Victoria's 2035 Emissions Reduction Target

Driving Real Climate Action



**Acknowledgements**

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria’s land and waters, their unique ability to care for Country and deep spiritual connection to it.

We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

The Department of Energy, Environment and Climate Action is committed to genuinely partnering with Victorian Traditional Owners and Victoria’s Aboriginal community to progress their aspirations.

© The State of Victoria Department of Energy, Environment and Climate Action, May 2023.

**Creative Commons**

This work is licensed under a Creative Commons Attribution 4.0 International licence, visit the Creative Commons website (<http://creativecommons.org/licenses/by/4.0/>). You are free to re-use the work under that licence, on the condition that you credit the State of Victoria as author. The licence does not apply to any images, photographs or branding, including the Victorian Coat of Arms, and the Victorian Government and Department logos.

ISBN 978-1-76136-266-8 (pdf/online/MS word)

**Disclaimer**

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

**Accessibility**

To receive this document in an alternative format, phone the Customer Service Centre on 136 186, email customer.service@delwp.vic.gov.au, or contact National Relay Service on 133 677. Available at DEECA website ([www.deeca.vic.gov.au](http://www.deeca.vic.gov.au/)).

# Foreword

## In Victoria, we’re not just talking about climate action. We’re getting on with it.

Since we released Victoria’s Climate Change Strategy in 2021, we’ve cemented our position as a world leader on climate action – alongside places like Germany, Finland and Scotland.

We’ve cut emissions by more than any other Australian state, tripled the amount of renewable energy and created thousands of jobs.

At the same time, we’ve laid the foundations for effective, long-lasting change.

We’re bringing back the State Electricity Commission (SEC), government-owned renewable energy which will drive down power bills, reduce emissions and help create 59,000 jobs in renewables.

An initial $1 billion investment in the SEC will help deliver 4.5 gigawatts of power – the equivalent replacement capacity of Loy Yang A – through renewable energy projects.

And because we know how important it is to protect the SEC for future generations – so Victorians are never left paying the price for electricity privatisation again – we’ll enshrine it in Victoria’s Constitution.

We’ve set new renewable energy targets for our state – increasing to 65 per cent by 2030, and 95 per cent by 2035.

Victoria will reach a massive 2.6 gigawatts (GW) of renewable energy storage capacity by 2030, with an increased target of 6.3 GW of storage by 2035 – that’s enough renewable energy to power around half of Victoria’s current homes at their peak energy use.

Importantly, we’ve set an emissions reduction target of 75-80 per cent by 2035, and we’ll bring forward our net zero emissions target by five years to 2045 – the most ambitious from any mainland state.

Together, these initiatives will increase Gross State Product by $63 billion and support even more jobs. Jobs in our cities, suburbs and regions – in solar, wind and emerging climate-positive industries all across the economy.

Victoria’s 2035 Emissions Reduction Target: Driving Real Climate Action is the next step in our journey to net-zero emissions, and our important work continues.

**The Hon. Daniel Andrews MP**

Premier of Victoria



**The Hon. Lily D’Ambrosio MP**

Minister for Climate Action

Minister for Energy and Resources

Minister for the State Electricity Commission

**Contents**

[Victoria’s new and ambitious climate targets 3](#_Toc135056099)

[We will meet our targets by continuing to take real action 7](#_Toc135056105)

[Securing our renewable energy future 8](#_Toc135056106)

[Helping households and businesses transition 9](#_Toc135056107)

[Driving down Victoria’s transport emissions 11](#_Toc135056108)

[Supporting industry to transition to net-zero emissions 12](#_Toc135056109)

[On-farm action 14](#_Toc135056110)

[Improving our environment and growing our forests 16](#_Toc135056111)

[Next steps 18](#_Toc135056112)

# Victoria’s new and ambitious climate targets

The Victorian Government has some of the most ambitious emissions reduction targets in the world. We have set a target to reduce Victoria's emissions by 75 - 80 per cent by 2035 and brought forward the date to achieve net-zero emissions from 2050 to 2045.

These targets place Victoria alongside international climate leaders and will bring real benefits for Victorians, including new jobs, energy bill savings, improved health and environmental benefits. They build on our success in reducing Victoria’s emissions to date and represent Victoria playing its part in global efforts to limit warming to 1.5°C by the end of the century to avoid the worst impacts of climate change.

We will ensure these targets are achieved and provide certainty to industry, investors and all Victorians by putting them in legislation.



# Victoria leads the nation on climate action

## Victoria’s world leading emissions reduction targets

* **Smashed** our 2020 target of 15-20%, cutting emissions by almost 30%
* We’ve **cut** our emissions by more than any other state since 2014
* **First** jurisdiction in Australia to set a 2035 target

**Earliest** net-zero emissions target of any major jurisdiction in Australia - net zero by 2045

## Cutting edge policies and investment

* **Ambitious** offshore wind targets of 9 gigawatts by 2040, driving the development of Australia’s offshore wind energy sector, providing certainty to the market
* **First** gas substitution roadmap in Australia to help cut emissions, slash power bills and provide greater choice for Victorians
* **Biggest** energy storage targets in Australia of 6.3 gigawatts by 2035 – enough to power around half of Victoria’s homes at their peak energy use
* Working towards the **world’s first** pasture-based carbon-neutral dairy farm
* **First** state in Australia to introduce subsidies to individuals and businesses for purchasing zero emissions vehicles
* **Putting electricity back in the hands of Victorians,** accelerating renewable energy and driving down power bills by bringing back the State Electricity Commission

**First** state in Australia to power all government operations with 100% renewable electricity by 2025, including all metropolitan trains and trams

# The world is acting and Victoria is among the leaders

## Victoria is at the forefront of climate action as one of the first in the world to set a 2035 target.

### 2035 Emissions Reduction Targets

* United Kingdom: 74%
* Victoria: 75–80%
* Scotland: 80%

Finland: net-zero emissions by 2035

Our 2035 target represents Victoria playing its part in the internationally agreed goal of limiting warming to 1.5°C and setting an example for others to follow.

### Net-zero targets

Countries representing almost 80 per cent of global emissions have net-zero emissions commitments.

Victoria will reach net-zero emissions by 2045 alongside global leaders such as Germany and California.

# Our climate action creates new jobs and benefits our economy, our communities and our environment

Our climate action is helping to secure Victoria’s economic prosperity and competitiveness in a future net-zero emissions world.

In a world with strong global climate action, taking action to meet our 2035 target will deliver economic benefits of **$63 billion between now and 2070**.

Victoria’s world leading targets will help attract a share of the estimated $US130 trillion of global private finance available for the net-zero transition.

# The net-zero transition provides an opportunity for:

## New jobs and industries

New, clean manufacturing and production facilities are already being established in Victoria and Victoria’s ambitious climate targets will help drive further investment.

Victoria’s renewable energy target of 95 per cent by 2035 and energy storage target of 6.3 gigawatts by 2035 are estimated to bring forward around **$9.5 billion in economic activity** and create **59,000 jobs** over the period to 2035.

## Lower energy costs

Switching from fossil gas to efficient electric appliances will cut energy bills – **savings can be more than $1,000 per year if households become all-electric** – with higher savings for those who also install solar.

Requirements for new homes to be more energy efficient can deliver household cost savings from $300 to over $1,000 a year.

## Economic benefits for Victoria’s farmers and Traditional Owners

Land restoration, the energy transition and carbon markets provide new economic opportunities and income streams in sectors such as renewable energy, land management and seed supply. This can diversify revenue streams for Traditional Owners, landowners and farmers, **with flow on benefits to regional communities**.

## Health benefits

Switching from fossil gas to electric cooktops will cut indoor air pollution, helping to reduce respiratory illnesses such as childhood asthma.

Reducing emissions from transport and electricity generation will also **reduce local air pollution, providing health improvements worth an estimated $5.7 billion between 2035 and 2045.**

## Protecting our environment

Protecting and increasing vegetation in Victoria will reduce emissions, improve air and water quality, reduce soil erosion, increase biodiversity and strengthen nature-based tourism.

# Our track record of strong climate action

We have already shown we can cut our emissions while our economy and population grow. Between 2005 and 2021, our economy grew by 43 per cent while our emissions fell by 32 per cent.

We have a strong track record of achieving our targets. We beat our emissions reduction and renewable energy targets for 2020 and are on track to meet our targets for 2025.



**Our climate action is driving down the cost of living for Victorians**

* Over **2 million households** and more than **141,000 businesses have cut their power bills** through the Victorian Energy Upgrades program – saving an average of $110 and $3,700, respectively per year.
* We’ve supported almost **250,000 households** with **rebates to install solar panels**, energy efficient hot water or battery systems through the Solar Homes program.

We’ve **introduced stronger energy efficiency standards** requiring all new homes to meet a minimum of 7-stars and a whole-of-home energy budget.

# We will meet our targets by continuing to take real action

Victoria’s *Climate Change Strategy*, released in 2021, provides a strong foundation for our pathway to net-zero emissions.

The Strategy set out our climate action policies and programs and describes the opportunities of climate action for Victorians including advancing clean and innovative technologies, investing in new industries, driving down energy bills and creating Victorian jobs.

We've kept building on the Strategy by bringing back the State Electricity Commission and establishing a target of 95 per cent renewable energy by 2035.

We are continuing to cut emissions on our journey to net-zero through:

* Securing our renewable energy future
* Helping households and businesses transition
* Driving down Victoria’s transport emissions
* Supporting industry to transition to net-zero emissions
* On-farm action

Improving our environment and growing our forests

# Securing our renewable energy future

The energy sector is Victoria’s biggest source of emissions and our transition away from fossil fuels to renewable energy is already well underway. This transition is reducing emissions, cutting energy costs for households and businesses, creating thousands of jobs – many in regional Victoria – and ensuring we have an affordable and reliable energy system.

## The Victorian Government is supporting this transition through:

### Putting power back in the hands of Victorians

* We are bringing back the State Electricity Commission – delivering government-owned renewable energy that will **drive down bills**.

We are making an initial investment of **$1 billion towards delivering 4.5 gigawatts of renewable power** – the equivalent replacement capacity of Loy Yang A coal-fired power station.

### Accelerating key transmission infrastructure

* VNI West (KerangLink) – an interconnector between Victoria and New South Wales – will enable up to 3,400 megawatts of additional renewable energy generation to be built in Victoria.

Marinus Link – an undersea electricity connection between Tasmania and Victoria – will create a renewable energy highway and give Victoria access to 1,500 megawatts of renewable energy, quadrupling the existing transmission capacity.

### Transformation of the electricity system with renewable energy

* We will update our legislated Victorian Renewable Energy Target (VRET) 2030 target to 65 per cent and legislate our new VRET target of **95 per cent renewable electricity generation by 2035**.
* We have achieved our first VRET target of 25 per cent by 2020 and are well on our way to achieving our 2025 target of 40 per cent.

Projects delivered under the first and second VRET auctions will bring forward 1.4 gigawatts of new renewable generation capacity, powering more than 870,000 homes. VRET2 will also deliver up to 365 megawatts of new battery storage.

### Australia’s biggest energy storage targets

We have set Victorian energy storage targets of at least **2.6 gigawatts** of energy storage capacity **by 2030** and at least **6.3 gigawatts** **by 2035** – enough to power around half of Victoria's current homes at their peak energy use.

### Reducing fossil gas use

* Victoria’s *Gas Substitution Roadmap*, released in July 2022, outlines how we will transition away from fossil gas, reduce bills and give Victorians greater choice through electrification, energy efficiency, and support for renewable gases such as biomethane and renewable hydrogen.

We will continue engaging with the community and industry to progress the gas transition, and will issue a Roadmap update report in 2023.

### New offshore wind energy targets

In Victoria, we are driving the development of Australia's first offshore wind energy projects, supporting regional investment, enhancing energy security, cutting emissions and creating renewable energy jobs – our offshore wind targets are at least **2 gigawatts by 2032**, **4 gigawatts by 2035** and **9 gigawatts by 2040**.

# Helping households and businesses transition

We’re helping Victorians to reduce emissions and cut energy costs by supporting households and businesses to install solar and more energy efficient appliances, build more comfortable and greener homes and buildings and adopt more energy efficient practices.

## The Victorian Government is supporting this transition through:

### Solar Homes

* The $1.3 billion Solar Homes Program has supported almost **250,000 Victorian households** with a rebate **to install solar panels**, **energy efficient hot water systems or batteries**.

With 1.5 gigawatts of solar capacity installed under the Program we’ve **cut Victoria’s emissions by more than two million tonnes**.

### The Victorian Energy Upgrades Program (VEU)

* The VEU program provides support to households and businesses to install energy efficient products such as weather sealing, efficient shower roses and water heating and refrigeration upgrades.
* Through the **500,000 upgrades** Victorians did last year under the VEU program, we **stopped** **7.9 million tonnes of emissions** going into the atmosphere (the **equivalent of** taking **2.4 million cars** off the road), smashing our 2022 target of 6.9 million tonnes.

We are expanding incentives under the program to help replace gas water heating and space heating appliances with efficient electric equipment.

### Planning reforms to support the transition to a clean energy economy

* We are **helping homes become more efficient and have lower emissions** by improving choices and removing barriers.
* New housing developments are no longer required to connect to gas – supporting the shift to all electric homes and giving Victorians more choice.

We are **increasing energy efficiency standards** for new homes from 6 to 7 stars.

### Waste

* Using materials more efficiently, generating less waste, and recycling more, along with reducing the emissions that waste generates, all play a part in driving down Victoria’s emissions.
* We have invested **$515 million to transform our waste and recycling system** for a sustainable circular economy and create **thousands of new jobs** in recycling and manufacturing. *Recycling Victoria: a new economy* commits to the following targets:
* **Divert 80 per cent of waste from landfill** by 2030, with an interim target of 72 per cent by 2025.
* **Halve the volume of organic material going to landfill** between 2020 and 2030 with an interim target of a 20 per cent reduction by 2025.

All households to have access to a separate food and organics recovery service or local composting by 2030.

## CASE STUDY

### Solar Vic – Skylark Boulevard, one of the highest concentrations of residential rooftop solar in Victoria

Skylark Boulevard in Berwick has one of the highest concentrations of residential rooftop solar in Victoria.

David Church applied for a solar PV rebate with the Solar Homes Program in 2018, soon after the program was launched.

The retired school principal says managing his finances has been a key factor in many of the decisions he’s made, including investing in solar.

“I’ve worked out it saved me about $10 a week over the 12-month period so that adds up to about $520 per year so in terms of paying back what your outlay was it's going to take probably 3 years to do and that’s a reasonable period of time.”

And while saving money on energy costs is a major advantage, for David solar power’s role in tackling climate change was an equally big driver.

Families like David's can save, on average, more than $1,000 per year on their power bills by going all electric – with higher savings for those who also install solar.

“**If you’re like us, you’ve got grandchildren and you begin to think well what’s their future like? It’s a worthwhile, valuable exercise both financially and for future proofing the environment**.”

# Driving down Victoria’s transport emissions

Transport is Victoria’s second largest source of emissions. Most emissions come from petrol and diesel-powered vehicles on our roads. We can cut transport emissions, reduce the long-term costs of vehicle ownership, strengthen national fuel security and improve our air quality by accelerating the move to zero emissions vehicles (ZEVs) powered by electricity, renewable hydrogen and other clean new fuels.

## The Victorian Government is supporting this transition through:

* $20 million for a Zero Emissions Bus Trial to support the transition to **100 per cent zero emissions new bus purchases from 2025**.
* A **$46 million ZEV subsidy program**, the first of its type in Australia, providing subsidies to individuals and businesses wanting to buy ZEVs, to increase the affordability and availability of ZEVs in Victoria.
* Victoria's **ZEV Roadmap that sets out actions in the coming decade** to prepare for and promote a stronger uptake of ZEVs.
* **$5 million commercial sector ZEV Innovation Fund** to encourage the uptake of ZEV light commercial vehicles in the commercial passenger vehicle, logistics, construction and service-sector industries.
* A further **$19 million to accelerate the roll-out of** electric vehicle (EV) **charging infrastructure** across regional Victoria and support the charging of EV fleets.
* The Victorian Government has joined the Accelerating to Zero Coalition, which pledges to work towards the sales of all new cars and vans being zero emissions globally by 2040, and in leading markets by 2035. This builds on the Victorian Government’s target for **ZEVs to be 50 per cent of new light vehicles sales by 2030**.
* Accelerating the integration of ZEVs into the Government fleet with a target of 400 ZEVs and supporting infrastructure by the end of 2023.
* **$5.2 million** from the Victorian Higher Education State Investment Fund **for a research project** led by RMIT University, in collaboration with Monash and La Trobe universities, that will support the Electrification of Victoria’s Future Fleet, including establishing an EV living lab and research into the technical and legal aspects of public and private fleet electrification.

$950,000 from the Workforce Training and Innovation Fund to support **workforce upskilling** as demand grows for EVs.

## CASE STUDY

### Electric bus trial

We’re rolling out more zero emissions buses across Victoria this year as part of the three-year Zero Emissions Bus (ZEB) Trials. Six Victorian bus operators will trial 52 buses, providing vital information to transition our 4,000-strong fleet to zero emissions by 2045.

The trials include Victoria’s first fully electrified bus depot at Ivanhoe.

Ventura will transition its Ivanhoe depot to ZEB operations with 27 battery powered buses, 13 of which started operations in late March 2023.

Ventura’s General Manager Business Improvement Michael Howlett says the trial will allow the team to work through the issues that come with the introduction of new technology.

“Distance travelled, driver behaviour, passenger loads and climate can all affect the batteries,” he said.

“**Our zero emissions bus fleet will be 100 per cent powered by green energy generated through renewable sources**.”

Although only a few weeks into the trial, the new buses have been well-received by the public, with the buses having no fumes and running much more quietly.

Victoria has saved about 36.9 tonnes of emissions since the ZEB trial started. About 12.2 tonnes of emissions were saved in February 2023 alone.

CDC Victoria will trial eight electric buses operating from its Oakleigh South depot, one of which is already in operation. Donric Group is trialling three electric buses operating from its Sunbury depot. Transit Systems will trial nine electric and two hydrogen buses out of its West Footscray depot.

Under current initiatives, there will be at least 89 quieter, smoother and fume-free ZEBs on Victorian roads by mid-2025. Additionally, all new public buses from 2025 onwards will be zero emissions.

# Supporting industry to transition to net-zero emissions

We are continuing to invest in the skills and industries required for a clean energy economy and to build the capacity of Victorian industries to adopt low‑emissions technologies and practices. This will give Victoria an edge in the zero emissions future, with new industries – some we can’t even imagine yet – supporting jobs growth in the decades ahead.

## The Victorian Government is supporting future skills and innovation in a net-zero emissions economy through:

### Training and renewable energy workforce development

* Through Solar Victoria, we are investing **$11 million** to deliver a **training and workforce development package** to grow Victoria’s renewable energy workforce.
* This includes programs such as mentoring for electricians, electrical engineers and licensed electrical inspectors in the installation or inspection of solar PV and battery systems, upskilling for plumbers to design and install energy efficient heat pumps and solar hot water systems, and apprenticeships for women in renewable energy related trades.
* The Victorian Government is **attracting more women to** take the first steps in **a fulfilling and rewarding career in the solar and renewable energy sectors**. As of March 2023, fifteen solar electrical women apprentices have been employed through this initiative, with more expected to join.
* Establishment of a State Electricity Commission Centre of Training Excellence will support the sector to develop the workforce it needs for the energy transition. Our target of 95 per cent renewables by 2035 will create **59,000 jobs**, **6,000 of which will be filled by trainees and apprentices**.

The **$50 million TAFE Clean Energy Fund** will deliver the Asia Pacific Renewable Energy Training Centre Stage 2 on Federation University’s Ballarat Campus, a Clean Energy Centre at Gippsland TAFE’s Morwell Trade Skills Centre, and the South West TAFE’s Building Innovation and Design Centre in Warrnambool.

### Jobs and skills planning

* The Victorian Energy Jobs Plan will set out a vision and actions for the energy sector to meet Victoria’s climate change and renewable energy targets. It will prioritise practical actions, improve linkages and **position Victoria to be a leader in energy workforce and skills**.

The Victorian Skills Plan for 2022 into 2023 provides a roadmap and evidence for provision of training and skills across Victoria. The Plan identifies the need for new skills and capabilities to enable Victoria to achieve its emissions targets. Actions taken under the plan will **support the building of skills for the clean economy**.

### Clean Economy Workforce Skills Initiative

* **To meet Victoria’s future skills needs, we invested $10 million** in 2020-21, including for a Clean Economy Workforce Development Strategy and eight projects under the Clean Economy Workforce Capacity Building Fund. Those projects include training and skills for zero emission vehicles, off-shore wind, hydrogen fuel cells, advanced manufacturing, and on-farm emissions reduction.
* The Strategy will provide a ten-year framework to inform planning and investment in skills and training, through the transition to net-zero emissions.

### Supporting Victorian manufacturers and low carbon manufacturing

* Investments in zero emissions products and technologies are creating huge opportunities for Victorian manufacturers. Zero and low emissions technologies is a priority sector in the Victorian Government’s Made in Victoria 2030 – Manufacturing Statement, which outlines priorities for enhancing sovereign advanced manufacturing, attracting investment, and creating new jobs. This will complement other state and Commonwealth investments, including up to $3 billion for renewables and low emissions technologies from the National Reconstruction Fund.

Through the Low Carbon Manufacturing Grant Program, the Victorian Government has **invested to help meet demand for low carbon technologies and products**. The program provided grants to help businesses to manufacture low carbon products and become more competitive in a low carbon economy, while strengthening the state’s supply chain resilience and creating high-skilled jobs.

### Boosting research and innovation

* The **$2 billion Breakthrough Victoria Fund** invests in innovation, ideas and entrepreneurs to bring to market breakthrough technologies that will help transform people’s lives. Breakthrough Victoria has identified the clean economy – including renewable energy – as one of its priority sectors for investment. Breakthrough Victoria will invest up to $10 million in innovative solutions and technologies to help address the challenge of solar recycling.
* Through the Victorian Higher Education State Investment Fund, the Victorian Government has invested:
* $11 million for Monash University’s Net Zero Initiative, which will upgrade campus buildings to reduce emissions and be a leading demonstration and training site for low emissions technologies.
* $4.7 million for the University of Melbourne’s Zero Emissions Energy Lab, to help develop and commercialise clean energy technologies with industry partners, including support for start-ups.

# On-farm action

We are continuing to support farmers to prepare to achieve emissions reductions. We're testing new technologies and practices for use in the Victorian context, and supporting farmers to access information and tools that will help them to realise emissions reduction opportunities on-farm.

## The Victorian Government is supporting this transition through:

* Investing almost **$20 million in emissions reduction activities** to deliver research, tools and services to help farmers to reduce emissions while maintaining productivity and profitability.
* Flagship research trials in pasture-based grazing systems, testing promising methane-inhibiting feed additives that are showing encouraging results for use on Victorian dairy and livestock farms.

New web tools that will support farmers to make location-specific farm planning decisions based on validated data, helping them prepare for future climate scenarios.

* The On-Farm Emissions Action Plan Pilot, an innovative program to **support up to 250 farm businesses** over three years to estimate their emissions profile and identify actions to manage and reduce emissions on-farm. Participants are eligible to apply for grant funding to help reduce their farm’s carbon footprint.

The Victorian Carbon Farming Program, which provides **$15.3 million for the establishment of trees on farms** that will help reduce the state’s emissions. Agroforestry and shelterbelt trees offer rural landowners the potential for new income streams via timber, carbon and other environmental markets, while providing other on-farm benefits associated with shade and shelter for stock, erosion or salinity control, increased climate resilience and improved farm aesthetics.

### Victoria’s first Agriculture and Climate Change Statement

The first Victorian Agriculture and Climate Change Statement presents a shared vision for industry and government. The statement was developed through extensive consultation across the agriculture sector, facilitated by the Victorian Agriculture and Climate Change Council. The Statement says:

"We are committed to a profitable and productive agriculture sector that takes ambitious action on climate change.

We are working together to accelerate climate change solutions, including taking steps to:

* understand and reduce our emissions
* adapt to climate risks and

capture future opportunities."

## CASE STUDY

### Agriculture Victoria: On Farm Emissions Action Plan Pilot

Through the On-Farm Emissions Action Plan Pilot, the Victorian Government is working with Victorian farm businesses to measure, manage and reduce their on-farm emissions.

Participants receive a free assessment of their farm’s greenhouse gas emissions and a personalised action plan. Participants are then eligible to apply for Victorian Government funding to reduce their farm’s carbon footprint.

Julian Carroll is a commercial beef and seedstock producer based in Mudgegonga in North-East Victoria, and signed up for the pilot to become part of the solution to climate change.

“For us, the highlight of the program was a kitchen-table discussion with a farm emissions specialist from Agriculture Victoria, looking over the carbon accounting data and spreadsheets.”

“It was the opportunity to really look at where our farm emissions were across the business and where there was room for improvement.”

The assessment showed 80 per cent of the farm’s emissions were enteric methane (from the cattle), and the most efficient way of reducing emissions was to have cattle reach market sooner.

Securing a $16,000 grant from the $5 million funding pool for participants, Mr Carroll installed new feeding infrastructure to address slow rates of cattle growth during the colder months.

In addition to improving efficiency and reducing emissions, Mr Carroll has also planted 17 per cent of the farm with trees with much of that occurring in recent years. As these trees grow and mature they will sequester more carbon over the next 20 years and deliver environmental benefits for the farm.

“The beauty of targeting productivity is that **there’s a triple bonus on offer – not only does it reduce our emissions and deliver a win for the environment, it’s also an improvement on profitability and on our business resilience**.”

# Improving our environment and growing our forests

We can also take carbon dioxide out of the atmosphere through the land and forestry sector. Investing in Victoria’s natural environment, plantation development and the establishment of trees on farms, strengthens our agricultural industry, protects our plants and animals and can deliver much needed timber and fibre to local industries and communities – while also reducing emissions. By continuing to protect and restore the natural environment, and by planting more trees on public and private land, we are also contributing to a renewed global push to improve our environment and biodiversity.

## The Victorian Government is supporting action through:

### BushBank

* The Victorian Government’s **$77 million BushBank program** is **planting millions of native trees and shrubs** to pull carbon from the air and restore wildlife habitat across more than 20,000 hectares of private land – **an area equivalent to 10,000 MCGs**.
* Planting on public land is underway in the Mallee and Upper Murray and completed around Lake Eildon. The program is also supporting restoration of forests at Wilsons Promontory National Park following a succession of devastating landscape-scale bushfires in the last 20 years.

The program includes **$14.5 million to support Traditional Owners** to heal country and increase Traditional Owner participation in restoration and revegetation markets.

### Marine and Coastal Strategy

The Victorian Government is looking at new ways to reduce emissions such as blue carbon sequestration – where carbon is captured and stored in coastal and marine ecosystems – through measures included in the Marine and Coastal Strategy released in May 2022.

## CASE STUDY

### BushBank: Reconnecting Malleefowl habitat and capturing carbon

The planting of millions of trees and shrubs is underway across Victoria, as part of a $77 million program designed to address climate change while creating healthy habitat for wildlife.

The BushBank program is restoring more than 20,000 hectares of public and private land to capture carbon and support some of the state’s most iconic species.

As part of the program, more than 30 hectares of woodland is being revegetated in northwest Victoria and will become prime habitat for the malleefowl.

Nearly 50 kilograms of seed has already gone into the ground near the Murray Sunset National Park, with supplementary planting and additional seeding to follow.

Once completed, the work is expected to deliver 50,000 trees and shrubs that will provide ideal food and shelter for the malleefowl, while capturing 148 tonnes of carbon per year.

Dr Joe Benshemesh is a member of National Malleefowl Recovery Team and has been involved in the conservation of this species for more than 30 years.

“The crucial part of this work is that it’s linking together different areas of existing mallefowl habitat.”

“When the birds can’t move freely between areas of fragmented habitat, they’re vulnerable to predators and the climate. If their population becomes isolated, there’s the insidious threat of inbreeding due to its effect on genetics.”

“This work is really looking decades ahead. There will be clear benefits for many, many species in the meantime – but as a result of this work, we’re expecting to see stronger genetic diversity and larger, more resilient mallefowl populations in the future.”

“**It's a slow but crucial process that will help safeguard the conservation of this species**”.

# Next steps: Victoria’s climate action path to 2035

## 2025

### Emissions cut 28–33% from 2005 levels

* At least 40% of our electricity is generated from renewables
* All Victorian Government operations using 100% renewable electricity, including metro trains and trams
* All new public transport buses are zero emissions

Our public transport system is expanded with major projects like the Metro Tunnel

## 2030

### Emissions halved from 2005 levels

* 65% of our electricity is generated from renewable sources
* Energy storage capacity is at least 2.6 gigawatts
* 50% of new light vehicle sales are zero emissions vehicles
* Native forests are protected following the end of timber harvesting
* All households have access to organic waste recycling

Energy efficiency standards for all new buildings are updated, supporting the transition to lower energy and emissions buildings

## 2035

### Emissions cut 75–80% from 2005 levels

* 95% of our electricity is generated from Victorian renewable sources
* Energy storage capacity is at least 6.3 gigawatts
* Offshore wind generation capacity is 4 gigawatts
* Victoria’s water sector is net-zero emissions
* A target of 200,000 hectares revegetated for habitat connectivity by 2037
* Improved community health and wellbeing due to less pollution
* Tens of thousands of Victorians working in industries supporting our move to renewable energy, creating a circular economy, and improving energy efficiency.

Victoria is a destination for zero emissions industries, investment is creating opportunities for Victorian manufacturers.

# Continuous action to achieve net-zero emissions by 2045

## As set out in the timeline below, past and future milestones under Victoria’s *Climate Change Act 2017* provide a framework to plan for, and implement, emissions reductions across the economy to reach net-zero emissions.

* **2017:** Victoria’s Climate Change Act came into effect
* **2021:** Set Victoria’s emissions reduction targets for 2025 and 2030

First Climate Change Strategy including actions to cut emissions for 2021-2025 and beyond

* **2023:** Set Victoria’s emissions reduction target for 2035
* **2025:** Second Climate Change Strategy including actions to cut emissions for 2026-2030 and beyond
* **2028:** Set Victoria’s emissions reduction target for 2040
* **2030:** Third Climate Change Strategy including actions to cut emissions for 2031-2035 and beyond
* **2035:** Fourth Climate Change Strategy including actions to cut emissions for 2036-2040 and beyond
* **2040:** Final Climate Change Strategy including actions to cut emissions for 2041-2045 and beyond
* **2045:** **Victoria achieves net-zero emissions**