CUTTING VICTORIA'S EMISSIONS 2021–2025

Energy sector emissions reduction pledge

Minister's foreword

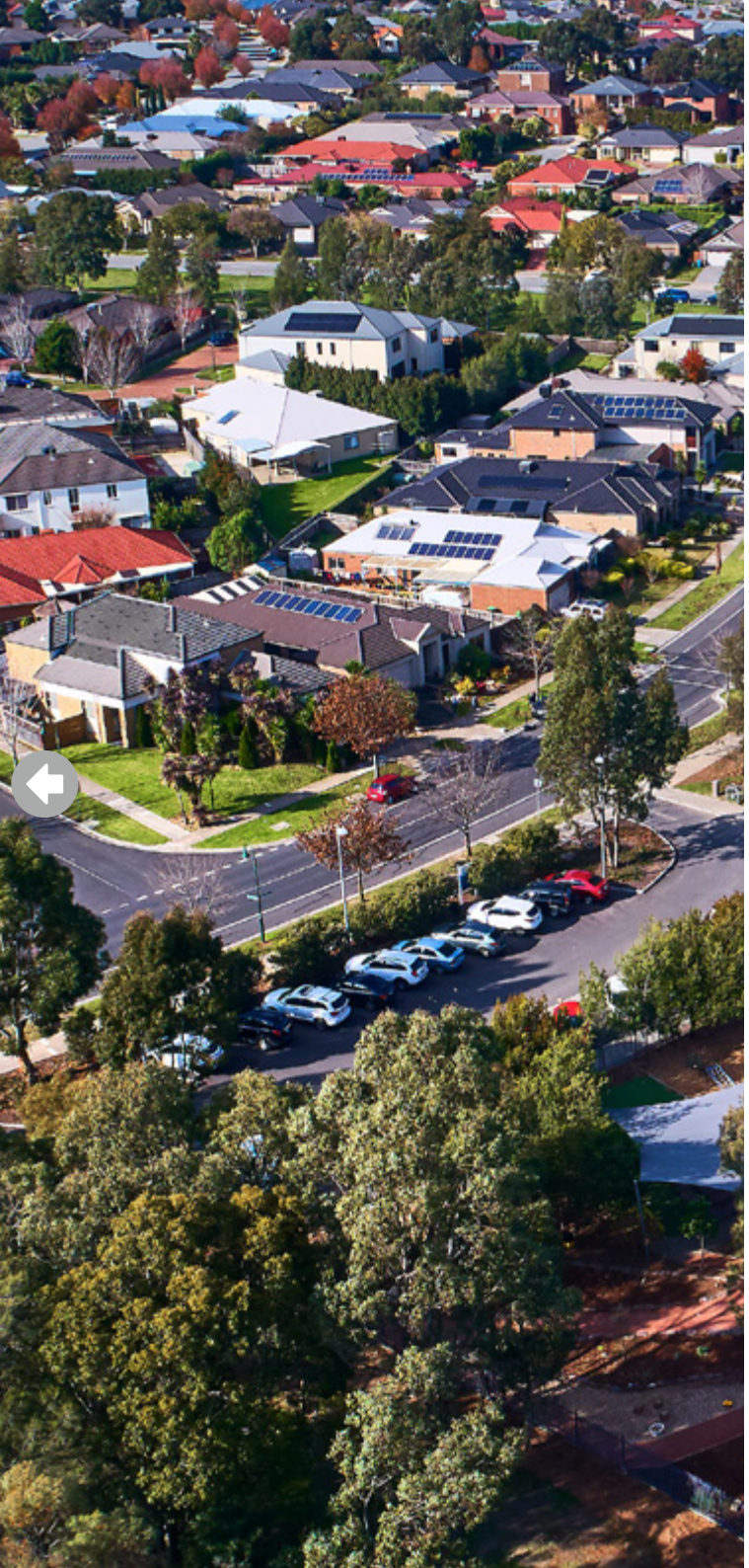
The energy sector pledge will deliver significant further progress towards the Victorian Government's goal of net-zero emissions by 2050. It will consolidate and accelerate key elements of Victoria's transition to a low-emissions and clean energy future. It will also stimulate investment and jobs growth to assist Victoria's recovery from the impacts of the coronavirus pandemic.

The pledge has a dual focus on switching to clean energy sources and managing energy demand, including through improved energy efficiency across the economy.

The pledge demonstrates that action to reduce emissions can yield multiple dividends. Deploying smart, clean energy technologies, systems and processes will stimulate growth in investment and jobs, help households and businesses to save on their energy bills, and improve the comfort and wellbeing of households.

The energy sector pledge is supported by $1.6 billion in funding for clean energy, announced in the *Victorian Budget 2020–21*, to bring forward these benefits and support Victoria's transition to lower cost, clean and more reliable energy for the long term. Targeted investments will assist economic recovery and jobs across the state, while ensuring that businesses as well as low-income and vulnerable Victorians benefit from this transition.

The Hon. Lily D'Ambrosio MP
Minister for Energy,
Environment and Climate Change
Minister for Solar Homes



Overview of the energy sector

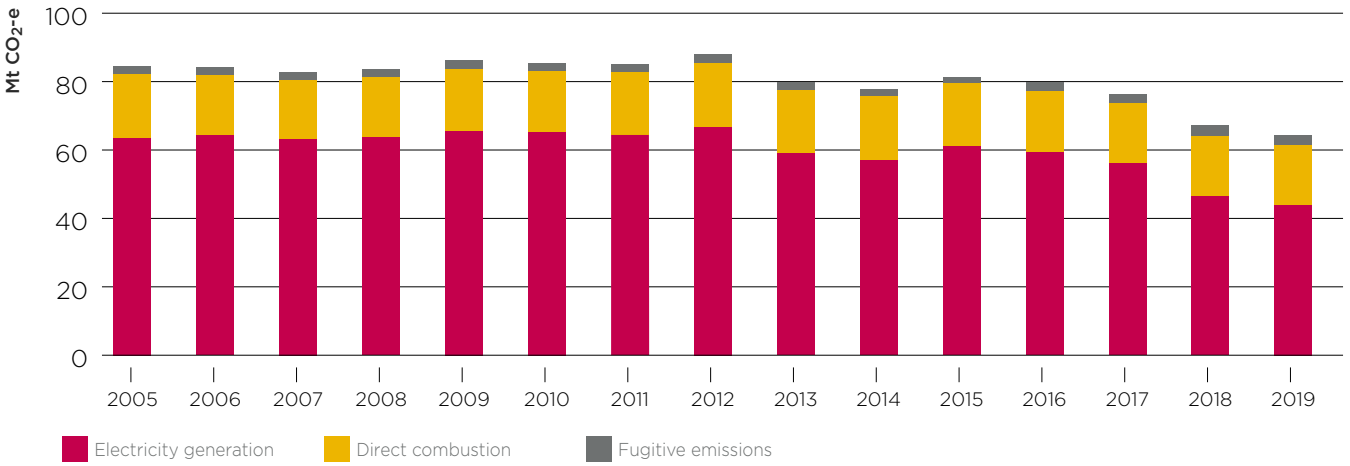
The energy sector is the largest single source of Victoria's greenhouse gas emissions, accounting for about 70 per cent of the state's total emissions in 2019.

Emissions from the sector decreased between 2005 and 2019, and will continue to fall over the next decade as the transition to renewable electricity and improvements in energy efficiency gather pace alongside our new focus on switching to clean fuels.

70%

of Victoria's greenhouse gas emissions came from the energy sector in 2019

Energy sector emissions (2005–2019)



Source: State and Territory Greenhouse Gas Inventories 2019 (DISER 2021)

Emissions reduction pledge 2021–2025

Actions to be taken under the energy sector pledge will deliver immediate emissions reductions. They will also lay the foundations for new policy and regulatory frameworks to bring forward low-emissions investments by the private sector and support Victoria's transition to a net-zero emissions future.

Importantly, as well as delivering emissions reductions, measures outlined in the energy sector pledge will contribute substantially to Victoria's economic recovery from the coronavirus pandemic. Increased investment in renewable and clean energy, in building infrastructure to enable the clean energy transition, and in improving energy efficiency in households and businesses will create new jobs across the state. A reduction in energy costs will be a further important benefit – Victorian households and businesses will see energy cost savings totalling $2.6 billion over the next four years.

The transition to decarbonised electricity is critical for reducing emissions in other sectors and across the economy. In particular, decarbonising our electricity supply provides opportunities to reduce emissions through the electrification of transport and our homes, businesses and industry.

Two key initiatives are the major drivers of emissions reductions: the Victorian Renewable Energy Target (VRET) and the targets set under the Victorian Energy Upgrades (VEU) program. These established initiatives have been highly effective in driving change to date. Through regulated and legislated targets, these initiatives provide investment certainty for transformational change, driving uptake at scale of low-emissions technologies and supporting new and emerging technologies. These ambitious forward targets will yield further benefits for Victorians, including jobs growth.

Major new investments and commitments by government are creating additional momentum. The *Victorian Budget 2020–21* supports the delivery of the energy sector pledge with funding for clean energy totalling $1.6 billion for the period 2020–21 to 2023–24.

It is estimated that the full suite of actions in the energy sector pledge will reduce emissions across the National Electricity Market (NEM) by 4.1 Mt CO_2-e in 2025 and 7.5 Mt CO_2-e in 2030[1]. This includes emissions reductions in Victoria of 2.2 Mt CO_2-e in 2025 and 3.7 Mt CO_2-e in 2030.

The energy sector pledge includes enabling measures that will support, complement and extend existing government programs and commitments, and lay the foundations for further action and further emissions reductions. Although these enabling measures do not deliver direct emissions reductions, they provide important signals to the market, and unlock barriers to future investment and emissions reductions where commitment and investment now is critical.

ACTIONS
under the energy sector pledge will reduce emissions in Victoria by an estimated

2.2 Mt
CO_2-e in 2025 and

3.7 Mt
CO_2-e in 2030[2]

[1] As Victoria is a net exporter of electricity in the NEM, measures that reduce demand for fossil fuel-generated electricity also reduce electricity imports, resulting in emissions reduction in other states.

[2] These emissions estimates represent the difference between projected emissions with these actions in 2025 and in 2030 compared to projected emissions without these actions.

Emissions reduction actions

Renewable energy investment

Victoria's energy system is changing to support the shift to renewable energy and distributed energy resources (such as rooftop solar) coupled with energy storage. To advance these changes, targeted investments are being made to:

- Unlock constrained renewable energy connection capacity and provide Victorians with clean, cheaper energy
- Support an affordable, reliable and secure energy system
- Encourage community engagement and co-investment for the uptake of new, smart distributed energy technologies.

Supporting large-scale renewable generation and transforming our grid

Victorian Renewable Energy Targets

In 2019, the Victorian Government legislated an increased Victorian Renewable Energy Target (VRET) of 50 per cent by 2030, building on the existing 2020 and 2025 targets. Victoria has achieved its renewable energy target for 2020 of 25 per cent renewable energy generation, and is now headed towards 40 per cent renewable generation by 2025 and 50 per cent by 2030.

The legislated VRET provides the power generation industry with the long-term policy certainty needed for new investment in renewable energy projects in Victoria.

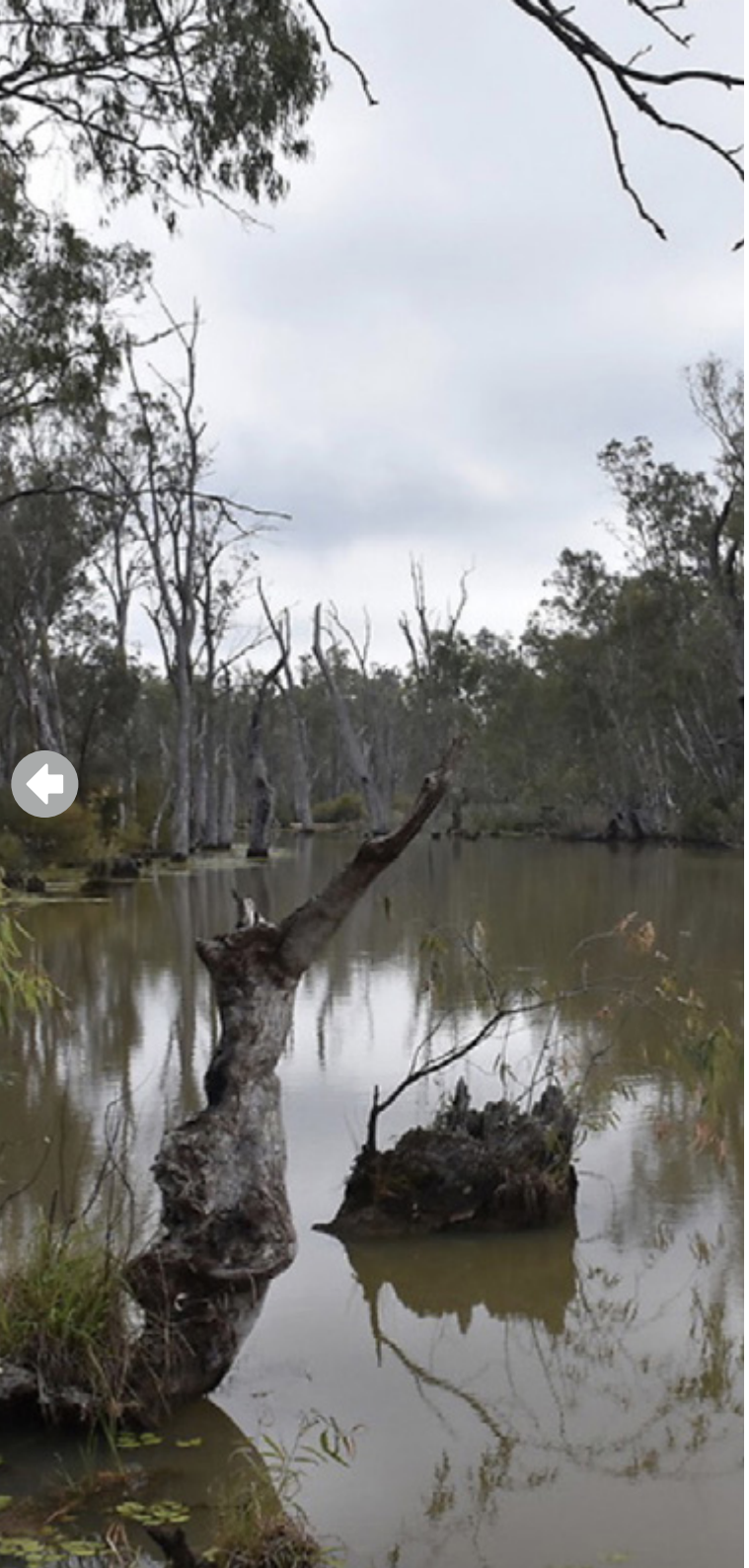
The first VRET auction in 2017 – the largest reverse auction ever held in Australia (a reverse auction involves just one buyer and multiple sellers) – has brought forward six wind and solar farm projects that will deliver a combined 928 megawatts (MW) of new renewable capacity, and generate $1.1 billion of investment in Victoria.

The second Victorian Renewable Energy Target auction (VRET2)

The Government is investing $12.6 million to fund the design and delivery of a second VRET auction to help meet its legislated renewable energy targets, and to ensure the fulfillment of its pledge to source 100 per cent renewable electricity for all government operations from 2025. The auction is expected to bring online at least 600 MW of new renewable energy capacity – enough to power Victorian public hospitals and schools, Melbourne's train network, and a range of other government infrastructure and services.

Renewable Certificate Purchasing Initiative

Over the next decade, the Renewable Certificate Purchasing Initiative will continue to support four new Victorian renewable energy projects through purchasing renewable energy certificates. The successful projects include two wind and two solar facilities. Around 35 MW of the generation capacity from the new solar projects is linked to the entire electricity load of Melbourne's tram network under the Government's Solar Trams Initiative.



Renewable energy investment

Energy Innovation Initiative

The Government is providing $108 million for:

- An Energy Innovation Fund
- An Offshore Wind Strategy
- Funding to accelerate Victoria's renewable hydrogen industry.

The Initiative is intended to support emerging energy proposals in Victoria that are strategically significant and have potential for transformational impacts. These types of projects could lay foundations for new investment, new industries and new jobs – with benefits for all Victorians, regions and local businesses. The fund could also support a range of projects and technologies that have the potential to stimulate longer term energy transition objectives for the state.

Renewable Energy Zones

Accelerated development of Victoria's six Renewable Energy Zones will unlock new renewable energy investment and support regional economic growth and jobs. The initiative involves:

- $540 million to support the accelerated delivery of Victoria's Renewable Energy Zones, including measures to address system constraints and to enhance access to the transmission network
- Planning and support for investment in renewable energy zone infrastructure and system security needs.

Transmission upgrades

The Government is supporting major transmission upgrades, including those identified in the Australian Energy Market Operator's Integrated System Plan. Its support will include co-funding with the Commonwealth for early works on the Victoria-New South Wales Interconnector West Project.

Victorian large-scale batteries

Government support for three large-scale batteries in Western Victoria, with a combined capacity of 75 MW/114 megawatt hours (MWh), is improving the reliability and security of Victoria's electricity supply.

In addition, the Victorian Government has fast-tracked the procurement of the 300 MW/450 MWh Victorian Big Battery – the largest lithium-ion battery in the southern hemisphere – to be installed near Geelong and ready for operation by November 2021.

Harnessing local and small-scale renewable generation

Solar Homes program

More than 135,000 rebated solar panels, batteries and solar hot water systems have been installed under the Solar Homes program since its launch in August 2018. More than 790 MW of new solar photovoltaic (PV) generation capacity has been installed so far, reducing Victoria's emissions and helping participating households save hundreds of dollars on their energy bills each year. Over its ten-year life, the $1.3 billion program will support 778,500 Victorian households to make the change to renewable energy, and help build a decarbonised energy system.

In 2020–21, the Government expanded the Solar Homes program with an additional $85.91 million to provide:

- 17,500 rebates over three years for households to install batteries (bringing the total Solar Homes battery rebate stream to 18,500 rebates over four years to 2022–23)
- Rebates for up to 15,000 small businesses over three years to install solar PV on their work premises.

Community Power Hubs

The Community Power Hubs pilot program in Ballarat, Bendigo and the Latrobe Valley has supported the installation of 1.35 MW of new renewable energy across 15 community energy projects, reducing greenhouse gas emissions by 1,839 tonnes CO_2-e per year, and saving local businesses and communities around $364,000 in annual energy costs.

In 2020–21, the Government expanded the Community Power Hubs pilot program, committing $5.94 million to invest in up to six new hubs in regional Victoria and metropolitan Melbourne to develop more than 25 locally-owned and cost-effective renewable energy projects in partnership with community and private investors.

New Energy Jobs Fund

The $20 million New Energy Jobs Fund has supported 72 projects through grants for industry and communities investing in new energy technologies.

25+

Locally-owned renewable energy projects to be developed through Community Power Hubs

Microgrids and stand-alone power systems

The $13 million Microgrid Demonstration Initiative has provided grant funding through two programs, supporting eight projects with a total value of $43.3 million to date.

The Government is also investing in up to three trial sites for microgrids and stand-alone power systems, to improve bushfire resilience and energy reliability in fire-affected communities.

Traditional Owner Renewable Energy Program

This program will deliver $1.1 million in grant funding for all 11 registered Aboriginal parties in Victoria. Each Traditional Owner Corporation will be eligible for up to $100,000 in funding to formulate plans to benefit from Victoria's renewable energy transformation. The program will support empowerment and self-determination of Victorian Traditional Owner Corporations, and aims to increase Aboriginal leadership and representation across all sectors and levels.

Neighbourhood batteries

The $10.92 million Neighbourhood Battery Initiative will fund a range of neighbourhood scale battery ownership and operational models, to unlock the role that neighbourhood scale batteries can play in Victoria's transitioning electricity system. A Consultation Paper has been released to seek views about the opportunities and challenges associated with neighbourhood scale batteries in Victoria.

Fuel switching to reduce emissions and strengthen supply options

Victoria will pursue a range of fuel switching options for our transition to net-zero emissions, including hydrogen and biogas, electrification and establishing the infrastructure for zero emissions vehicles.

Gas Substitution Roadmap

Victoria's Gas Substitution Roadmap will establish a strategic framework for decisions on gas efficiency, electrification and increased use of hydrogen and biogas. The Government will set aspirational targets for 2025 and 2030 for the displacement of natural gas. This will support transition planning for gas markets and long-term planning and investment decisions for gas use in Victorian homes and businesses. It will also identify policy mechanisms for achieving these targets. The roadmap will also support measures to reduce fugitive emissions from the gas supply and distribution system.

Accelerating Victoria's renewable hydrogen industry

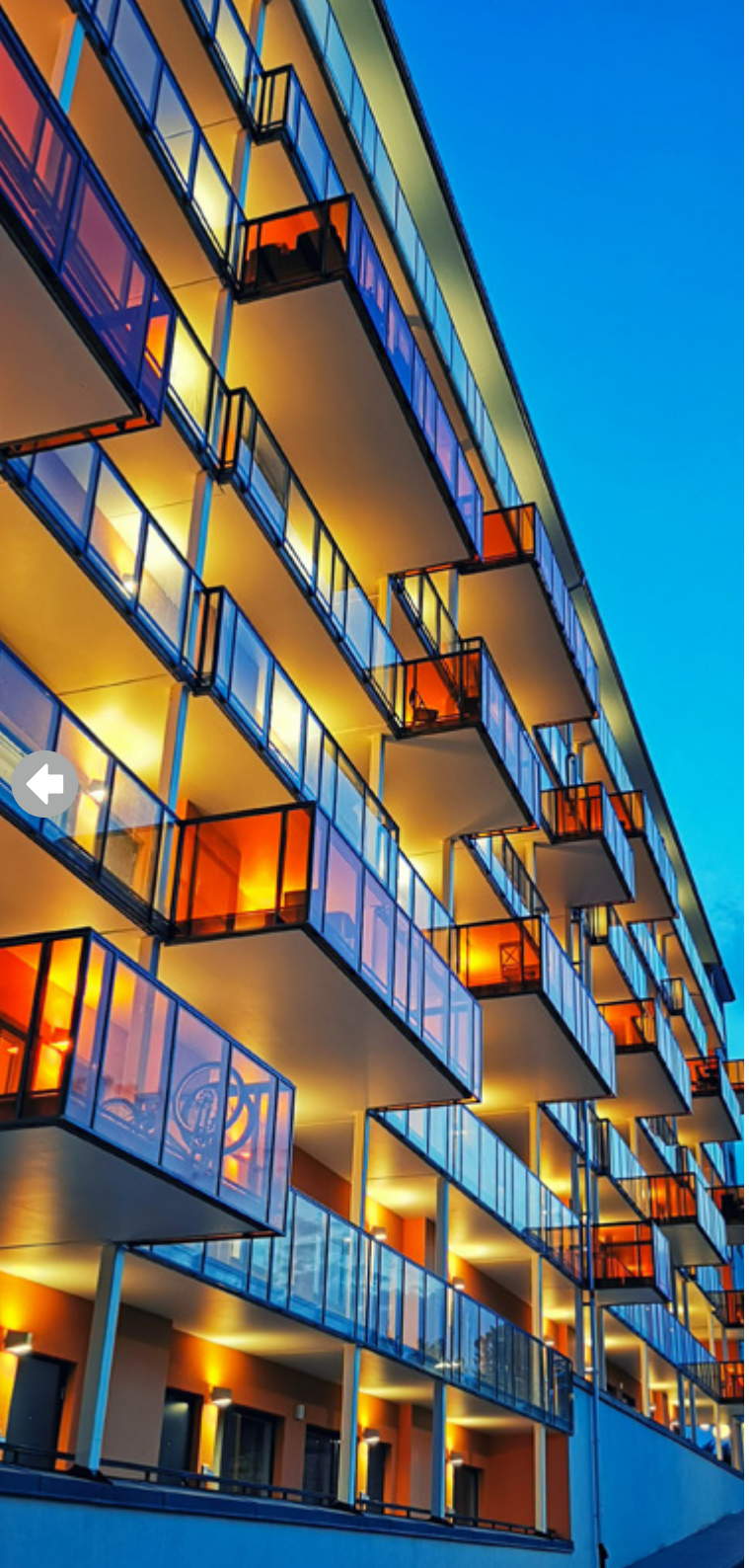
$10 million has been committed to progress the Victorian Renewable Hydrogen Industry Development Plan and take the first step in supporting the emerging hydrogen industry through pilots, demonstrations, industry and policy development and strengthened collaboration. This program will help establish pathways to hydrogen production, use and eventual exports.

Zero emissions vehicles

The energy system has a crucial role to play in supporting the adoption of zero emissions vehicles (ZEVs) and the decarbonisation of the road transport sector. The Government's package for accelerating the uptake of ZEVs has a range of important new measures that will help to drive the transition. Key measures in the energy pledge include:

- Victoria's ZEV Roadmap. The Roadmap provides the strategic foundation for this transition, outlining the Government's key actions and priorities to support the uptake of ZEVs over coming years and ensure the successful integration of electric vehicles into the grid.
- $19 million to be invested in a further rollout of electric vehicle charging infrastructure – in regional towns, tourist spots, and at other high-use locations and for commercial and government fleets – to create a readily accessible and coordinated network of public charging infrastructure across Victoria.
- Victoria's support for further reforms to the National Construction Code in 2022 to make new buildings ZEV-ready.
- New public information and awareness campaigns that will help increase the public's knowledge of and interaction with ZEVs and their benefits.

The transport pledge will complement these initiatives with additional important measures. The Government will establish an Expert Advisory Panel to advise on the policies required to ensure ZEVs make up 50 per cent of all new light vehicle sales by 2030.
To help start the change now, $46 million will be provided in subsidies to encourage Victorians to purchase ZEVs, and $5 million will be provided to support quicker uptake of ZEVs in commercial fleets. $20 million will be invested to begin the transition of the public transport bus fleet to zero emissions and $10 million to start transitioning the Victorian Government fleet.



Transforming energy demand

Energy efficiency and demand management are among the most cost-effective ways to reduce emissions and energy costs for Victorians. Under this pledge, the Government will accelerate the pace of change by investing $515 million to drive further energy savings and support our transition to a smart, distributed energy system. Energy efficiency also supports jobs growth in trades and supply chains across the state.

Victorian Energy Upgrades – high efficiency, low emissions, lower cost energy services

Victorian Energy Upgrade (VEU) program

For over a decade, the Victorian Energy Upgrades (VEU) program has helped Victorians cut annual energy bills on average by $110 (for households) and $3,700 (for businesses). It has also led to a reduction of 55 million tonnes of greenhouse gas emissions by giving 1.8 million households and 100,000 businesses access to discounted energy-efficient products and services.

Thousands of Victorian households and businesses have made the move to the world's most efficient lighting technologies – and the next generation of the VEU program will support them to take up other smart energy technologies.

In 2020–21, the Government began supporting a $17.13 million expansion of the VEU program, with ambitious targets for 2022 to 2025 to achieve $1.3 billion in investment in energy efficiency and energy management.

Over the next five years, VEU will support the installation of around 9 million energy-saving items. Major initiatives will include:

- Support for energy management information systems, smart thermostats, ceiling insulation and cold rooms, and medium-scale rooftop solar
- Reforms to the VEU exemption framework to require exempt large energy users to implement energy management systems, delivering 1–3 per cent energy savings per year
- Development of new incentives for demand-management activities.

$515M

to drive further energy savings and support our transition to a smart, distributed energy system

Targeted upgrades of homes for improved affordability and comfort

Energy efficiency is one of the most effective ways for households to reduce energy costs and reduce emissions, while improving comfort and health.

Major investments in energy efficiency from 2020–21 will ensure that low-income and vulnerable households benefit from the energy transition through appliance upgrades and home retrofitting.

Low cost heating and cooling for 250,000 Victorian households

The Government is providing $335.5 million in support for low-income and vulnerable households to replace old, inefficient, high-cost and high-emissions heaters with high-efficiency reverse cycle air conditioners. Depending on the type of heater being replaced, eligible households are expected to save between $300 and $900 annually on their energy bills while increasing the comfort of their homes. Eligible households will be supported to make these upgrades through the new Home Heating and Cooling Upgrades program delivered by Solar Victoria from 2021.

Upgrading 35,000 social housing properties

The Government will invest $112 million on upgrades to improve thermal performance (with insulation and draught-proofing) and replace inefficient appliances in 35,000 public and community housing properties. This will reduce energy costs for renters and make homes more comfortable.

Minimum energy standards for rental homes

The Government will introduce minimum energy efficiency standards for rental homes covering insulation, draught sealing and hot water, subject to a Regulatory Impact Statement. These new energy efficiency standards will complement the minimum standard for heaters that commenced on 29 March 2021.

Smart, efficient new homes

Victoria has led the way nationally with energy efficiency standards for new buildings. Since 2011, more than 500,000 new homes (roughly 20 per cent of all homes) have been built to 6–Star standard and above.

7–Star building standards

The next step for new homes will be '7–Star' building standards, with changes to the National Construction Code planned to take effect from September 2022. To achieve this target, the Victorian Government will support:

- Improved thermal performance (from 6–Star to 7–Star) to make homes more comfortable and resilient
- Strengthened energy performance standards for fixed appliances such as heating and cooling, hot water systems and lighting to make homes cheaper to run and increase demand response capability
- Design and construction for easy retrofit of solar panels, batteries and electric vehicle charging in apartments and commercial buildings
- As part of changes to the National Construction Code, Victoria will remove barriers to installation of efficient electric hot water systems, helping households to capture further benefits from investing in solar panels, and supporting those who choose all-electric new homes.

Many new homes built as part of the Government's $5.3 billion Big Housing Build package will exceed current minimum standards for energy efficiency, including 7-Star thermal performance, solar PV and all-electric appliances where possible. More than 12,000 new social and affordable homes will be built over four years.

Environmentally sustainable development

The Government's roadmap for the environmentally sustainable development of buildings and subdivisions outlines a program through which the planning system can support reduced energy consumption in buildings.

7-STAR

building standards from 2022... improved thermal performance... strengthened energy performance standards...

Working with Victorian businesses to reduce energy costs and create jobs

Energy efficiency has a strong track record in reducing business energy costs, and there are now increasing opportunities for businesses to deploy a range of demand-side and distributed energy options to optimise these savings. Targeted investment provided under this pledge will support businesses to take up these opportunities, reduce their energy costs and create new jobs.

~$31M

to support high energy consuming businesses and large emitters to consider – and invest in – a range of energy options to manage costs and future proof their operations

Business Recovery Energy Efficiency Fund

The Government has committed $31.17 million to support high energy consuming businesses and large emitters to consider – and invest in – a range of energy options to manage present and future costs. The options include energy management systems, energy efficiency measures, demand response initiatives, low-emissions equipment, energy storage and electrification.

Supporting small to medium businesses to be energy smart

The Government will invest $9.1 million to assist businesses to access energy savings opportunities and subsidised upgrades, with targeted incentives for energy-efficiency upgrades.

High performance commercial buildings

New building standards from 2025 will provide opportunities to increase minimum energy performance standards for new and refurbished commercial buildings.

Expanding the clean energy workforce

The Government will invest in expanding the state's clean energy workforce to help ensure the timely delivery of energy policies and projects, generate local jobs, and advance the transition to a low-emissions economy.

Training the clean economy workforce

Under this pledge, the Government will invest $10 million in supporting priority trades to 'skill up' for Victoria's clean economy with a five-year skills strategy, workforce capacity building, targeted training and careers support.

Empowering communities to take action

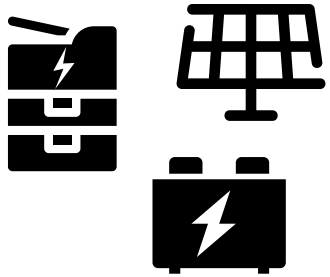
The Government will support community investment and uptake of cost-effective and low-emission technologies for community facilities.

Community Climate Change and Energy Action program

A $4.5 million Community Climate Change and Energy Action program will provide grants of up to $50,000 for community groups to install solar panels, batteries and energy efficiency equipment in community buildings, such as sports centres, surf clubs, community centres, and kindergartens.

$4.5M

in grants for community groups to install solar panels, batteries and energy efficiency equipment in community buildings...



Acknowledgement

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.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.

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This instrument has been made to give effect to the requirements in Division 3 of Part 5 of the *Climate Change Act 2017*.

Accessibility

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