, because all sectors and communities will be affected by the changing climate.

## Review of Tasmania's climate change legislation and emissions reduction target

This year, the Tasmanian Government is also conducting an independent review of the *Climate Change (State Action) Act 2008* (the Act).

The Act sets the Tasmanian Government's legislative framework for action on climate change, including establishing Tasmania's emissions reduction target.

Tasmania has achieved our target of net zero emissions by 2050 for four years in a row, so a key focus of the review will be the evidence and feedback on a more ambitious target.

The review will also aim to strengthen our legislation and ensure it provides a sound foundation for our climate change mitigation and adaptation initiatives.

A key legislative requirement of the independent review is consultation. A discussion paper is available for you to consider and send us your thoughts and ideas.

The outcomes of the independent review of the Act will feed into the development of the new climate change action plan.

This year, the Tasmanian Government will also undertake detailed analysis of the pathway Tasmania would need to take to achieve a target of net zero emissions prior to 2050. We will also analyse the economic impacts of a more ambitious emissions reduction target. This analysis work will feed in to the public consultation on the review of the Act.

## What have we achieved?

The Tasmanian Government has delivered the 37 actions under Climate Action 21 across the action plan's six priority areas:

1. Understanding Tasmania's future climate
2. Advancing our renewable energy capability
3. Reducing our transport emissions
4. Growing a climate-ready economy
5. Building climate resilience
6. Supporting community action

## KEY ACHIEVEMENTS



### ELECTRIC VEHICLE WORKING GROUP



SMARTER  
FLEETS

### SMARTER FLEETS PROGRAM

Supported Tasmanian Government, local government and heavy vehicle fleets to improve fleet efficiency and prepare for electric vehicle uptake.



### CHARGESMART GRANTS PROGRAM

Investment of over \$600,000 to support a statewide electric vehicle fast-charging network.



### TRANSITIONING GOVERNMENT VEHICLE FLEETS TO 100 PER CENT ELECTRIC VEHICLES BY 2030



### COMMUNITY 'TRY AND DRIVE AN EV' DAYS



### BUSINESS RESOURCE EFFICIENCY PROGRAM

Supported 11 Tasmanian businesses to reduce waste in Tasmania.



### POWER\$MART BUSINESSES PROGRAM

Supported 21 businesses to undertake energy efficiency audits and reduce energy use.



### 48 BUSINESSES COMPLETED CONTINUITY PLANNING TO PREPARE FOR AND RESPOND TO EXTREME EVENTS



### CLIMATE CHANGE RESEARCH

- \$750,000 in grant funding for 16 priority climate research projects;
- undertook priority research on compound extreme events;
- updated enterprise suitability mapping for key crops to support agricultural decision making.



### CLIMATE RESILIENT COUNCILS

Supported 17 councils to understand and improve how climate change is considered by their council when making strategic and financial decisions.



### TASMANIAN CLIMATE SYMPOSIUM

Held three annual Symposiums in 2018, 2019 and 2020.



### CLIMATE CHANGE AND HEALTH ROUNDTABLE



### COASTAL HAZARDS MANAGEMENT FOR EXISTING SETTLEMENTS AND VALUES PROJECT



### 12 STATEWIDE WORKSHOPS FOR FINANCIAL COUNSELLORS TO BETTER ASSIST VULNERABLE CLIENTS IN MANAGING THEIR ENERGY USE AND POWER BILLS



### AN ADDITIONAL 339 HA OF LAND NOW IRRIGATED WITH EFFLUENT UNDER FERT\$MART



### CONDUCTING ENERGY AUDITS OF GOVERNMENT BUILDINGS

More information on the Tasmanian Government's implementation of Climate Action 21 is available at: [www.climatechange.tas.gov.au](http://www.climatechange.tas.gov.au).

## WHAT HAS CHANGED SINCE THE LAST ACTION PLAN?

There have been many developments since Climate Action 21 was released in 2017.

In the last five years, Tasmania has experienced significant extreme climate and weather events. Scientific data and observations continue to affirm the scientific consensus that changes to the climate are occurring as a result of a warming planet.

There have also been national and international developments in response to climate change, with implications for governance of business, industry and government.

Technology and innovation also present new opportunities as the world transitions to a low carbon economy.

The response to climate change also needs to be considered in the context of the COVID-19 pandemic, with governments, businesses and communities working together to minimise impacts and recover.



### Australia

#### CHANGING CLIMATE

The State of the Climate 2020 report by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Bureau of Meteorology shows Australia is experiencing climate change now. Significant climatic changes in Australia are projected over the coming decades, including changes in extreme heat events, rainfall patterns, sea level rise, and extreme fire weather.

The report found Australia's climate has warmed on average by  $1.44 \pm 0.24$  °C since national records began in 1910. It also found that despite the slow-down in global fossil fuel emissions of carbon dioxide from early 2020, which is largely due to travel restrictions associated with the COVID-19 pandemic, there will be negligible impact in terms of slowing climate change.

#### KEY DEVELOPMENTS

In 2019, the Australian Government announced a \$3.5 billion Climate Solutions Package, to deliver on Australia's 2030 Paris climate commitments.

The Package includes a \$2 billion Climate Solutions Fund to be delivered over 15 years, which will partner with farmers, remote indigenous communities, and small businesses to deliver practical climate solutions across the economy that reduce greenhouse gas emissions.

In 2020, the Australian Government released the first annual Low Emissions Technology Statement, the first milestone in Australia's Technology Investment Roadmap.

The Australian Government will invest around \$18 billion in low emissions technologies through the Technology Investment Roadmap over the ten years to 2030.

The Low Emissions Technology Statement includes five priority technologies: clean hydrogen; long duration energy storage; low carbon steel and aluminium production; carbon capture and storage; and soil carbon. The Statement also highlights electric vehicles as emerging and enabling technologies.

The Australian Government has also released a National Hydrogen Strategy (2019) and is planning to release a national electric vehicle strategy.





## Tasmania

### CHANGING CLIMATE

Over the last five years, Tasmania has experienced two significant bushfire events, a record marine heatwave off the East Coast, prolonged drought creating energy security concerns and the introduction of staged water restrictions, and the worst statewide flooding seen in 40 years.

### KEY DEVELOPMENTS

A number of new plans and strategies have been released in Tasmania that are relevant to climate change, including:

- Tasmanian Renewable Energy Action Plan and Tasmanian Renewable Energy Target
  - » The Action Plan outlines how the Tasmanian Government will utilise renewable energy to benefit all Tasmanians through job creation, helping the environment and driving investment through economic growth.
  - » New renewable energy target of 200 per cent of our current electricity needs by 2040 that, together with additional transmission interconnection, can lead to lower emissions and improved reliability for the National Electricity Market.
- Tasmanian Renewable Hydrogen Action Plan
  - » Action Plan to outline the Tasmanian Government's plan to ensure Tasmania is perfectly placed to benefit from the emerging global hydrogen industry.
  - » The centrepiece of the Action Plan is the Tasmanian Government's \$50 million Tasmanian Renewable Hydrogen Industry Development Funding Program, which may support the development of hydrogen fuel cell technologies to reduce transport emissions.
- Agrivision 2050 and White Paper: Growing Tasmanian Agriculture Research, Development and Extension for 2050
  - » Highlights the vulnerability of the agriculture sector to the projected impacts of climate change. It states that a key focus area for the Government will be to continue to support agricultural producers to reduce emissions; adapt to, and be prepared for, the impacts of climate change; and leverage opportunities for growth.



Photo: Chris Crerar



## International climate policy

In late 2018, the Intergovernmental Panel on Climate Change (IPCC) released the Special Report on Global Warming of 1.5°C. Key findings:

- human activities have caused approximately 1.0 °C of global warming above pre-industrial levels.
- limiting warming to 1.5°C requires major and immediate transformation; and
- emissions will need to reach net zero by around 2050.



## Climate-related financial and liability risks

There are increasing expectations from the community, and regulators and investors, that company directors (both public and private) publicly identify, report and manage relevant climate change risks, with potential legal liability if they don't.

Since the establishment of the Taskforce on Climate Related Financial Disclosures in 2015, there is growing evidence of climate-related financial and liability risk for government and business. This is being driven by key financial regulators, legal opinion and credit rating agencies.



## COVID-19

The COVID-19 pandemic is also likely to have an impact on local, state and international action on climate change, as governments work to respond and recover.

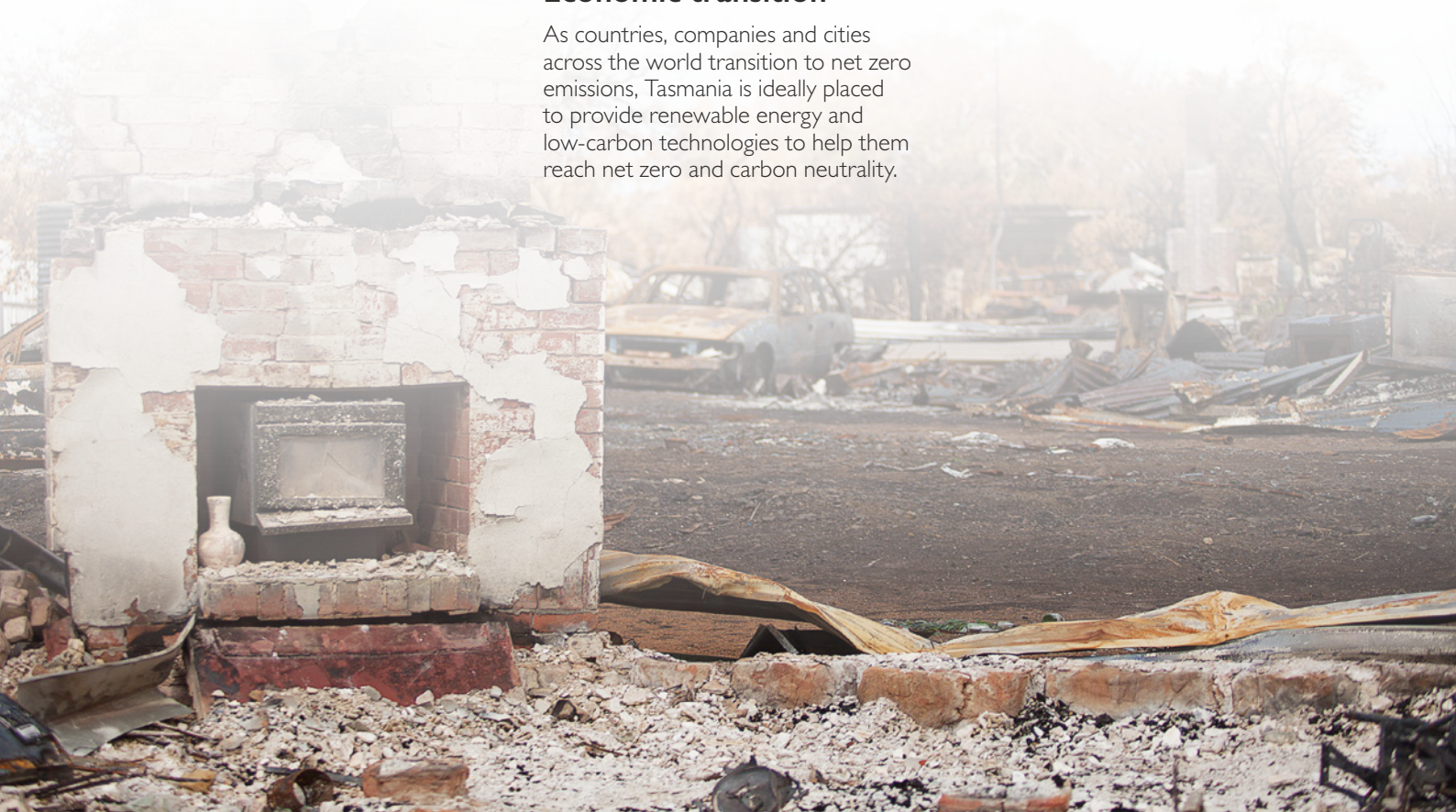
There is an opportunity for climate change to be considered in economic and social recovery from COVID-19. This includes opportunities to invest in renewable energy projects, sustainable and green infrastructure, low emissions transport options, energy efficiency, and a focus on circular economy models. There is an opportunity for long-term economic stimulus packages that promote future growth and development, to incorporate low emissions objectives and consideration of climate change.



## Economic transition

As countries, companies and cities across the world transition to net zero emissions, Tasmania is ideally placed to provide renewable energy and low-carbon technologies to help them reach net zero and carbon neutrality.

*Ruins of a building in Dunalley.*





## KEY QUESTIONS

As we develop Tasmania's new climate change action plan, there are two key areas to consider: **reducing Tasmania's greenhouse gas emissions** and helping Tasmania **adapt to a changing climate**. Key questions for each of these areas are provided here. Background information on each of the areas is provided in the following pages to help guide your feedback.

### Reducing Tasmania's greenhouse gas emissions

Tasmania has a strong record on greenhouse gas emissions reduction. We are 100 per cent self-sufficient in renewable energy and we have met our target of net zero emissions by 2050 four years in a row. It is important that this momentum continues to ensure Tasmania consistently achieves and maintains its low emissions status, and leads Australia in the transition to a low-emissions economy.

#### KEY QUESTIONS

1. What do you think are the key opportunities to reduce Tasmania's emissions? Please choose your top three.
2. What do you think are the key gaps in Tasmania's current efforts to reduce emissions?
3. What do you think are the main opportunities for Tasmania to transition to a low carbon economy?

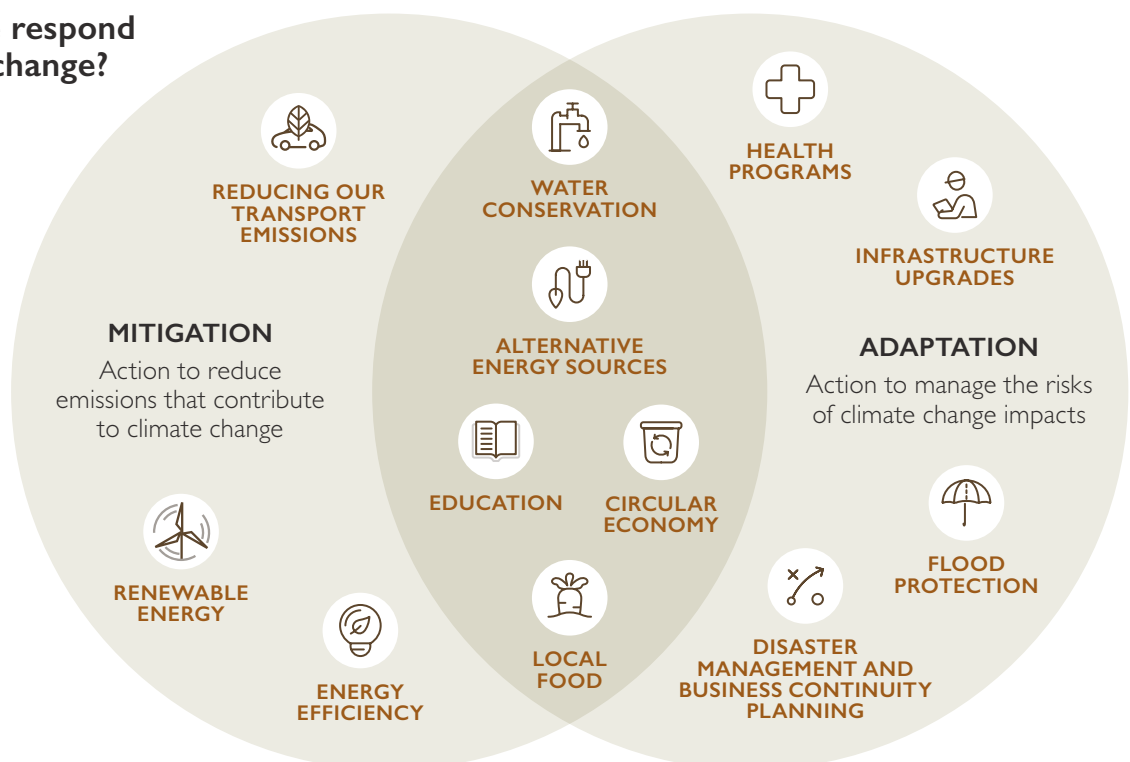
### Helping Tasmania adapt to a changing climate

Adapting to climate change requires governments, industries, businesses and communities to prepare for the impacts of climate change that are already occurring, and are likely to occur in the future. This preparation includes considering both the risks and opportunities of a changing climate, to build resilience to those changes.

#### KEY QUESTIONS

1. What aspects of Tasmania's projected future climate most concern you and why?
2. Which parts of Tasmania (for example locations, industries, communities) do you think are most vulnerable to a changing climate?
3. What do you think are the key opportunities to help Tasmania adapt to a changing climate? Please choose your top three.

### How do we respond to climate change?



## REDUCING OUR GREENHOUSE GAS EMISSIONS

### Tasmania's greenhouse gas emissions

Tasmania is a global leader in mitigating climate change. The Tasmanian Government currently has a policy target of net zero emissions by 2050, which we have met four years in a row.

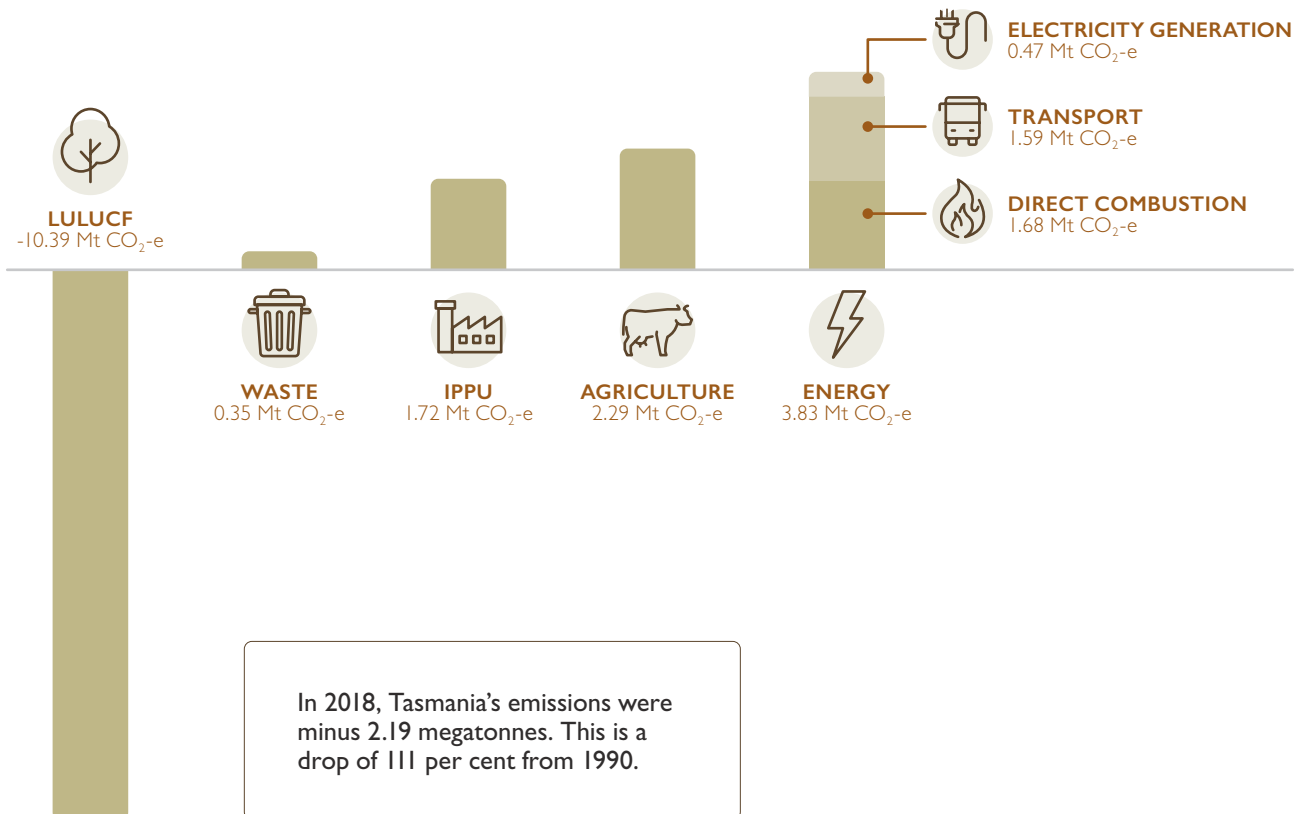
This year, the Tasmanian Government is also undertaking a review of the *Climate Change (State Action) Act 2008*. A key focus of this review will be to set a more ambitious net zero emissions target for Tasmania.

In 2018 (the latest available data), Tasmania had the lowest emissions per person in Australia, at minus 4.2 tonnes of carbon dioxide equivalent greenhouse gases, known as CO<sub>2</sub>-e. The national average is 21.5 tonnes of CO<sub>2</sub>-e.

Sources of Tasmania's emissions by sector and energy sub-sectors in 2018 were:

- Energy: 3.83 Mt CO<sub>2</sub>-e, made up of:
  - » Direct combustion: 1.68 Mt CO<sub>2</sub>-e
  - » Transport: 1.59 Mt CO<sub>2</sub>-e
  - » Electricity generation: 0.47 Mt CO<sub>2</sub>-e
- Agriculture: 2.29 Mt CO<sub>2</sub>-e
- Industrial Processes and Product Use (IPPU): 1.72 Mt CO<sub>2</sub>-e
- Waste: 0.35 Mt CO<sub>2</sub>-e
- Land Use, Land Use Change and Forestry (LULUCF): minus 10.39 Mt CO<sub>2</sub>-e

Each year, the Tasmanian Climate Change Office releases a report on Tasmania's latest greenhouse gas emissions. The report is available on our website ([www.climatechange.tas.gov.au](http://www.climatechange.tas.gov.au)). The report runs two years behind the current date and represents the most recent official data in Australia. Tasmania's emissions are reported in accordance with the IPCC reporting framework for national greenhouse gas inventories.



## Emissions from energy



### ELECTRICITY GENERATION

Electricity generation accounts for 6 per cent of Tasmania's emissions excluding LULUCF. In contrast, emissions from electricity generation account for more than half of Victoria's total net emissions.

Tasmania has an enviable renewable energy profile. We are 100 per cent self-sufficient in renewable energy and have a commitment to generate 200 per cent of our energy needs from renewable energy by 2040, which means Tasmania will double its renewable energy production. The Tasmanian Government is also fast-tracking a renewable hydrogen industry in Tasmania, with the goal of using locally-produced renewable hydrogen in Tasmania by 2022, and commercially exporting clean hydrogen by 2030.



### ENERGY EFFICIENCY

We can reduce emissions associated with electricity generation by reducing the amount of electricity government, industry, businesses, and households use.

Improved energy efficiency can lower emissions, as well as reduce electricity bills, and improve the health and wellbeing of Tasmanians.



### DIRECT COMBUSTION

Direct combustion of fossil fuels for stationary energy accounts for approximately 21 per cent of Tasmania's emissions (excluding LULUCF).

Direct combustion includes emissions from: burning coal, gas, agricultural waste or forestry residue to generate heat, steam or pressure for manufacturing industries and construction; agriculture, forestry and fishing operations; commercial operations; and burning wood or gas for household heating and cooking.

Opportunities to reduce emissions from the direct combustion of fossil fuels include electrification and fuel switching to bioenergy to replace natural gas and coal fired boilers in commercial and industrial applications, and the use of heat pumps to replace residential wood and gas heating.



### Emissions from transport

Transport accounts for 19 per cent of Tasmania's emissions (excluding LULUCF). The majority (94 per cent) of transport emissions come from road transportation (made up of cars: 58 per cent, heavy duty trucks and buses: 23 per cent, and light commercial vehicles: 19 per cent). Reducing emissions from transport involves transitioning to technologies that improve efficiency; fuel switching to low and zero emissions sources, such as battery electric vehicles, renewable hydrogen fuel cell technologies and biofuels; and supporting the transition to alternative means of transport such as walking, cycling or public transport.

## Emissions from industry



### AGRICULTURE

Agriculture is a key growth sector in Tasmania's economy. Currently, the sector accounts for 28 per cent of Tasmania's emissions (excluding LULUCF). The majority (71 per cent) of these emissions comes from enteric fermentation (digestive processes that result in methane production), mainly from cattle and sheep.

Emissions from agriculture can be reduced by improving soil carbon through regenerative farming practices and using precision agricultural technologies. There are also promising trials underway to include seaweed in the feed of livestock which may significantly reduce methane emissions from enteric fermentation.



### FORESTRY AND LAND USE

Forestry is a well-established industry in Tasmania, which provides jobs and large-scale export opportunities. Tasmania's forests act as a carbon sink, which offsets the majority of the State's greenhouse gas emissions. Projected climate changes mean it will be important to sustainably manage our current forests and plantations in order to offset atmospheric greenhouse gases.

The use of wood products that store carbon for long periods, such as in building construction applications, can sequester carbon for longer. This has the additional benefit of replacing more emissions-intensive building products such as concrete and steel.



### INDUSTRIAL PROCESSES AND PRODUCT USE

Emissions from industrial processes and product use (IPPU) account for 21 per cent of Tasmania's emissions (excluding LULUCF).

IPPU includes emissions from: the calcination of carbonate compounds (eg cement, lime or glass production); carbon when used as a chemical reductant (eg aluminium, ferromanganese and zinc production); and the production and use of synthetic gases such as hydrofluorocarbons (eg refrigeration, air conditioning and solvents).



### Emissions from waste

Emissions are produced by the decomposition of organic waste in landfills, and from the release of greenhouse gases during the treatment of wastewater. Emissions from waste account for 4 per cent of Tasmania's emissions, excluding LULUCF.



## ADAPTING TO A CHANGING CLIMATE

### What is climate change adaptation?

Adapting to climate change means changing the way we live so we can prepare for, and build resilience to, the impacts of climate change.

Adaptation helps individuals, communities, businesses, industry and governments to understand and manage the impacts of the changing climate that are already occurring and are expected to occur in the coming decades.

As we make considered changes, we can also take advantage of opportunities to transition and build resilience.

### Impacts of climate change in Tasmania

#### WHAT WE HAVE SEEN

Climate change impacts are here and now. Australia's climate has already warmed on average by 1.44°C since 1910, with most of the warming recorded since 1950.

Australia's warmest year on record was 2019, and in 2020 Tasmania had warmer nights than usual for much of the year, especially in the North-East. 2019 was also Australia's driest year on record, with annual rainfall 40 per cent below average, and much of Australia affected by drought.

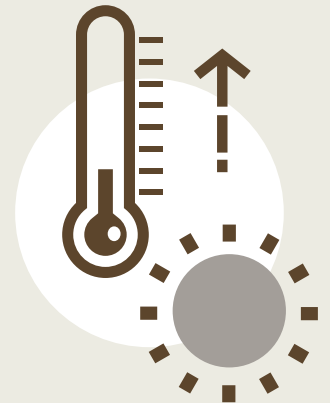
In the last five years, Tasmania has experienced two significant bushfire events, a record marine heatwave off the East Coast, prolonged dry periods in 2015-16 and 2019-20, and the worst statewide flooding seen in 40 years.

## PROJECTED CHANGES TO TASMANIA'S CLIMATE



**A SIGNIFICANT CHANGE IN RAINFALL PATTERNS FROM SEASON TO SEASON AND VARYING BETWEEN DIFFERENT REGIONS**

**A RISE IN ANNUAL AVERAGE TEMPERATURES BY UP TO 2.9°C BY 2100**



**AN INCREASE IN STORM INSTANCES, WHICH IS LIKELY TO RESULT IN INCREASED COASTAL EROSION AND INUNDATION**

**LONGER FIRE SEASONS AND MORE DAYS AT THE HIGHEST RANGE OF FIRE DANGER**



These events have had an environmental, economic and social impact on governments, businesses, communities and households.

#### WHAT WE'RE LIKELY TO SEE

The Climate Futures for Tasmania (CFT) project is the most important source of downscaled climate change projections for Tasmania. Downscaling is a process where coarse-resolution Global Climate Model outputs are translated into finer-resolution climate information

so that they better account for regional climatic differences, such as local topography.

Through CFT modelling, we can better understand how the Tasmanian climate is likely to change between now and 2100. In addition to general data, there is specific information for agriculture, coastal impacts, and water and catchments. This modelling projects significant changes in rainfall patterns; a rise in annual temperatures and more hot summer days; longer fire seasons

and more days at the highest range of fire danger; sea level rise; ocean acidification; and increased East Coast water temperatures. Extreme weather events are projected to increase in frequency and intensity over time.

Tasmania is also facing growing transitional impacts and opportunities as the world moves to a low carbon economy (eg changing consumer preferences or regulatory intervention).

You can find detailed projections for your local government area, and information about where our climate change projections come from, on our website ([www.climatechange.tas.gov.au](http://www.climatechange.tas.gov.au)).



## MORE HOT SUMMER DAYS AND MORE HEAT WAVES

THAN EXPERIENCED IN THE PAST



## SUBSTANTIALLY REDUCED INCIDENCE OF FROST



## AN INCREASE IN OCEAN ACIDIFICATION LEVELS AND EAST COAST WATER TEMPERATURE BY UP TO 2°C – 3°C BY 2070, RELATIVE TO 1990 LEVELS

## SEA LEVEL RISE

OF BETWEEN 0.39 AND 0.89m BY 2090, ALTHOUGH UNDER CERTAIN CIRCUMSTANCES SEA LEVEL RISES HIGHER THAN THESE MAY OCCUR



## Who is affected?

### BUSINESS AND INDUSTRY

Projected changes to Tasmania's climate will impact our businesses and industries in a variety of ways and it is important to prepare for these impacts.

As the world transitions to a low carbon economy and more sustainable business practices, there is an opportunity for Tasmanian businesses and industries to capitalise on our State's advantages, such as our renewable energy and world-class climate science.

Some of our key growth sectors, such as tourism, agriculture, and aquaculture, are also vulnerable to the projected impacts of a changing climate. These sectors need tailored information to minimise climate risks and make informed decisions.

In comparison to other parts of Australia, Tasmania's temperate climate may also provide some comparative economic advantage for some industries and opportunities for new industries.

### COMMUNITY

Climate change will affect the health of Tasmanians. The greatest threats are expected to come from extreme weather events (such as heatwaves), rising temperatures and the changing variability of rainfall.

Building community resilience to population health risks is important in a changing climate.

This includes protection of vulnerable members of the community. Contributing factors to vulnerability include poor health, age, limited mobility, access to transport and dependence on others for care. Some communities may also be vulnerable due to physical location, for example near the coast, or in flood or bushfire-prone areas.

The projected impacts of climate change may also change the way our workplaces and business systems operate as we adapt to a changing environment. It is important for Tasmania to continue investing in skills to support workforce development across industry sectors and regional communities. This will enable us to maximise our economic advantage and prepare for a changing climate.

### GOVERNMENTS

State and local governments play a key role to ensure Tasmanian communities are able to adapt to climate change.

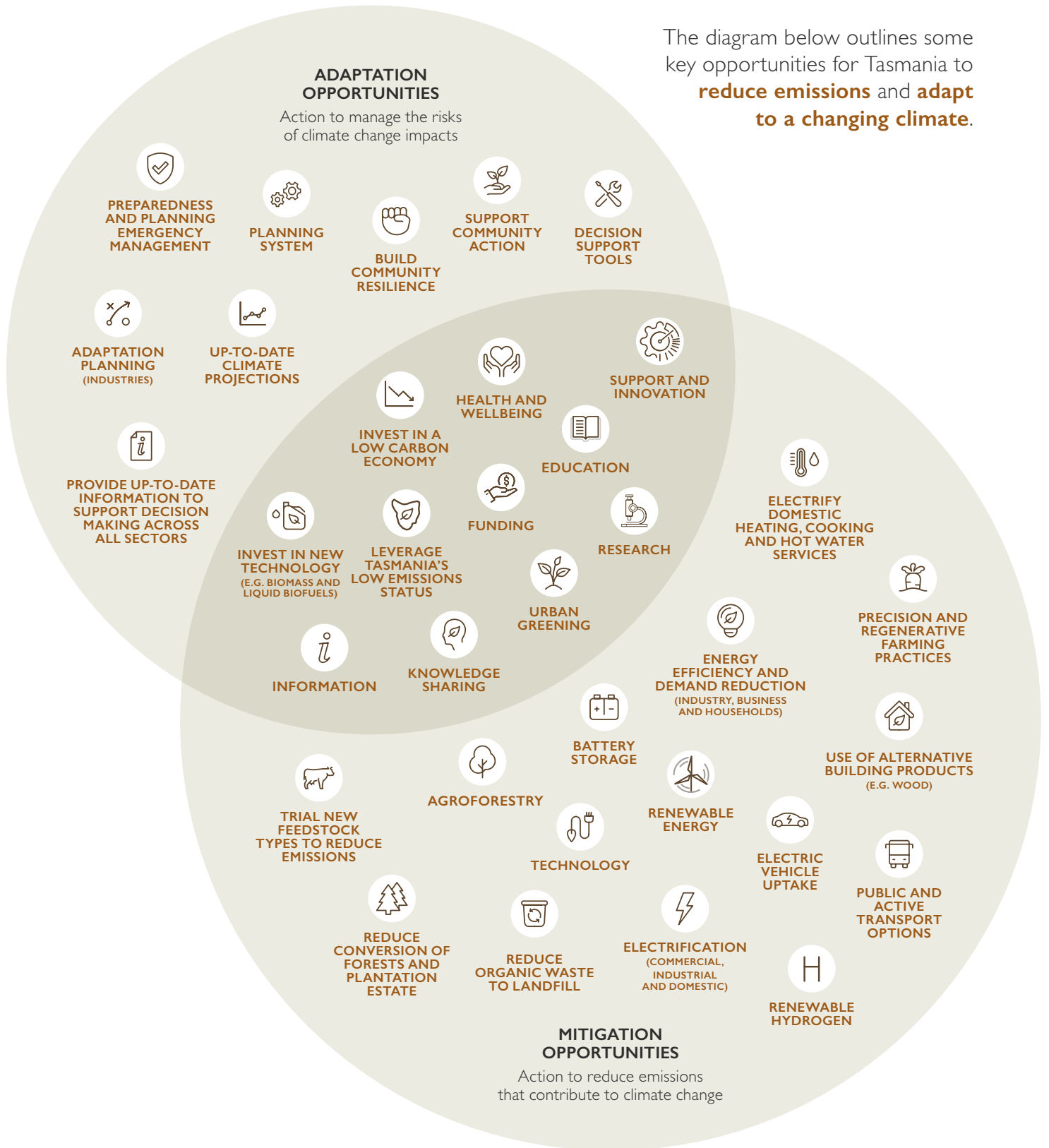
Key considerations for governments include: development and infrastructure; land use planning; water resources management; emergency management; and community services.

*Photo: Chris Crerar*



# KEY OPPORTUNITIES FOR TASMANIA

The diagram below outlines some key opportunities for Tasmania to **reduce emissions** and **adapt to a changing climate**.





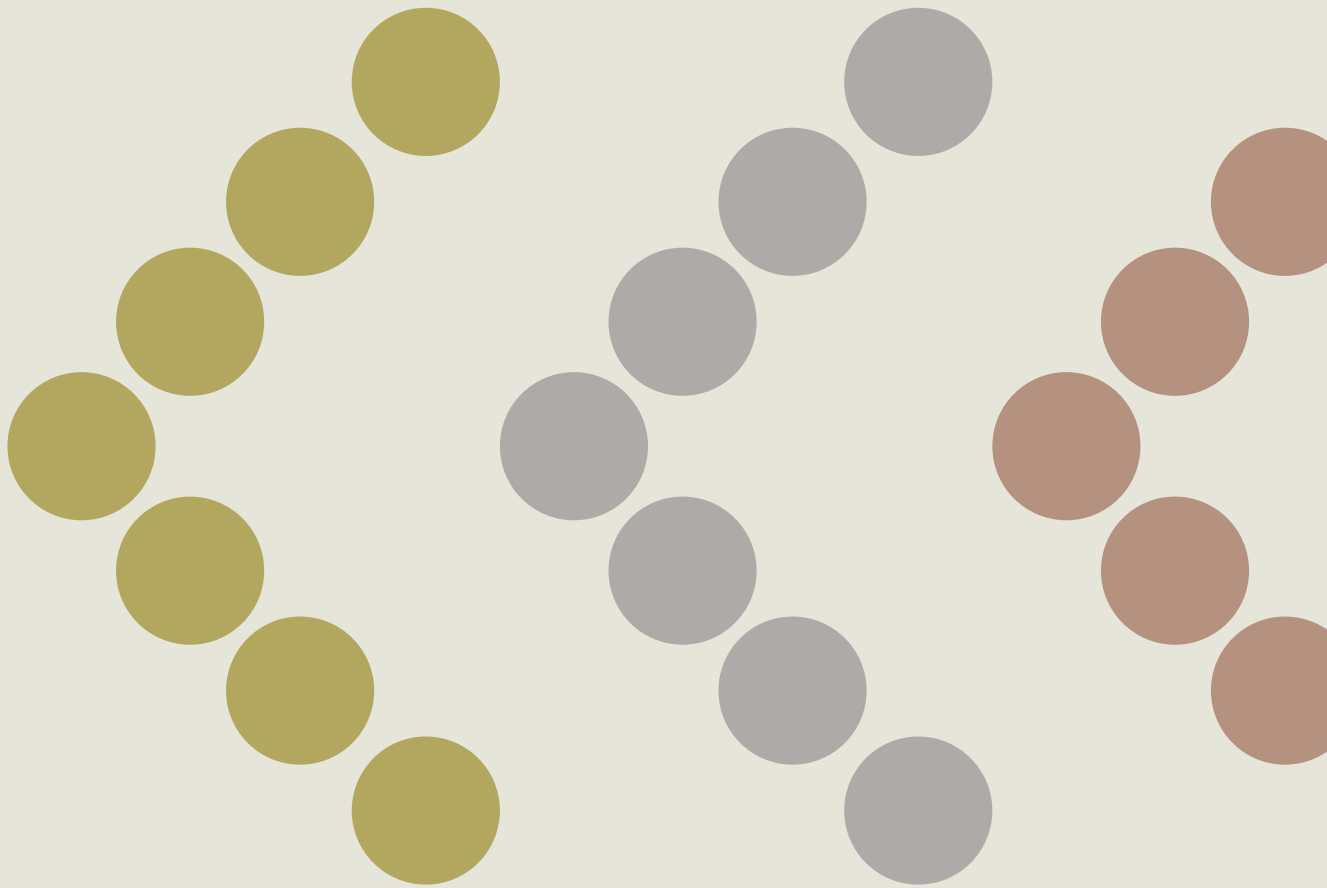
## » GLOSSARY AND ACRONYMS

<b>CFT</b> .....	Climate Futures for Tasmania, <a href="http://www.climatefutures.org.au">www.climatefutures.org.au</a>
<b>Climate Action 21</b> .....	<i>Climate Action 21: Tasmania's Climate Change Action Plan 2017-21</i>
<b>CO<sub>2</sub>-e</b> .....	Carbon dioxide equivalent
<b>CSIRO</b> .....	Commonwealth Scientific and Industrial Research Organisation
<b>IPCC</b> .....	Intergovernmental Panel on Climate Change
<b>IPPU</b> .....	Industrial Processes and Product Use
<b>LULUCF</b> .....	Land Use, Land Use Change and Forestry
<b>The Act</b> .....	<i>Climate Change (State Action) Act 2008</i>



Photo: Chris Greer







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