

Climate Change Office



Tasmania's Draft Climate Change Action Plan 2023-25

March 2023

In recognition of the deep history and culture of this Island, we acknowledge the Tasmanian Aboriginal people as the traditional and original owners, and ongoing custodians of lutruwita/Tasmania and pay respect to their elders past and present.

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Minister's Foreword



Hon Roger Jaensch MP

Minister for Environment and Climate Change

Tasmania has a nation-leading emissions profile, having recorded net zero emissions for the last seven years due to our long-term investments into renewable energy, our sustainably managed forest estate and ongoing emissions reductions, including in our waste sector. We are self-sufficient in renewable electricity.

But we cannot be complacent. Modelling shows that, as our economy and population grow, and the risk of severe bushfires increases, we will need to do more to reduce emissions across all sectors of our economy and build resilience to the impacts of a changing climate. The Tasmanian Government is committed to doing its part as we transition to a low emissions economy.

Last year, the Tasmanian Government's nation-leading climate change legislation passed Parliament. The new Act sets a legislated target of net zero emissions, or lower, from 2030 - the most ambitious legislated emissions reduction target in Australia and one of the most ambitious in the world. It also creates a requirement to prepare a climate change action plan within one year, a Climate Change Risk Assessment and Emissions Reduction and Resilience Plans for key sectors within two years, as well as other measures to strengthen accountability and transparency.

This draft Climate Change Action Plan sets out our Plan for the next two years. The two-year timeframe reflects the urgency to act, better aligns with the requirements of the new Act and the rapid changes in climate change policy occurring globally. A new Action Plan will be developed for the period 2025-2030 to ensure it can take into account the findings of the Risk Assessment and all Emissions Reduction and Resilience Plans, consistent with the requirements under the new Act.

This draft Plan builds on the achievements of our last Action Plan, Climate Action 21, extensive consultation and our more recent action on climate change. This includes supporting the transition to electric vehicles and zero emissions buses, supporting research to develop innovative livestock feed supplements to reduce emissions, funding energy efficiency in homes and businesses, replacing government-owned fossil fuel boilers with renewable energy and diverting and reprocessing organic waste from landfill to reduce both waste and emissions.

Less than seven years remain to take the necessary actions to achieve our legislated 2030 emissions target. This Plan's priorities and actions are designed to provide a clear pathway to achieve our target, continue to reduce Tasmania's greenhouse gas emissions, build resilience in our communities and deliver on our new legislative requirements.

Your contribution is vital as we finalise Tasmania's next climate change action plan, and I encourage all Tasmanians, including business, industry, scientific, environmental and community bodies, children and young people, local government, unions and members of the community to have your say on this important issue.

I look forward to considering your feedback and releasing Tasmania's next Climate Change Action Plan later this year.

Developing Tasmania's next climate change action plan

Tasmania's *Climate Change Action Plan 2023-25* will set the government's agenda for action on climate change for the next two years and support Tasmania's transition to a low emissions economy, in line with our target to maintain net zero emissions, or lower, from 2030.

Initial consultation on Tasmania's next climate change action plan was undertaken in 2021. Over 200 people participated in consultation workshops and 41 written submissions were received in response to the Opportunities Paper. The Opportunities Paper and Consultation Summary Report are available on the ReCFIT website at www.recfit.tas.gov.au/climate/climate_change_action_plan

At the same time as the initial consultation was being undertaken, a statutory independent review of Tasmania's climate change legislation was undertaken. The independent review of the *Climate Change (State Action) Act 2008* (the Act) made seven recommendations to amend the Act to strengthen the state's legislative framework for action on climate change, including recommendations relating to Tasmania's next climate change action plan.

In response, the government accepted all recommendations of the review, either in full or in principle, and developed legislation to amend the Act. As the legislation contained several amendments relating to the development of an action plan, the government decided to finalise the action plan after the Bill passed through Parliament. The Bill was introduced into Parliament in November 2021 and was passed by Parliament and enacted in November 2022.

The draft action plan

This draft action plan has been informed by the extensive consultation undertaken in 2021 with state and local government, business, industry, non-government organisations and the community. It takes into account the best available climate science, the outcomes from the independent review of the Act, the Tasmanian Emissions Pathway Review, and economic analysis. It also takes into account the objects of the Act and the specific legislative requirements relating to the development of the action plan.

The priorities and actions are designed to provide a clear pathway to achieve our legislated emissions reduction target, continue to reduce Tasmania's greenhouse gas emissions, build resilience in our communities, and fulfil the government's other legislated commitments for action on climate change.

Invitation for comments

We want to hear your feedback on the draft action plan and the government's proposed climate change priorities and key actions.

We encourage submissions from a broad range of stakeholders, including business and industry, scientific, environmental and community bodies, children and young people, local government, relevant unions and members of the community.

The Tasmanian Government recognises the importance of children and young people having a say in decision making on climate change, given that it is a long-term issue that will affect future generations. Targeted consultation with Tasmania's youth sector is ongoing and will be undertaken through existing groups, including the Premier's Youth Advisory Council and the Commissioner for Children and Young People Ambassadors Program (Tasmania).

This feedback is essential because all sectors and communities will be affected by the changing climate.

Your feedback will inform the development of the final action plan, to be released by mid-2023.

How to have your say

Key dates

Draft action plan released:	Thursday 2 March 2023
Written submissions close:	Thursday 6 April 2023

How can you have your say?

An interactive online version of this draft action plan has been developed to guide public consultation, available through the ReCFIT website link below.

You can also make a submission by writing to us, answering the questions on page 4 of this document.

Targeted meetings and online public workshops will also form part of the consultation process. Details will be available on the ReCFIT website.

Contact details

Email:	climatechange@recfit.tas.gov.au
Post:	Climate Change Office Renewables, Climate and Future Industries Tasmania, Department of State Growth GPO Box 536, HOBART TAS 7001
Online:	www.recfit.tas.gov.au/consultation_and_community

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 draft action plan before you make a submission. The questions on page 4 will assist you to provide relevant feedback, which will help us develop the final version of the action plan.

Publication

Submissions will be published on the Renewables, Climate and Future Industries Tasmania (ReCFIT) website (www.recfit.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 Climate Change Office on 03 6166 4466 or by email at climatechange@recfit.tas.gov.au.

Consultation questions

These consultation questions have been developed to guide your feedback on the draft action plan.

Vision and goals

1. Do you agree with the proposed vision and goals for the action plan? Which goals are you most supportive of? Are there any other goals that should be considered?

Priority areas

2. Will the three priority areas, (1) information and knowledge, (2) transition and innovation and (3) adaptation and resilience, help Tasmania achieve its legislated 2030 emissions reduction target and its vision for action on climate change? Are there other issues not covered by the three priority areas?

Information and knowledge

3. Will the key actions under Priority area 1 help support decision making for you and your community or organisation? What types of projects should be supported under the final action plan?

Transition and innovation

4. Will the key actions under Priority area 2 support Tasmania to achieve its 2030 emissions reduction target and continued emissions reduction across Tasmania? What types of projects should be supported under the final action plan?

Adaptation and resilience

5. Will the key actions under Priority area 3 build resilience and support adaptation planning across Tasmania? What types of projects should be supported under the final action plan?

Implementation, reporting, and monitoring and evaluation

6. Are there other ways the government could make its action on climate change, and progress towards meeting its targets, more transparent and accessible?

Tasmania's climate change action plan 2023-25

Introduction

As the world moves to a low emissions economy there are increasing risks and potential opportunities associated with that transition. Countries all over the world, including Australia, are recognising the importance of managing these risks and maximising the opportunities from investing in renewable energy and low emissions technologies.

Despite our strong advantages in climate science and research, and our cool temperate climate, Tasmania is not immune to the impacts of a changing climate. In the past decade, 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. It is important that we adapt effectively to a changing climate and build strong, resilient communities.

Our research indicates that Tasmania can reduce emissions across all sectors while maintaining economic growth and creating jobs. Action on climate change to reduce emissions and adapt to a changing climate offers multiple opportunities and benefits for Tasmania, including investment attraction, new skills and industries, future-proofing our economy, and improved health and wellbeing.

Tasmania's legislative framework for action on climate change

Climate Change (State Action) Act 2008

Through the establishment of Tasmania's new greenhouse gas emissions reduction target of net zero, or lower, from 2030, and key measures to reduce emissions and build resilience, the recent amendments to the *Climate Change (State Action) Act 2008* (the Act) set the Tasmanian Government's agenda for action on climate change.

The amendments to the Act were passed by Parliament and enacted in November 2022. They were developed based on the recommendations of the third independent review of the Act, extensive consultation with business, industry and the community, a detailed analysis of Tasmania's emissions pathway out to 2050 (Tasmanian Emissions Pathway Review), and corresponding economic analysis. These documents are available online at www.recfit.tas.gov.au/climate/climate_change_legislation

The amended Act requires the government to:

- Prepare a climate change action plan within one year, and then at least every five years.
- Work with industry and business to develop sector-based Emissions Reduction and Resilience Plans within two years, to be updated at least every five years. The first Emissions Reduction and Resilience Plan, for the transport sector, is to be developed within 12 months.
- Prepare a Statewide Climate Change Risk Assessment, which considers the risks associated with energy transition (including social and economic impacts). The initial risk assessment is to be prepared within two years and updated at least every five years.
- Prepare and publish an annual greenhouse gas emissions report and an annual climate change activity statement.

The objects of the Act have also been consolidated to establish a clear framework for the government's action on climate change.

This draft action plan outlines the government's plan to fulfil the requirements under the Act and deliver on its key policy commitments.

Legislative requirements for the action plan

The Act requires that the actions in the action plan reduce Tasmania's emissions, build resilience to the impacts of a changing climate, manage climate-related risks and take advantage of the potential opportunities from a changing climate.

In developing the action plan, the Minister is to take into account:

- the objects of the Act
- Tasmania's greenhouse gas emissions and emissions reduction target
- the latest and best available science on the projected impacts of climate change on Tasmania
- consultation with business, industry, scientific, environmental and community bodies, children and young people, local government, relevant unions, the peak body representing trade unions, and the Tasmanian community
- evidence of the effectiveness of existing measures to reduce Tasmania's greenhouse gas emissions and adapt to the impacts of climate change
- the findings of the most recent Statewide Climate Change Risk Assessment and Emissions Reduction and Resilience Plans
- developments in other jurisdictions
- any other matters the Minister considers relevant.

The Act also requires that the draft action plan is made available online for public comment, and that the final action plan is tabled in Parliament and published in a way that is accessible to a wide range of audiences, including children and young people.

A two-year action plan for 2023-25

To ensure we deliver on all of our legislative requirements, this action plan will be in place for a two-year period.

A new climate change action plan for Tasmania will be developed for release in 2025 to ensure the actions and priorities in the action plan take into account the findings of the risk assessment and all Emissions Reduction and Resilience Plans, consistent with the requirements under the Act.

Funding our climate action

The government has allocated \$10 million towards the implementation of this action plan. The funding will support the key actions under the plan, including updating the fine-scale climate projections for Tasmania, the first Statewide Climate Change Risk Assessment, and the development of sectoral Emissions Reduction and Resilience Plans.

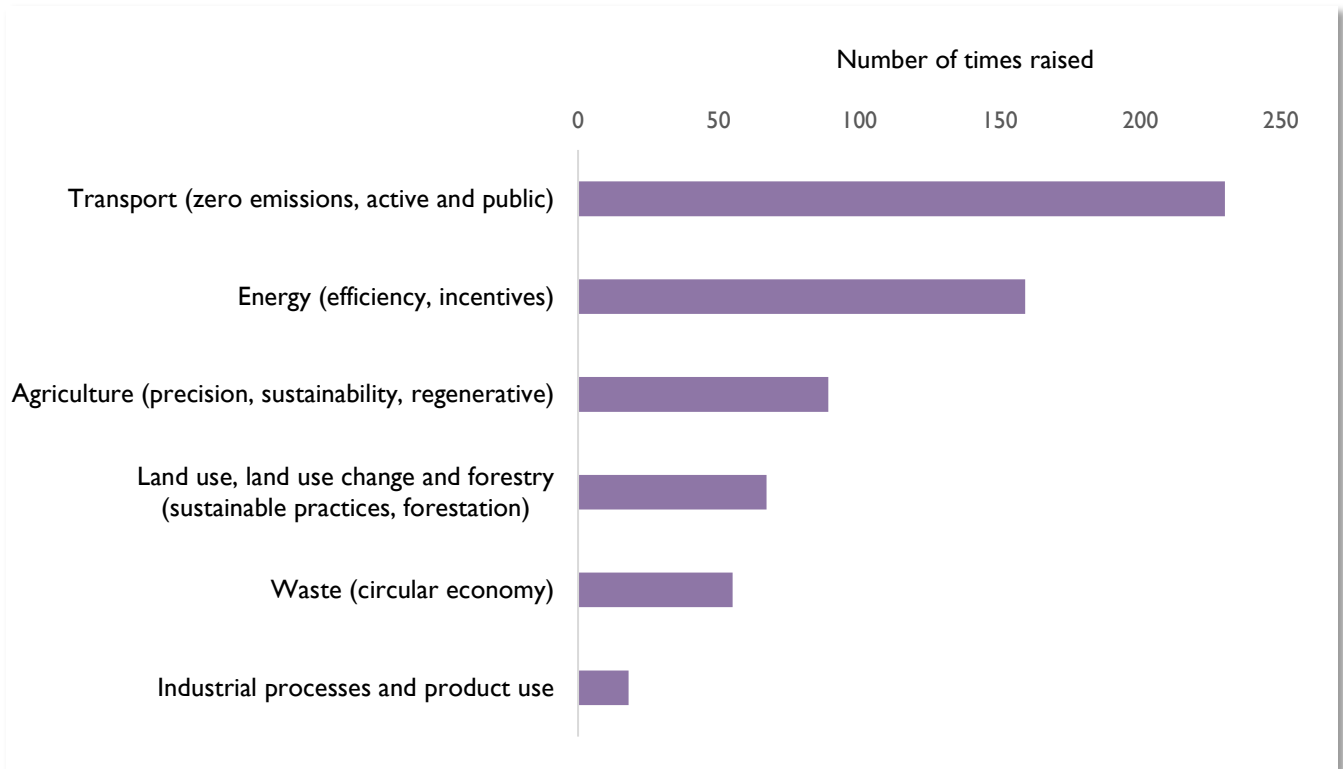
The funding will also support the Climate Change Office to partner with agencies, and support local government, business, industry, and community to progress projects and activities that will reduce emissions and help us adapt to the impacts of climate change.

Your feedback on this draft action plan will help us identify priority projects, consistent with the objectives of the *Climate Change (State Action) Act 2008*, past consultation and the opportunities identified in the Tasmanian Emissions Pathway Review, to deliver under the final action plan.

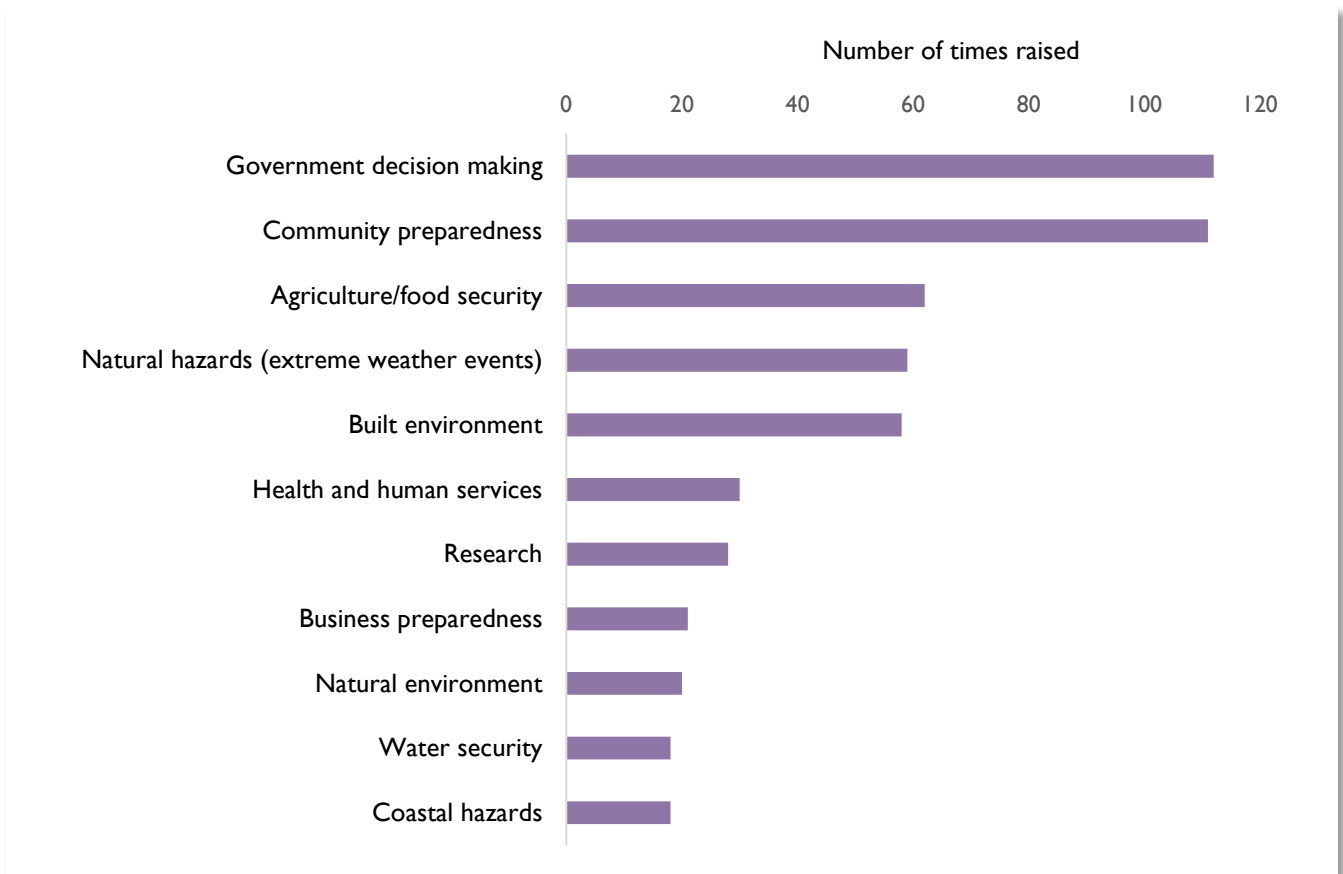
What have we heard?

Key themes from 2021 consultation on Tasmania's next action plan

Mitigation



Adaptation



What have we done?

Climate Action 21

Climate Action 21: Tasmania's Climate Change Action Plan 2017-2021 (Climate Action 21) set the government's agenda for action on climate change through to June 2021. Through Climate Action 21 we have:

- Supported climate change priority research projects to build partnerships and encourage over \$1.2 million in research investment.
- Built networks and understanding of climate change through the Climate Change Health Roundtable, annual Climate Change Symposia, and by supporting the Curious Climate Tasmania initiative.
- Provided \$600,000 to deliver 14 fast chargers and 23 destination and workplace charging stations around the state, through the Electric Vehicle ChargeSmart grants program.
- Supported the integration of electric vehicles into the fleets of nine Tasmanian councils and government departments, and assisted six heavy vehicle fleets to improve efficiency, and reduce fuel expenditure and carbon emissions, through the Smarter Fleets Program.
- Helped 11 businesses improve resource efficiency and reduce waste through the Business Resource Efficiency Program.
- Assisted 28 small- and medium-sized businesses to understand and find ways to reduce their energy use through the PowerSmart Businesses program.
- Partnered with DairyTas to deliver FertSmart plans for 200, or nearly 50 per cent, of Tasmania's dairy farms.
- Delivered the Climate Resilient Councils project to 17 of Tasmania's 29 councils.
- Supported financial counsellors to better assist vulnerable clients to manage their energy use and power bills through 12 statewide training workshops.

Action since June 2021

Since Climate Action 21 concluded, the government has:

- Provided a further \$773,000, through the Electric Vehicle ChargeSmart grants program, to support the installation of 20 fast charging stations and 23 destination chargers across regional areas and tourism hotspots, delivering a charging network around the state to support the transition to electric vehicles.
- Allocated \$4.6 million to support the transition of the government vehicle fleet to 100 per cent electric vehicles by 2030.
- Launched a second round of the Business Resource Efficiency Program.
- Provided over \$1 million to support research to develop commercial formulations of *Asparagopsis* seaweed to reduce emissions from livestock and improve productivity.
- Provided \$6 million to Metro Tasmania to deliver an electric bus trial, with further funding available for a hydrogen bus trial through the Tasmanian Renewable Hydrogen Industry Development Funding Program.

- Allocated \$10 million to replace government-owned fossil fuel boilers with renewable energy alternatives.
- Provided \$6 million to increase Food Organics Garden Organics (FOGO) reprocessing capacity across Tasmania, to divert organic waste from landfill and reduce the associated emissions.
- Introduced a statewide waste levy in July 2022.
- Passed legislation to introduce a container refund scheme, due to start in 2023.
- Built on the Climate Change and Health Roundtable to embed climate change and health as a focus area of the Healthy Tasmania Strategic Plan 2022-2026.
- Established a Statewide Environmental Sustainability Committee in the Department of Health to guide actions at a departmental level, with a focus on transitioning the fleet to electric vehicles and moving towards more sustainable, lower impact buildings and infrastructure.
- Participated in national and international climate change forums, including the Net Zero Futures Policy Forum, National Partnership for Climate Projections, Energy and Climate Ministerial Council and the Net Zero Economy Taskforce.

What have we achieved?

Tasmania is:

- the first Australian jurisdiction to achieve net zero emissions in 2014, and has maintained net zero for the last seven reported years
- the only Australian jurisdiction that contributes to a reduction in Australia's total emissions (0.7 per cent)
- the first Australian state to have a statewide electric vehicle charging network – once installation of all ChargeSmart-supported chargers is complete, each station will have another station within 47km on average.
- the jurisdiction with the lowest emissions per person in Australia (minus 6.6 tonnes CO₂-e, compared to the national average 19.4 tonnes CO₂-e)
- steadily reducing its emissions - since 1990, emissions (excluding the Land Use, Land Use Change and Forestry (LULUCF) sector) per person have declined (down 21.8 per cent)
- able to generate 100 per cent of its electricity needs from renewable sources since 2020, two years earlier than committed.

Where are we heading?

Our vision

By 2030 we will have reduced our emissions and built our resilience to the impacts of a changing climate.

Our goals

Our policies, programs and commitments to reduce emissions, adapt to the impacts of climate change, and strengthen our transition to a low emissions economy, mean by 2030 we will:

- be maintaining net zero emissions or lower, by implementing key opportunities for Tasmania, including:
 - a 100 per cent electric vehicle government fleet
 - increasing the use of public and active transport
 - reducing the volume of organic waste sent to landfill by 50 per cent
 - improving the management of landscapes to support emissions reduction and resilience, including through carbon farming and precision agriculture technologies
 - increasing new timber plantations, expanding the adoption of agroforestry in Tasmanian farming systems and reducing the conversion of plantations to other land uses
 - reducing livestock emissions by implementing livestock management strategies to reduce methane emissions, including through new feedstock types
- have up-to-date, high quality, accessible information about our future climate, to support decision making
- have a strong policy framework to consider climate change risks and opportunities in the formation of government policies and strategies
- be more resilient to the risk posed by gradual (such as sea level rise) and acute (such as bushfire and flood) climate change impacts.

How will we get there?

Action plan at a glance

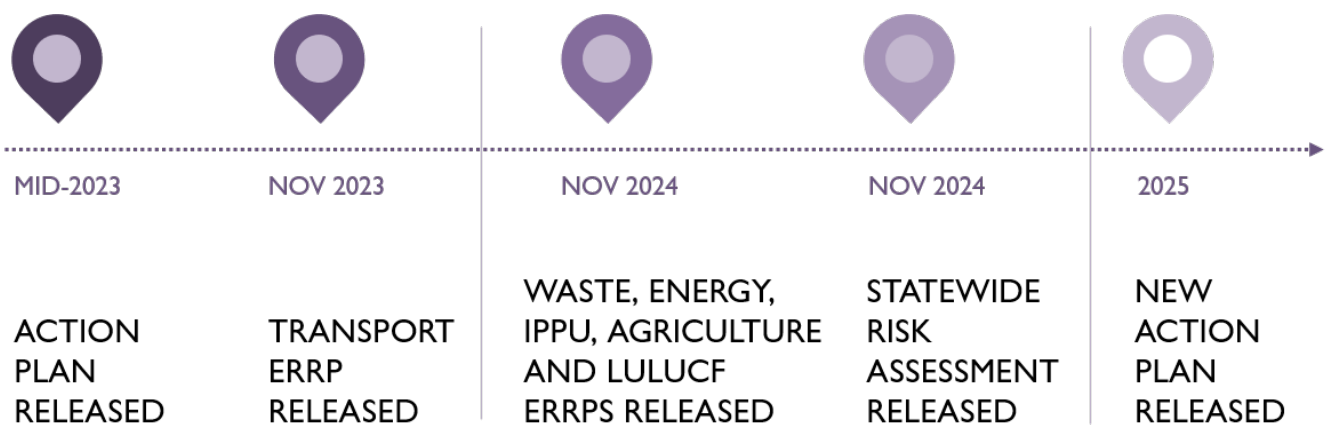
Vision	By 2030 we will have reduced our emissions and built our resilience to the impacts of a changing climate.		
Principles	<ul style="list-style-type: none"> • Sustainable development and social equity • Transparency and reporting • Science-based approach • Integrated decision making 	<ul style="list-style-type: none"> • Risk management • Community engagement • Complementarity 	
Priority areas	Information and knowledge	Transition and innovation	Adaptation and resilience
	We will ensure we have up-to-date, high quality, accessible information about our future climate to support state and local government, industry, and the community in decision making.	We will make the most of opportunities to reduce our emissions, and support households, businesses and industry through the transition to a low emissions economy.	We will manage the risks and leverage the opportunities from climate change to support planning and decision making and build our resilience to natural disasters.
Key actions	<ul style="list-style-type: none"> • Updating Tasmania’s fine-scale climate projections. • Improving accessibility and useability of information about climate projections and risks, reducing emissions and responding to the impacts of a changing climate. • Developing a whole-of-government framework to embed climate change into Tasmanian Government decision making. • Supporting the development of climate change resources for schools. • Undertaking research on climate change priorities. • Celebrating the efforts of communities, businesses and organisations to take action on climate change. 	<ul style="list-style-type: none"> • Developing Emissions Reduction and Resilience Plans for our key sectors. • Supporting businesses, industry, the community and government to innovate and implement emissions reduction opportunities, now and into the future. 	<ul style="list-style-type: none"> • Preparing Tasmania’s first Statewide Climate Change Risk Assessment. • Supporting business, industry and government to undertake adaptation planning and resilience building activities for our key sectors through the development and implementation of Emissions Reduction and Resilience Plans. • Delivering projects that support business, industry and the community to be more resilient and adapt to a changing climate.
Keeping track	<ul style="list-style-type: none"> • Development of an implementation plan. • Regular updates through our website, newsletter and social media. • Annual reporting through a greenhouse gas emissions report and climate change activity statement. • Monitoring and evaluation of each action by the lead government agencies, in collaboration with partner organisations, with oversight and assistance provided by the Climate Change Office. 		
Next steps	<ul style="list-style-type: none"> • Develop a new action plan in 2025 to ensure it takes into account the findings of Tasmania’s first Statewide Climate Change Risk Assessment and the actions identified through the development of sector-based Emissions Reduction and Resilience Plans. 		

Our principles

The government’s action on climate change will be guided by the following principles, recommended by the independent review of the Act.

Principle	Description
Sustainable development and social equity	Climate action, and any government action that has a direct impact on climate change mitigation or adaptation efforts, should benefit both current and future generations of Tasmanians. In particular, vulnerable communities and First Nations practices should be considered.
Transparency and reporting	Reporting on climate change action should be timely, transparent and accurate, and made available to the public.
Science-based approach	Climate change action should be scientifically substantiated and align with limiting global warming to no more than 1.5°C above preindustrial levels.
Integrated decision making	Decision making on climate change action is integrated, addressing environmental, social and economic considerations over short-, medium-, and long-term timeframes.
Risk management	Climate change action adequately reflects assessed risks, and risks of action and inaction are addressed.
Community engagement	Proposed climate change action takes into account the views of interested and relevant members of the community, through appropriate engagement.
Complementarity	Climate change action should reflect an appropriate level of cohesion with relevant state, national, and international climate change developments.

Key timeframes



Priority area I – Information and knowledge

We will ensure we have up-to-date, high quality, accessible information about our future climate to support state and local government, business, industry, and the community, in decision making.

Having accurate, accessible information about our future climate helps state and local government, industry, and the community make informed decisions about managing climate risks. It enables us to take advantage of potential opportunities and prepare for risks in areas such as agricultural production, health services, sustainable forest management, water and land use planning, infrastructure planning and investment, and emergency management. We use a range of international, national and local climate change-related information and projections.

Tasmania is fortunate to have world class capabilities in marine and climate science. The Tasmanian Government has continued to support research on Tasmania's future climate to help equip Tasmanian businesses, industry and the community to manage the risks and opportunities presented under a changing climate.

Since 2010, *Climate Futures for Tasmania* has provided fine-scale climate projections to inform regional decision making. Developing fine-scale or “downscaled” projections for Tasmania is important as our topography (in particular, the state's mountainous terrain) causes significant regional differences in weather across the state that are not well represented in global climate modelling.

Fine-scale climate projections show the likely impact of changes to Tasmania's climate, which assists with planning, and policy and program development, in areas such as agriculture, water catchments, extreme events, and future fire danger. There are a range of stakeholders that rely on these projections, including government entities, government businesses and private companies.

The government is currently delivering the Catchment Yield Science Update Project, which will identify contemporary climate change projection datasets to enable us to update information on Tasmania's water catchments under a changing climate.

As part of *Climate Action 21: Tasmania's Climate Change Action Plan 2017-2021*, the Tasmanian Government invested in research about the state's future climate. In 2020, individual grants of up to \$50,000 were awarded to climate research projects that aimed to improve understanding of, and adaptation to, Tasmania's future climate. Total funding of \$746,958 was allocated across 16 projects, aligned with one or more of seven Tasmanian priority research areas. Projects included:

- research by the University of Tasmania (UTAS) to understand the economic burden of climate-related extreme events, and development of a framework to support future planning and decision making in the health care sector
- climate change modelling for part of the Port Arthur Historic Site to guide better long-term management procedures
- climate adaptation models to guide climate resilient forest revegetation by UTAS
- mapping of reefs in warming waters on the east coast of Tasmania to evaluate management strategies by the Institute for Marine and Antarctic Science (UTAS).

Key actions – Priority area I

Action	Description
<p>Updating Tasmania’s fine-scale climate projections.</p>	<p>Since the Climate Futures for Tasmania projections were developed in 2010 there have been many advances in the skills of model simulations, impact assessment techniques and new interpretation approaches.</p> <p>The Australian Government’s Royal Commission into National Natural Disaster Arrangements recommended that Australian, state and territory governments produce and regularly review downscaled climate projections to better understand future natural disaster risk to inform decision making.</p> <p>Through this action plan, the government will develop fine-scale or “downscaled” projections for Tasmania using the latest global climate models (CMIP6).</p> <p>This information will be important to support Tasmania’s communities, government agencies, businesses and industry to build resilience to the impacts of climate change and adapt to its impact.</p>
<p>Improving accessibility and useability of information about climate projections and risks, reducing emissions and responding to the impacts of a changing climate.</p>	<p>We will bring together Tasmania’s extensive climate change knowledge and resources to develop a suite of resources that meet user needs, to support state and local government, industry and the community make informed decisions about reducing their emissions and managing climate risks and opportunities.</p>
<p>Developing a whole-of-government framework to embed climate change into Tasmanian Government decision making.</p>	<p>The framework will build capability and embed consideration of climate change into decision making across the General Government Sector. It will consider Ministerial guidelines, guidance material and decision support tools, information on scientific, legal and market developments and training opportunities. It will be informed by the principles recommended by the independent review of the Act (outlined on page 12).</p> <p>The framework will be developed by mid-2024.</p>
<p>Supporting the development of climate change resources for schools, in partnership with the Department for Education, Children and Young People.</p>	<p>The government has developed a Renewable Energy Education Package for Tasmanian Schools that aligns with the curriculum and provides local curriculum extensions. The Renewable Energy Education Package will be rolled out in 2023 and includes explanations of the different forms of renewable energy, how renewable energy addresses climate change and the role of renewable energy in Tasmania’s economy.</p> <p>Building on these resources, the government will develop additional climate change resources for Tasmanian children and young people. These resources aim to build a generation of young Tasmanians who are critical thinkers involved in exploring and understanding the science of climate change, its causes and solutions, and how society and our economy will need to build resilience and adapt to its impacts.</p>
<p>Partnering to undertake research on key climate change priorities.</p>	<p>We will continue to support research on climate change priorities in Tasmania through the climate change research grants program.</p>

Action	Description
Celebrating the efforts of communities, businesses and organisations to take action on climate change	We will consider opportunities to celebrate action on climate change. This could include an awards scheme or a community event to showcase innovative responses to the challenges of a changing climate.

Information and Knowledge Case Study: Enterprise Suitability Mapping

Enterprise suitability maps help farmers or investors match local soil and climate information with the right crops for those conditions. They combine digital soil mapping, localised climate data and crop rules, and provide information to shortlist potential crops or enterprises for further investigation. The mapping process also identifies the likely risks or barriers to growing the crops.

Under Climate Action 21, the government produced enterprise suitability maps for six crops commonly grown in Tasmania. The government has now produced enterprise suitability maps for a total of 32 crops, which incorporate fine-scale climate projections with existing modelling.

The maps show how these crops could be grown productively in the future under different climate scenarios, allowing farmers, industry, or investors to identify:

- areas where crops or enterprises could potentially be introduced, intensified, or diversified, guiding more detailed investigations at the farm or paddock-scale
- possible risks or impediments to growing the crops and mitigation to improve suitability
- the wider viability of new enterprises at a state or regional scale.

Statewide Enterprise Suitability Maps are available for a range of agricultural commodities, including vegetables, fruit, grains, pharmaceuticals, pastures and forestry. The maps are available through the Land Information System Tasmania (LIST) map. More information is available on the Department of Natural Resources and Environment Tasmania website at: www.nre.tas.gov.au/agriculture/investing-in-irrigation/enterprise-suitability-toolkit

Priority area 2 – Transition and innovation

We will make the most of opportunities to reduce our emissions, and support households, businesses and industry through the transition to a low emissions economy.

In 2014, Tasmania was the first Australian jurisdiction to achieve net zero emissions, and we have achieved this commitment for the last seven reported years. Tasmania also achieved 100 per cent self-sufficiency in renewable electricity generation in 2020, two years ahead of its committed target.

Tasmania's emissions profile is unique compared with other Australian jurisdictions, due to our managed forest estate offsetting our emissions (an emissions, or carbon, sink) and our high proportion of renewable electricity generation. In 2020 (the most recent reporting year) Tasmania's emissions were minus 3.73 megatonnes (Mt) of carbon dioxide equivalent (CO₂-e). This is a reduction of 121 per cent from 1990 levels.

However, maintaining Tasmania's net zero emissions profile is not guaranteed into the future, due to factors such as population growth, global market forces, and the uptake of new technologies. In addition, the carbon sink from our forests is not fixed and could be impacted by external factors, such as bushfires, which are projected to increase in both frequency and intensity under a changing climate.

The Tasmanian Government is committed to continuing to reduce emissions across all sectors of our economy and support the transition to a low emissions economy.

Transition and Innovation Case Study: Business Resource Efficiency Program

Through the Business Resource Efficiency Program (BREP), delivered by Business Action Learning Tasmania, the government is supporting businesses across the state to reduce waste and emissions, adopt innovative practices, manage financial and climate risks, and strengthen their competitive advantage in the transition to a low emissions economy.

The first round of BREP was delivered under Climate Action 21 in 2018-19, and successfully supported 11 small- and medium-sized businesses in a range of sectors, across the north and north west of Tasmania, to improve resource efficiency and reduce waste.

Each business received a comprehensive waste audit, to identify opportunities for increased resource efficiency.

Through a series of workshops and action learning meetings, the businesses worked as a team to tackle each business's particular waste problem and develop an action plan.

Businesses received one-on-one mentoring throughout the program to develop their projects, and visited waste management centres and other businesses that are leading the way in resource efficiency.

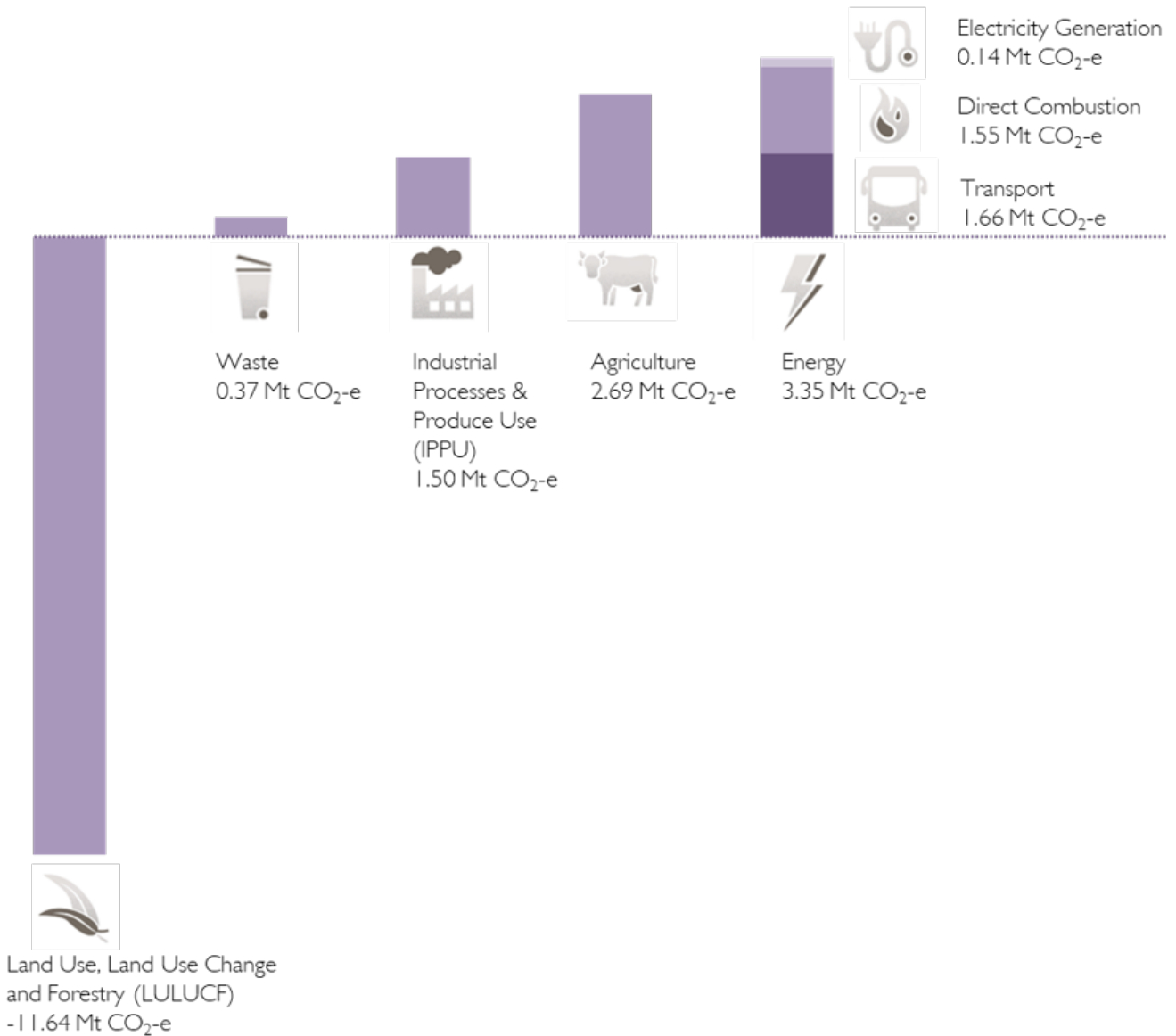
Each business finished the program with a set of recommendations and an implementation plan to improve their resource efficiency. Participants presented their results at a program review forum. A range of resources and tools were developed to summarise the key program learnings and outcomes and help other businesses to improve their resource efficiency. Resources include case studies, fact sheets and short videos, available online.

A second round of BREP has recently been launched, and applications are now open. More information is available on the Business Action Learning Tasmania website at:

www.businessactionlearningtas.com.au/brep/

Current emissions from our key sectors

Tasmania’s latest reported greenhouse gas emissions were released in June 2022 as part of the Australian Government’s National Greenhouse Accounts 2020 and State and Territory Greenhouse Gas Inventories 2020. The Australian Government reporting framework is consistent with UNFCCC and Kyoto Protocol reporting rules. National inventory reporting runs two years behind the current date, and represents the most recent official data in Australia on annual emissions.



Key actions – Priority area 2

Action	Description
<p>Developing Emissions Reduction and Resilience Plans for key sectors.</p>	<p>To support businesses, industry and the community to make the transition to a low emissions future, the amended Act establishes a legislative framework for the government to collaborate and consult with industry to develop sector-based Emissions Reduction and Resilience Plans (ERRPs). The Plans will ensure that a practical and balanced approach is taken to reduce emissions and build resilience to the impacts of a changing climate. The ERRPs will be developed by the Minister for Environment and Climate Change, in consultation with relevant Portfolio Ministers and consultation with key industry stakeholders. ERRPs will be developed for the Energy, Transport, Waste, Agriculture, IPPU, LULUCF and Government sectors. All ERRPs are due to be completed within two years (November 2024), with the exception of the transport ERRP, due for completion by November 2023.</p> <p>The objectives of the ERRP development are to:</p> <ul style="list-style-type: none"> • prioritise government and industry activity to support the state’s target of net zero emissions, or lower, from 2030 • develop strategies for greenhouse gas emissions reductions • support the transition to a low emissions economy • improve resilience to climate-related risks <p>Key outputs include:</p> <ul style="list-style-type: none"> • State of Play reports, which will be publicly released and inform targeted consultation with key stakeholders • draft Plans, which will be released for public consultation • final Plans
<p>Supporting business, industry, the community and government to innovate and implement emissions reduction opportunities, now and into the future.</p>	<p>We will support business, industry, the community and government to undertake projects, programs and other activities that innovate by integrating traditional, new and emerging knowledge to reduce emissions and support the transition to a low emissions economy.</p> <p>This may include projects such as:</p> <ul style="list-style-type: none"> • research and development • pilot programs to demonstrate suitability of new technologies • information and decision support tools • capability building • enabling infrastructure • legislative and policy settings • advocacy to the Australian Government on key issues • developing information for businesses, industry and the community on relevant Tasmanian and Australian Government programs.

How are we reducing emissions from our key sectors?

The government has announced a number of initiatives in recent years to support emissions reduction across Tasmania.

Sector	Emissions reduction measures
Transport	<p>We have:</p> <ul style="list-style-type: none"> • Provided nearly \$1.4 million in funding, through two rounds of the Electric Vehicle ChargeSmart Grants Program, to support electric vehicle charging infrastructure and deliver Australia’s first statewide charging network. • Provided \$6 million for Metro Tasmania to deliver an electric bus trial, and made further funding available for a hydrogen bus trial, through the Tasmanian Renewable Hydrogen Industry Development Funding Program. <p>We are:</p> <ul style="list-style-type: none"> • Working towards our target to transition the government vehicle fleet to 100 per cent electric vehicles by 2030, with funding of \$4.6 million to support the transition. • Assisting Tasmanians to purchase an electric vehicle (EV) through the stamp duty waiver on new or secondhand EVs, introduced in July 2021. The waiver saves the purchaser more than \$2,400 on average and has assisted Tasmanians to purchase over 1,280 EVs. The number of EVs on our roads has more than doubled since late 2021, increasing to just over 1,600 vehicles as of the end of January 2023. • Chairing Tasmania’s Electric Vehicle Working Group since 2017, bringing key industry partners together to ensure a coordinated and efficient approach to support the uptake of electric vehicles in Tasmania.
Waste	<p>We have:</p> <ul style="list-style-type: none"> • Established a Waste and Resource Recovery Board to provide strategic oversight and drive the circular economy agenda. • Introduced a statewide levy on waste from 1 July 2022 to encourage the diversion of waste from landfill and drive investment in Tasmania’s circular economy. • Invested \$9 million to improve and increase Food Organics Garden Organics (FOGO) reprocessing capacity across Tasmania. • Provided \$5.5 million towards improving plastic recycling in Tasmania, and over \$870,000 towards improving recycling in our remote communities (King Island, Flinders Island and the west coast). • Allocated \$3 million to invest with industry in the construction of a rubber crumbing plant to turn end-of-life tyres into products that can be used in the government’s Road Resurfacing Program. <p>We are:</p> <ul style="list-style-type: none"> • Developing a Waste and Resource Recovery Strategy for Tasmania. • Developing a Container Refund Scheme, due to start in 2023. • Delivering a second round of the Business Resource Efficiency Program, following the success of the first round in 2018. • Committed to phasing out single-use plastics in Tasmania by 2025, with funding of \$1 million to help us achieve this target.

Sector	Emissions reduction measures
Energy	<p>We are:</p> <ul style="list-style-type: none"> • Growing Tasmania’s renewable electricity generation to our legislated target of 200 per cent (of 2020 generation capacity) by 2040, with an interim target of 150 per cent by 2030. • Developing a renewable hydrogen industry to meet local demand and for export by 2030, supported by a \$50 million Tasmanian Renewable Hydrogen Industry Development Funding Program, and the development of a green hydrogen hub at Bell Bay. The Hub will deliver major infrastructure upgrades across port, water and electricity transmission, as well as providing funding for domestic market activation opportunities. • Committed to contributing to the national transition to net zero through the Marinus Link and Battery of the Nation projects, which are expected to enable national savings of at least 140 million tonnes of carbon dioxide by 2050. • Committing \$10 million over four years to replace ageing fossil fuel boilers in schools, hospitals and correctional facilities with low emissions and renewable energy-powered alternatives, including bioenergy technology. • Providing \$800,000 to implement the Renewable Energy Coordination Framework, which prioritises actions to support the future growth of the renewable energy sector. • Delivering the Energy Saver Loan Scheme to provide three-year interest-free loans of up to \$10,000 for households and businesses to purchase and install energy efficient appliances. • Delivering a range of additional measures to support emissions reduction and reduce energy costs, including: <ul style="list-style-type: none"> – a \$5 million Renewable Energy Schools Fund – finalising a \$15 million program to support energy efficiency upgrades in public housing – doubling funding for the No Interest Loan Scheme to \$2 million. This scheme provides concession-card holders with a 50 per cent subsidy toward energy efficient appliances, with a no interest loan for the balance.
IPPU	<p>We have:</p> <ul style="list-style-type: none"> • Allocated funding of \$1.3 million to support large Tasmanian greenhouse gas-emitting businesses and industries to reduce emissions. <p>We are:</p> <ul style="list-style-type: none"> • Working with Rio Tinto’s Bell Bay Aluminium operations to support decarbonisation of its smelters in line with our renewable energy target.
LULUCF	<p>We are building on our sustainable forestry sector to support the state’s emissions profile through:</p> <ul style="list-style-type: none"> • carbon sequestration in forests, plantations and wood products • promoting the use of locally-sourced timber instead of more emissions-intensive building materials or imported products • exploring opportunities for biofuels to reduce fossil fuel use.

Sector Emissions reduction measures

Agriculture

We have:

- Provided over \$1 million in funding for research to develop commercial feed supplements, using the seaweed *Asparagopsis*, to reduce enteric methane emissions from cattle and sheep.
- Delivered the Landcare Action Grants Program from 2018-19 to 2021-22, in partnership with the Tasmanian Farmers and Graziers Association and Landcare Tasmania.
- Delivered the On-Farm Energy Audit and Capital Grant Program from 2018-19 to 2020-21 to assist eligible farmers to engage a qualified professional to review their farm energy use, infrastructure and systems and identify savings strategies and invest in capital infrastructure.
- Funded Farmers for Climate Action to promote strategies for managing perennial pastures, improving soil carbon and reducing agricultural emissions.
- Supported DairyTas to deliver the Fert\$mart program from 2014 to 2018.

We are:

- Delivering the \$250,000 Carbon Farming Advice Rebate Pilot Program to offset the costs to primary producers of obtaining expert advice on carbon farming projects.
- Developing a 10-Year Salmon Plan, with a key priority of emissions reduction and resilience planning for the salmon industry.
- Exploring further opportunities to support the commercial uptake of feed supplements to reduce enteric methane emissions from cattle and sheep.

How can we further reduce emissions for our key sectors?

The Tasmanian Emissions Pathway Review identified 16 “best-fit” emissions reduction opportunities that are already technically and economically achievable and align with current policy settings. Other emissions reduction opportunities are likely to become technically and economically achievable with further research, development, investment, and time.

This best fit pathway would see Tasmania maintaining net zero emissions easily from now until 2050, with the state acting as a net sink of over 4,700 kt CO₂-e per annum in 2050.

Expert economic analysis, undertaken by Victoria University, demonstrates that by adopting these 16 opportunities to reduce emissions, Tasmania can generate higher economic and employment growth than business as usual.

The opportunities identified in the Tasmanian Emissions Pathway Review will play an important role in the development of the sector-based Emissions Reduction and Resilience Plans.

A description of each sector, together with information on Tasmania’s emissions reporting is included on page 30.

Tasmanian Emissions Pathway Review “best-fit” opportunities for Tasmania

Sector	2020 emissions (Mt CO ₂ -e)	Emissions reduction opportunities	Timeframe	Estimated annual abatement in 2050 (Mt CO ₂ -e)
Transport	1.66	Increase uptake of low emissions vehicles, including electric vehicles, in the passenger fleet.	Short-term	0.55
		Increase uptake of public and active transport.	Short-term	0.05
		Decarbonise the heavy transport fleet by using electric vehicles, hydrogen fuel cells, and renewable hydrocarbon fuels.	Medium-term	0.69
Waste	0.37	Reduce landfill methane emissions by diverting more organic waste from landfills and increase landfill gas capture.	Short-term	0.06
Energy	1.69	Reduce diesel use in the agriculture industry through precision agriculture and improved irrigation technologies.	Medium-term	0.06
		Increase implementation of measures to improve energy efficiency and manage energy demand in manufacturing industries.	Medium-term	0.23
		Electrification of boilers for process heat applications in manufacturing industries.	Long-term	0.13
		Use of bioenergy or renewable hydrogen in manufacturing industries	Long-term	0.37
		Renewable hydrogen, biogas or synthetic gas substitutes for natural gas	Long-term	0.15
IPPU	1.50	Use of locally-sourced wood in construction in place of emissions-intensive building products.	Medium-term	0.21
LULUCF	-11.64	Reduce conversion of plantations to other land uses.	Medium-term	0.12
		Increase plantations, including agroforestry	Short-term	0.30
		Introduce new measures, and maintain existing measures, to reduce the risk of major bushfires in forests.	Short-term	0.07
		Increase proportion of forestry logs directed to long-term wood products, and increased domestic processing	Short-term	0.03
Agriculture	2.69	Reduce agricultural soil emissions through precision agriculture and regenerative farming practices.	Short-term	0.07
		Reduce methane emissions from livestock by introducing feed supplements that inhibit enteric fermentation.	Medium-term	1.70
Total	-3.73			4.79

Priority area 3 – Adaptation and resilience

We will manage the risks and take advantage of the potential opportunities from climate change, support planning and decision making, and build our resilience to a changing climate.

Under a changing climate, Tasmania is expected to experience increased storm events and changes in rainfall patterns, which are likely to result in increased flooding, coastal inundation and erosion. We are also expected to experience increased temperatures and longer fire seasons, with more frequent and intense bushfire events. Extreme weather events are projected to increase in frequency and intensity over time.

These events have environmental, economic and social impacts on state and local government, business, communities and households.

Managing the risks of a changing climate and making the most of opportunities that may arise will help to minimise disruptions to our economy and help communities to adapt and recover. Although we cannot remove the risks entirely, we will be more resilient if we understand them and plan appropriately to lessen their impacts.

Decisions and actions taken now build community resilience, capacity and preparedness to protect our environment, community and economy into the future.

Across government, a broad range of actions have already been implemented or are underway to support climate change adaptation and build resilience. Programs include:

- Tasmanian Disaster Resilience Strategy 2020-2025
- Tasmanian State Natural Disaster Risk Assessment 2022
- Tasmanian Strategic Flood Mapping Project
- review of the *Fire Service Act 1979*
- statewide mapping of natural hazards, including coastal erosion and inundation, publicly available on LISTmap
- statewide sea level rise planning allowances for municipalities
- embedding climate change consideration into the State Planning Provisions and Tasmanian Planning Policies
- understanding the impacts of climate change on bushfire risk in the Tasmanian Wilderness World Heritage Area
- the Climate Resilient Councils program, which supported 17 councils to understand and improve how climate change is considered by their council when making strategic and financial decisions
- understanding and managing the impacts of coastal hazards on existing settlements and values
- delivering irrigation schemes, to support farmers to adapt to changing rainfall patterns.

Key actions – Priority area 3

Action	Description
Preparing Tasmania's first Statewide Climate Change Risk Assessment.	<p>The Act requires that a Statewide Climate Change Risk Assessment (Risk Assessment) is prepared within two years of the commencement of the Act (November 2024) and updated at least every five years.</p> <p>The Risk Assessment will assist the government to prioritise actions that support adaptation to the impacts of climate change, including through future climate change action plans, sector-based emissions reduction and resilience plans, and the whole-of-government policy framework, to ensure climate change is considered in government decision making.</p> <p>The Risk Assessment is required to consider the economic, social and environmental implications of climate change and the associated risks to Tasmanian communities, natural environments and ecosystems, economic activity, the risks associated with energy transition, and the impact of climate change on the health and wellbeing of Tasmanians and future generations.</p>
Supporting business, industry and government to undertake adaptation planning and resilience building activities for our key sectors.	<p>The government is committed to supporting business, industry and government to undertake adaptation planning and resilience building activities for our key sectors, through the development and implementation of Emissions Reduction and Resilience Plans.</p>
Delivering projects that support business, industry and the community to be more resilient and adapt to a changing climate.	<p>The government is committed to delivering projects that support business, industry and the community to be more resilient and adapt to a changing climate.</p> <p>This may include projects such as:</p> <ul style="list-style-type: none">• adaptation planning with local government• guidance to manage coastal hazards• working with Tasmanian Aboriginal communities• supporting actions to protect priority populations from the impacts of climate change such as extreme weather events• planning for business continuity after natural disasters• embedding climate change into strategic risk management• supporting the community and key groups to adapt and build their resilience to a changing climate through open grant programs.

Adaptation and Resilience Case Study: Tasmanian Wilderness World Heritage Area

The government is committed to the effective management and protection of the Tasmanian Wilderness World Heritage Area (TWWHA), which is recognised through the World Heritage Convention as having both cultural and natural heritage of Outstanding Universal Value.

A key action under Climate Action 21 was to examine the impacts of climate change on bushfire risks in the TWWHA. The government's response to the Tasmanian Wilderness World Heritage Area Bushfire and Climate Change Research Project was publicly released in December 2017.

In September 2021, the government released the *Tasmanian Wilderness World Heritage Areas Natural Values Climate Change Adaptation Strategy 2021–2031*, which aims to manage climate risk by planning for the potential impact of heatwaves, seasonality of weather variables, coastal erosion and extreme weather events.

Climate change will have significant implications for TWWHA biosecurity, both in terms of the vulnerability of values and landscapes, and the risks posed by existing or potential invasive organisms. The TWWHA *Biosecurity Strategy 2021-30* guides management activities and decision making to minimise the risks and impacts of invasive organisms on the natural and cultural values of the TWWHA.

In June 2022, the Tasmania Parks and Wildlife Service released a fire management plan (plan) for the TWWHA. The plan provides a strategic and comprehensive management framework to guide fire management and mitigate bushfire risk into the future and was developed through extensive consultation with stakeholders and the public. The plan acknowledges that the ecosystems of the TWWHA are a product of millennia of fire management, with records of people using fire as a management tool in the region extending back at least 40,000 years. Active fire management is still required to preserve the World Heritage values of the TWWHA. Key strategies in the plan include the development and implementation of a planned burning program, and improving rapid attack capability.

How will we keep track of our progress?

Implementation, reporting, monitoring and evaluation and governance

Implementation

The Climate Change Office will develop an implementation plan to clearly outline timelines, outputs and performance indicators for each action in the action plan. We will continue to engage with stakeholders and the community on specific actions.

The Climate Change Office will keep stakeholders and the community informed on the implementation of the action plan through our website, newsletter and social media.

Reporting

The amendments to the Act include measures to increase the transparency and accountability of the government's action on climate change. This includes a legislative requirement to prepare:

- an annual greenhouse gas emissions report detailing Tasmania's emissions for each sector
- an annual climate change activity statement, showing the status of the actions in the action plan, and the Emissions Reduction and Resilience Plans.

Each of these reports is to be tabled in Parliament.

Wherever possible, estimates of emissions reduction for actions and projects will be included. However, calculating emissions from projects is complex and challenging, with risks of claims of "greenwashing". Emissions estimates require a comprehensive assessment of all inputs into the project, and there are many factors that can influence the energy use and emissions reductions from projects (such as weather and climate variability, technologies deployed, production levels, occupancy of buildings, use of vehicles).

Monitoring and evaluation

We will determine whether actions in the plan have been effective by monitoring and evaluating individual actions. Monitoring will be based on the approach identified for each of the actions. Evaluation methods will vary, as they will be tailored for each action.

Lead government agencies, in collaboration with partner organisations, will be responsible for monitoring and evaluating the actions they deliver. The Climate Change Office will provide oversight and assistance.

An adaptive management approach will be used. Implementation of actions will be adjusted based on what we learn from our monitoring and evaluation activities.

Learning from our experiences and sharing this information with others is a priority, as we implement the action plan and build our capacity for effective action on climate change.

Consultation

The government has committed to establish a Climate Change Reference Group (the Reference Group). The Reference Group will provide advice and feedback on strategic priorities and emerging opportunities in climate change mitigation and adaptation. Advice from the Reference Group will support the government to work towards Tasmania's 2030 net zero emissions target and increase community resilience to the impacts of climate change. The government has committed to reviewing governance arrangements related to climate change in Tasmania over the next 12-18 months.

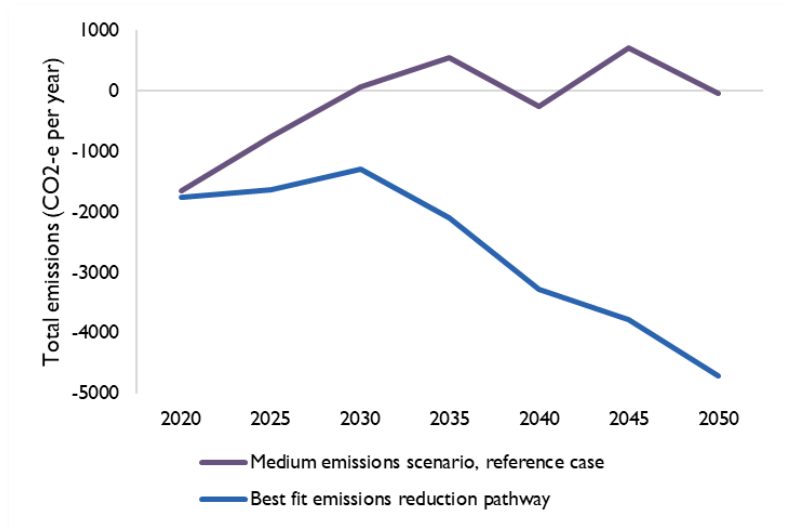
How will the target of net zero emissions, or lower, from 2030 impact our economy?

The Tasmanian Emissions Pathway Review and Economic Impact Analysis projects, undertaken in 2021, assessed the impact on industry and jobs of setting an ambitious emissions reduction target. The emissions reduction opportunities identified in these projects suggest positive outcomes for both economic growth and employment over time. This largely reflects expected productivity and value-add gains that contribute to increased economic growth and employment opportunities.

Our emissions

Under a business-as-usual (reference case) scenario, Tasmania becomes a net emitter in years when a major bushfire is modelled.

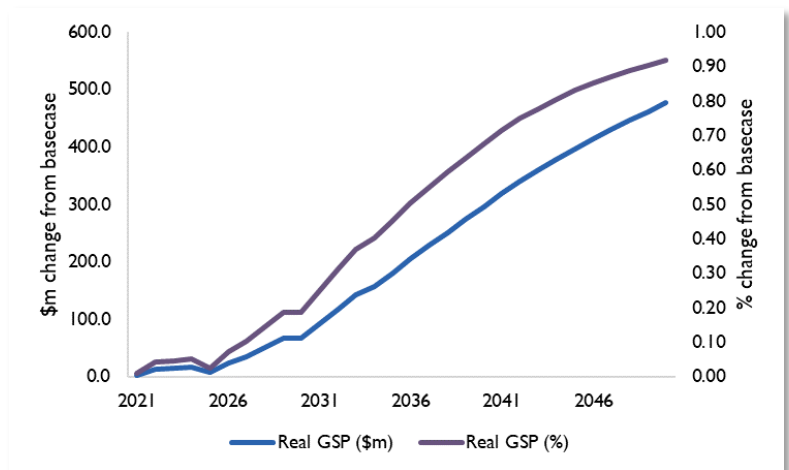
A best-fit emissions pathway, that incorporates a range of achievable emissions reduction opportunities, projects that Tasmania can comfortably maintain net zero emissions to 2050.



Our economy

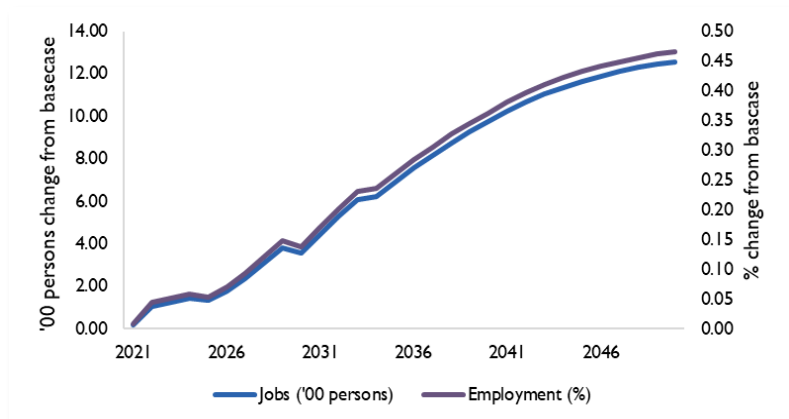
Tasmania's GSP in 2050, under the best-fit scenario, could be 0.2 per cent higher than it would be under the reference case.

This equates to GSP in 2050 being higher by around \$475 million (in 2021 prices) than it would be without the emissions reduction opportunities being implemented.



Our employment

Over the same period, the level of employment is estimated to be 0.5 per cent higher (or over 1,200 persons) in 2050 under the best-fit scenario compared with the reference case.



Alignment to government priorities

Several plans and strategies have been released in Tasmania that are relevant to climate change, outlined below. This draft action plan has been developed to align with these key policies.

Policy	Description
Tasmanian Renewable Energy Action Plan and Tasmanian Renewable Energy Target	<p>The Action Plan outlines how the Tasmanian Government will utilise renewable energy to benefit all Tasmanians through job creation and driving investment through economic growth.</p> <p>Sets a legislated 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.</p>
Tasmanian Renewable Hydrogen Action Plan	<p>Outlines the Tasmanian Government's plan to ensure Tasmania is perfectly placed to benefit from the emerging global hydrogen industry.</p> <p>The centrepiece of the Action Plan is the Tasmanian Government's \$50 million Tasmanian Renewable Hydrogen Industry Development Funding Program, which could support the development of hydrogen fuel cell technologies to reduce transport emissions.</p>
AgriVision 2050 and White Paper: Growing Tasmanian Agriculture Research, Development and Extension for 2050	<p>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.</p>
Draft Waste Action Plan	<p>Outlines the framework for waste management and resource recovery in Tasmania.</p> <p>Sets out a broad framework for waste management and resource recovery in Tasmania, including targets and actions to achieve them. A key focus area of the plan is growing Tasmania's circular economy and prioritising waste management and resource recovery.</p>
A Strategic Growth Plan for the Tasmanian Forests, Fine Timber and Wood Fibre Industry	<p>The Plan outlines an objective of doubling the value of the industry to \$1,200 million by 2036 through more efficient use of the available resources. This growth will be driven by innovation and investment to produce products and services of maximum value and greatest return.</p>
Child and Youth Wellbeing Strategy	<p>Consultation identified that protecting the environment and tackling climate change was a key priority for children and young people.</p>

There are also relevant policies under development, including a refreshed Population Strategy, Small Business Growth Strategy, Waste and Resource Recovery Strategy, Tasmanian Housing Strategy and Tasmanian Events Strategy 2023-27.

Defining Tasmania’s key sectors

Tasmania’s emissions are reported in accordance with the Intergovernmental Panel on Climate Change (IPCC) reporting framework for national greenhouse gas inventories.

The main source of data on Tasmania’s emissions is the Australian Government’s State and Territory Greenhouse Gas Inventories (STGGI).

The STGGI is prepared as part of Australia’s National Greenhouse Accounts and the National Inventory Report, which is submitted annually in accordance with the international guidelines agreed under the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol.

The National Inventory Report runs two years behind the current date and represents the most recent official data in Australia on annual emissions. The current National Inventory Report details estimates of Australia’s emissions for the period 1990 to 2020.

Under the UNFCCC, the National Inventory Report must report net emissions from the following sectors:

- energy
- industrial processes and product use (IPPU)
- agriculture
- land use, land use change and forestry (LULUCF)
- waste.

An Emissions Reduction and Resilience Plan will be developed for each of these sectors. However, due to the significance of the energy sector in Tasmania, this sector will be disaggregated into two sub-sectors:

- energy (comprising electricity generation and direct combustion)
- transport.

Sector / sub-sector	Description
Energy	
Electricity generation	<p>Emissions from electricity generation are included in the energy industries sub-sector in the STGGI. Emissions are produced by the combustion of fuels to generate electricity that is supplied to the electricity grid for domestic and commercial use.</p> <p>This sub-sector covers emissions resulting from electricity that is generated in Tasmania, some of which is exported for consumption in the National Electricity Market (NEM) via Basslink. Emissions from electricity imported via Basslink from other states in the NEM are accounted for in the emissions inventory for the generating state.</p>
Direct Combustion	<p>Emissions from direct combustion are covered by a number of energy sub-sectors in the STGGI (namely, Manufacturing Industries and Construction; Other Sectors; and Other). These sub-sectors include all emissions that arise from the combustion of fuel for stationary energy used directly on site, such as:</p> <ul style="list-style-type: none"> • burning coal, liquefied natural gas or forestry residue to generate heat, steam or pressure for major industrial operations

Sector / sub-sector	Description
	<ul style="list-style-type: none"> burning wood or gas for household heating and cooking. <p>The industries that generate these emissions include manufacturing, construction, agriculture and fisheries, residential, and commercial activities.</p> <p>Emissions from these industries associated with the combustion of fuels to generate electricity, or fuel combustion in transport, are accounted for in the electricity generation and transport sub-sectors respectively.</p>
Transport	<p>Emissions from the transport sub-sector are produced by the combustion of fuels such as petrol, diesel and liquefied petroleum gas in passenger and commercial motor vehicles; railways; domestic aviation; and shipping.</p> <p>Emissions from the electricity used to power electric vehicles are accounted for in the electricity generation sub-sector.</p>

Industrial processes and product use (IPPU)

Emissions from the IPPU sector are generated from a range of production processes that include:

- the calcination of carbonate compounds (in cement, lime or glass production)
- carbon when used as a chemical reductant (in iron, steel or aluminium production)
- the production and use of synthetic gases such as hydrofluorocarbons (refrigeration, air conditioning, solvents) and sulphur hexafluoride (electrical equipment).

Emissions associated with the energy used in industrial production processes are accounted for in the electricity generation and direct combustion sub-sectors. For example, the emissions from cement manufacture include the combustion of fuels (coal) for heat used in the manufacturing process. However, these combustion-related emissions are reported as energy emissions (direct combustion sub-sector) and not with IPPU, which only includes the emissions from calcination.

Agriculture

Emissions from the agriculture sector include emissions from:

- livestock digestion (enteric fermentation)
- the release of nitrous oxide from cropping and pasture land, and manure management.

Enteric fermentation of plant material that is digested by livestock (cattle, sheep and pigs) results in methane emissions. Urine and dung deposited by grazing animals, and nitrogen leaching and run-off, results in emissions from microbial and chemical transformations that produce and consume nitrous oxide in the soil. Manure management produces emissions through the anaerobic decomposition of the organic matter contained in manure.

Emissions associated with the use of electricity, fuel consumption from operating agricultural equipment, and fuel consumption in transport, are accounted for in the energy sector. Emissions from land use change (such as clearing of forest land for the purpose of creating cropping and pasture land) are accounted for under the LULUCF sector.

Sector / sub-sector	Description
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Land use, land use change and forestry (LULUCF)

The LULUCF sector includes emissions and sequestration (removals or carbon sinks) of greenhouse gases from direct human-induced land use, land use change and forestry activities. This includes emissions and sequestration associated with clearance of forested land and conversion to other land uses (cropland, grassland, wetlands and settlements), from new forests planted on previously unforested land, and from other practices that change emissions and sequestration (forest management, cropland management and grazing land management). Emissions from fuelwood consumption, controlled burning and wildfires on forest land are also included, as are removals associated with post-fire recovery. Carbon that accumulates in harvested wood products is included as a sink.

Combustion of fossil fuels associated with forestry and land management (such as diesel to run logging machinery and farming equipment) are accounted for in the direct combustion sub-sector. Emissions associated with livestock (enteric fermentation) and cropping (release of nitrous oxide), are accounted for in the agriculture sector.

Waste

Emissions from the waste sector are produced by the decomposition of organic waste in landfills and from the release of greenhouse gases during the treatment of wastewater. The anaerobic decomposition of organic matter from solid waste in landfills and wastewater treatment plants produces methane. The nitrification and denitrification of urea and ammonia in wastewater treatment plants produces nitrous oxide emissions.

Emissions associated with the energy used in the management and transportation of waste are reported in the electricity generation, direct combustion and transport sub-sectors.

Glossary and acronyms

The Act	<i>Climate Change (State Action) Act 2008</i>
Climate Action 21	Climate Action 21: Tasmania's Climate Change Action Plan 2017-21
Climate projections	Description of likely changes to the Earth's climate in future decades, based on the concentration of greenhouse gas emissions.
CMIP	Coupled Model Intercomparison Project
CO ₂ -e	Carbon dioxide equivalent
Emissions	Greenhouse gas emissions
IPPU	Industrial Processes and Product Use
Low emissions economy	An economy based on energy sources that produce low levels of greenhouse gas emissions
LULUCF	Land Use, Land Use Change and Forestry
Net zero emissions	The greenhouse gases that are emitted (for example through the burning of fossil fuels) and removed from the atmosphere (for example through restoration of forests) balance to an overall result of zero.
ReCFIT	Renewables, Climate and Future Industries Tasmania (Department of State Growth)

ReCFIT

Renewables, Climate and
Future Industries Tasmania

Department of State Growth

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