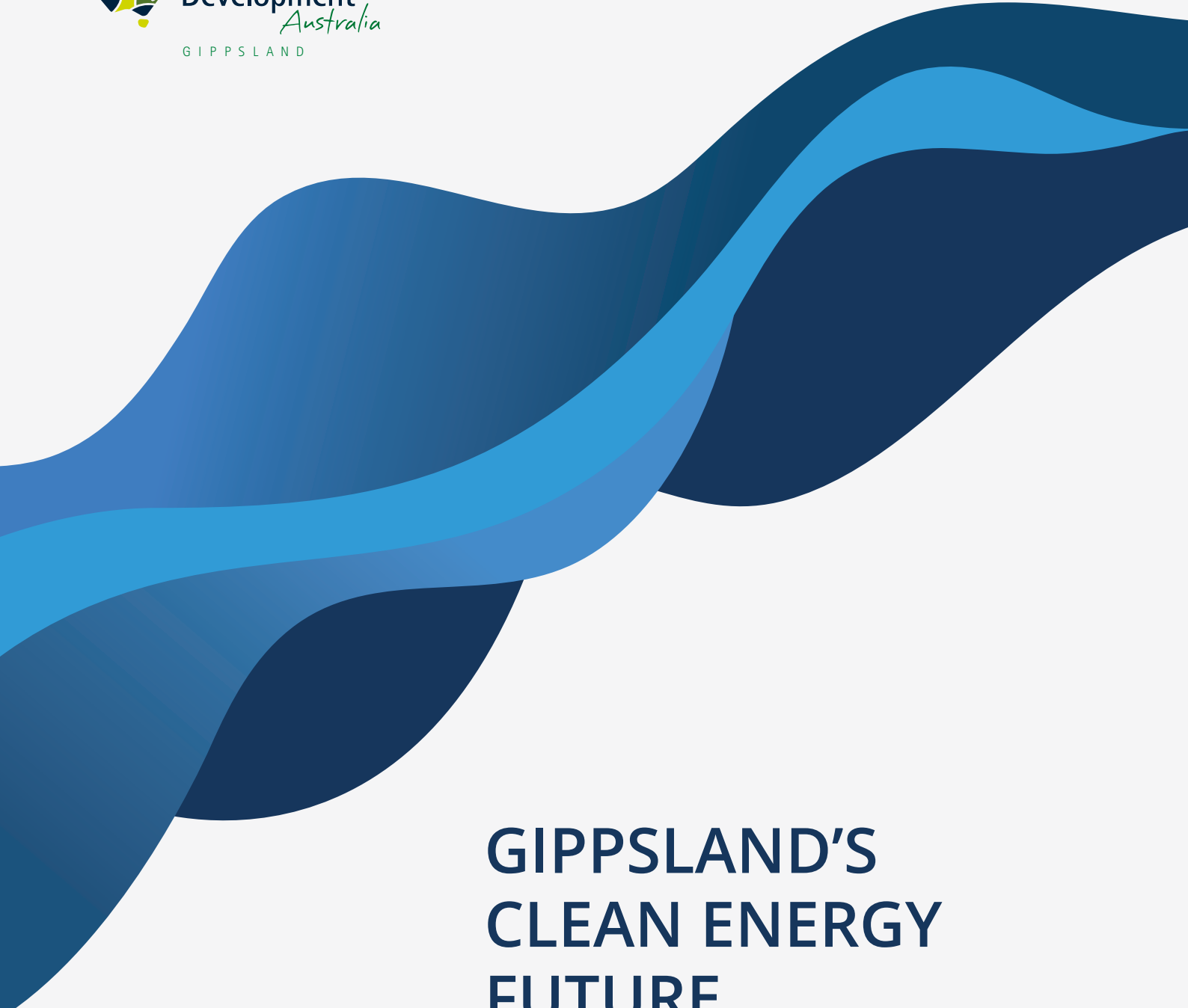




Committee for
GIPPSLAND




**Regional
Development**
Australia
GIPPSLAND



GIPPSLAND'S CLEAN ENERGY FUTURE

.....
Through investment and growth



We acknowledge the Traditional Custodians of Country and recognise their continuing connection to the land, water, air and sky; culture and community. We pay our respects to their Elders past and present.

We acknowledge the two Registered Aboriginal Parties within Gippsland:
The Gunaikurnai Land and Waters Aboriginal Corporation
and the Bunurong Land Council Aboriginal Corporation.



On behalf of the Committee for Gippsland and the Regional Development Australia Gippsland Committee I am pleased to be able to present Gippsland's Clean Energy Future: Through investment and growth.

We live in an era of transformation. Climate change presents a momentous challenge that requires the whole of society to act. The enormity of the task has been recognised globally, with many countries, including Australia, pledging to achieve net zero carbon emissions by 2050.

Reaching 'net zero emissions' will require a refocus on investment, developing infrastructure and implementing new technology, and reskilling our workforce. For Gippsland, this is also a once-in-a-generation opportunity to create new economies, develop diverse industries and strengthen our regional communities. Gippsland has a proud history as the energy powerhouse of Victoria and the region wants to seize the opportunities that exist to power the clean energy economy of the future.

By engaging with business and industry, regional leaders and the community, this document seeks to highlight the many strengths of our region and identify the opportunities for investment in energy projects to achieve 'net zero emissions'.

Gippsland is positioned to take a leading role in the clean energy transition for Victoria and, indeed, the whole country. We have unparalleled natural resources, a solid base of infrastructure and network connections, a skilled workforce, and a strong tradition as the backbone of Victoria's electricity grid.

The Committee for Gippsland has partnered with the RDA Gippsland Committee to prepare and deliver a clean energy future for Gippsland and in doing so would like to thank and acknowledge the RDA Gippsland Committee for their support and leadership in helping drive this piece of work ensuring the region can attract clean energy investments now and into the future.

This document is an important first step for the Committee for Gippsland in proactively driving clean energy investments across Gippsland. As a region, we must play an active role in forging our own path.

We will work with governments, industry and the community to help realise the opportunities provided by the energy transition for the benefit of all Gippslanders.

Rochelle Wrigglesworth
Committee for Gippsland Chair

About Committee for Gippsland

Committee for Gippsland (C4G) is a positive and influential voice for Gippsland helping to create a thriving and sustainable future for the region.

As the region's lead industry representative voice to government, the Committee for Gippsland brings together groups representing various business and industry views and interests to collaborate on regional priorities and outcomes that bring broader benefit to Gippsland communities.

The Committee for Gippsland actively engages across industry throughout the region, including through established industry sectors such as energy, agriculture and health, through to new and emerging businesses as well as those organisations that provide support services, education and professional advice, to help drive a positive future for Gippsland.

About RDA Gippsland Committee

The Regional Development Australia Gippsland Committee (RDA Gippsland) is an Australian Government initiative that helps drive economic development by identifying and advocating for regional priorities and projects that leverage Gippsland's regional strengths.

RDA Gippsland works across agencies, local councils, industry bodies and the private sector to facilitate regional economic development, and to shape projects to align with regional priorities, as well as state and federal government policy.

RDA Gippsland draws upon the data, knowledge, experience and opinions of regional alliances, partnerships and networks to support regional strategic planning through the Gippsland Regional Plan Leadership Group, the committee also works to bring investment to the region and create local jobs.

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1. THE PURPOSE OF THIS DOCUMENT

Gippsland has a proud history as Victoria's foremost energy producer. The region's fossil fuel endowments have underpinned a vibrant, modern economy. While these resources have delivered much prosperity to Gippsland, their role is changing. The future will be very different from the past. The need to address climate change and reduce carbon emissions is seeing a shift away from brown coal towards cleaner, less carbon-intensive forms of electricity generation.

Decarbonisation means that Gippsland's traditional energy industries have a finite life. This change needn't be negative, however, as it brings opportunities for new industries to emerge on the back of the region's comparative advantages in energy production and transmission. With the region's natural resources, established infrastructure and workforce capability, Gippsland has an enviable foundation to become a leader in the clean energy economy.

Government leadership and support will be essential for business to grow new energy industries in Gippsland. By working with our workforce and communities, government and business can strengthen the region, secure Victoria's energy future, and help to meet Australia's climate change commitments.

This document showcases what Gippsland can uniquely offer to a clean energy future, highlighting the opportunities for investment and sets out the support that the region requires to realise those opportunities.

This document will be used to attract government support and business investment to the region, and to ensure that our workers, households and communities enjoy lasting benefits. It is our roadmap from a vital, high-carbon past to a thriving net-zero future.

This prospectus defines 'clean energy' as investments and practices that can contribute to net zero carbon emissions by 2050 in Victoria and Australia.

The document focuses on driving investment and new sources of employment for the region through any energy technology that is consistent with net zero emissions. It does not seek to pick winners, and covers a broad set of solutions including renewable technologies (like wind and solar power), storage of energy in batteries, pumped hydro, hydrogen, more efficient and flexible uses of energy, net-zero natural gas to support renewables and the development of value-add coal technologies with transitional use of offsets or carbon capture and storage. The exception is nuclear power, which has not been included as it is banned by State law.



2. THE CASE FOR A GIPPSLAND CLEAN ENERGY REGION

Clean energy presents an enormous and growing investment opportunity, which Gippsland is ideally positioned to capture. The region has the natural resources, infrastructure, workforce and educational capability to support clean energy development at every scale. A clean energy region will deliver economic, environmental and social benefits to Gippsland, and contribute to state, national and global decarbonisation goals.

Clean energy transition is a once-in-a-generation investment opportunity

It is well established that carbon emissions are a major contributor to atmospheric warming and resultant climate change, which has led to 136 countries committing to carbon neutrality.^{1,2} Both the Australian and Victorian Governments have committed net zero greenhouse gas emissions targets by 2050. To achieve net zero, Australia must decarbonise all economic activity with most gains to be made in high emissions sectors like electricity, heavy industry, transport and agriculture.³

Transitioning to a clean energy economy is forecast to result in the phasing out of high emission uses of fossil fuels and renewables growing to a dominant role.⁴ Gippsland saw Hazelwood Power Station close in 2017 and Yallourn's closure is planned for 2028. Bass Strait oil production began to fall some time ago, and gas production is now doing the same, due to reduced reserves. The waning of these key industries is an economic loss for Gippsland's economy and communities.

Decarbonisation leaves Gippsland vulnerable but it is also a major opportunity. Investment in clean energy must double in the next decade to limit atmospheric warming to two degrees, and triple to achieve the Paris Agreement's preferred limit of 1.5 degrees.^{5,6} This economic transformation will be of unprecedented size that Gippsland, with its comparative advantages, can capitalise on to create new jobs and grow the region's economy.

CLEAN ENERGY INVESTMENT IS STRONG AND GROWING



US\$750 BILLION
Global annual clean energy expenditure



9%
Annual growth in energy transition investment



\$1.6 BILLION
Victorian Government clean energy investment package



Public demand
for decarbonisation



Net Zero
emissions targets in Victoria and globally

AUSTRALIAN CLEAN ENERGY DEVELOPMENT COULD POTENTIALLY DELIVER



9,000

Victorian renewable energy jobs by 2035

1,100

Ongoing jobs in carbon capture and storage operations

1.7%

Higher GDP by 2030

SECTOR GROWTH IS DRIVEN BY

Clean energy presents enormous opportunities

Gippsland has world-class natural resources to drive the energy transition

Gippsland has unparalleled advantages that make it an exceptional investment proposition. The region has the natural resources, infrastructure, workforce and educational capability needed to build a clean energy sector. These ingredients will enable the region to foster clean energy developments, capture economic opportunities and play a major role in achieving a net zero future.

Gippsland is endowed with natural resources to support a range of clean energy developments. The high and steady winds and shallow water off the Gippsland coast have attracted Australia's first proposal for an offshore wind farm.⁷ Grid-scale onshore wind and solar projects are also proposed for the region, and bioenergy has potential.

Gippsland's fossil fuel reserves may have an important role in transitioning to net zero. Gas-fired power that uses offsets in the near term, and transitions to burning hydrogen in the longer run, will help accelerate decarbonisation by providing essential, flexible back-up energy as wind and solar power grows, electricity storages increase, and coal-fired power stations close. Geological structures under Bass Strait could permanently store carbon emissions from new uses of coal and gas (e.g. to produce hydrogen or derivatives) and non-energy applications such as cement-making.⁸

Finally, Gippsland has particularly high rainfall in the south-western and eastern zones – an important input to many industries and clean energy sources.⁹

Gippsland has Victoria's best infrastructure to support clean energy production

Gippsland is home to one of the best power grid connections in Australia due to the Latrobe Valley's development as a major power producer. 2,000 MW of spare capacity is currently available at a low marginal loss factor,¹⁰ which will grow as remaining coal-fired power stations close. Transmission infrastructure could be further built upon to connect renewable developments including offshore clean energy developments whose construction and maintenance requirements can be serviced via Gippsland's ports including the Barry Beach marine terminal and Port Welshpool. Gippsland provides by far the largest and strongest grid connection of any Victorian Renewable Energy Zone (REZ) making it clean energy investment-ready.

Renewable energy production in Gippsland can be supported by grid-scale batteries, and net zero gas-fired power stations which are capable of providing 24-hour power to homes and businesses.

Gippsland also has a network of gas and liquid fuel easements and pipelines that could form part of a clean fuel grid carrying hydrogen and other zero-emission fuels.

Gippsland has an increasingly available skilled workforce – with potential to grow

Early estimates indicate that Gippsland will need 320 renewable energy workers by 2025.¹¹ These jobs will require skills in construction, planning, electrical and mechanical trades, and community engagement.^{12, 13}

Gippsland can provide some of these skills from its traditional energy industries. 1,200 people are directly employed in the mining sector, and more have related energy and resources jobs.¹⁴ This workforce has transferable technical and operational skills and will become increasingly available as coal-fired power stations close.¹⁵


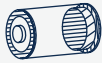
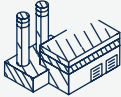




Gippsland can provide additional skilled workers from our current population and can attract workers and their families from outside the region to our towns, which provide good health and education services and an attractive lifestyle.

Much of Gippsland is close to the rapidly growing south-east corridor of Melbourne, which adds to the attraction of living and working in the region. It also provides another source of workers which will avoid the need for fly-in-fly-out workforces. This sets Gippsland apart from the many more remote regions of Australia which aspire to become clean energy producers.

Gippsland has the right institutions to support a workforce transition and technology commercialisation

Strong educational institutions are key to creating new opportunities for people currently employed in traditional fossil fuel industries and developing career pathways for the next generation of Gippslanders. The region has a proud history in providing high-quality, high-skill technical training back, which has carried forward from the former State Electricity Commission of Victoria to the present day. TAFE Gippsland operates a tertiary training facility in every major town and works closely with Federation University to deliver industry-led training partnerships.

The Hi-Tech Precinct Gippsland and proposed Regional Carbon Innovation Centre will strengthen Gippsland's educational and commercialisation capability. These institutions will be a conduit between academia and industry to support the development and commercialisation of clean energy research.

Resource	Size of the resource in Gippsland
Wind 	<p>Gippsland has high potential for at least 4000MW of offshore wind production. The region has high wind speeds with strong capacity factors (exceeding 50%) and favourable water depths for installing fixed platform turbines off Gippsland's south coast (20 - 70 m).^{16 17 18}</p> <p>Gippsland also has potential for 2,000MW onshore wind.</p>
Carbon Storage 	<p>The offshore Gippsland basin has the highest ranking of any Australian east coast basin to support carbon capture and storage (CCS)¹⁹ in suitable geological structures.</p> <p>The proposed 'Pelican' storage site has potential to store five million tonnes of carbon dioxide annually for 25 years and other potential fields have been identified.²⁰</p>
Coal 	<p>Gippsland's large and accessible brown coal deposits enable low-cost and large-scale mining, with 33 billion tonnes being potentially economically viable²¹ for clean energy, with CCS.</p>
Gas 	<p>The Gippsland Basin delivers 97 per cent of Victoria's natural gas and 40 per cent of Australia's east coast domestic demand, and contains an estimated 2.7 trillion cubic feet of gas.^{22 23} Forward estimates predict declining production, and onshore gas²⁴ exists but is less accessible.</p>
Solar 	<p>While Gippsland has a modest solar resource (~15.3 MJ/sqm.²⁵), grid access makes solar farms attractive. There is also potential for large-scale distributed production.</p>
Biomass 	<p>Gippsland has a significant forestry and agricultural sector that could provide biomass and waste for energy. Agriculture produced almost 800,000 tonnes of food and fibre waste in 2014-15 and the region manages 363,000 tonnes of waste, such as paper and packaging.²⁶</p>
Carbon Offsets 	<p>Gippsland has obvious advantages in regenerative agriculture as a natural form of CCS and the production of Australian Carbon Credits. The region has 28% of Victoria's food and fibre land area and 25% of Victoria's plantation timber.</p>

Resource

Existing infrastructure

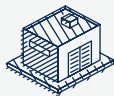
Electricity transmission



Gippsland has strong transmission connections from Latrobe Valley to Melbourne and interconnection with Tasmania.²⁷ The network has the best marginal loss factor of all renewable energy zones²⁸ and the largest spare network capacity with 2,000 MW of transmission capacity that will grow as coal plants close.

Additional transmission will be needed for the region's full renewable potential to be realised.

Stabilising energy



Gippsland has a total of 873 MW of gas-fired power stations²⁹ that can form renewable power, as can existing and planned big batteries for shorter periods: Energy Australia will build a 350 MW battery in the Latrobe Valley by 2026 and Loy Yang A have proposed a 200 MW battery to be built by 2023.^{30 31}

Gas and liquid fuel pipelines and easements



Gippsland has an extensive network of gas easements and pipelines – from Longford to Melbourne through the Latrobe Valley, and to Sydney (the Eastern Gas Pipeline).³² They currently have limited spare capacity during winter peak demand,³³ but the easements and pipelines may have value for transporting hydrogen and carbon dioxide in future.

A liquid fuels pipeline runs from Hastings to Altona and Geelong, and crude and LPG pipelines from Longford to Hastings.^{34 35}

Transport



The region has strong rail, road and port infrastructure. Ports at Hastings and Barry Beach could be developed to export hydrogen or build and maintain offshore infrastructure.

Princes Highway offers major road access to Melbourne, and the Gippsland rail corridor offers freight routes from Bairnsdale to Melbourne through Latrobe and Warragul.

Gippsland is ripe for investment

A STRONG AND DIVERSE ECONOMY

REGIONAL JOBS
126,000

GROSS REGIONAL PRODUCT
\$16 BILLION

BIGGEST ECONOMIC CONTRIBUTORS:



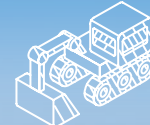
Agriculture



Tourism



Manufacturing



Construction

A BOUNTIFUL LANDSCAPE



41,000kms²
OF LANDSCAPE



16,000kms²
OF PUBLIC LAND

290,000
population

165,000

live in the Latrobe Valley,
centered on Moe, Morwell and Traralgon

40%
live in towns of
less than 1,000 people

ECONOMIC HUBS AND SMALL LOCALITIES

A clean energy region can create lasting benefits for Gippsland

Gippsland has the opportunity to realise a shared vision for a clean energy future that will bring lasting economic and social benefits. The region's proud history as an energy powerhouse can continue in the transition to net zero emissions.

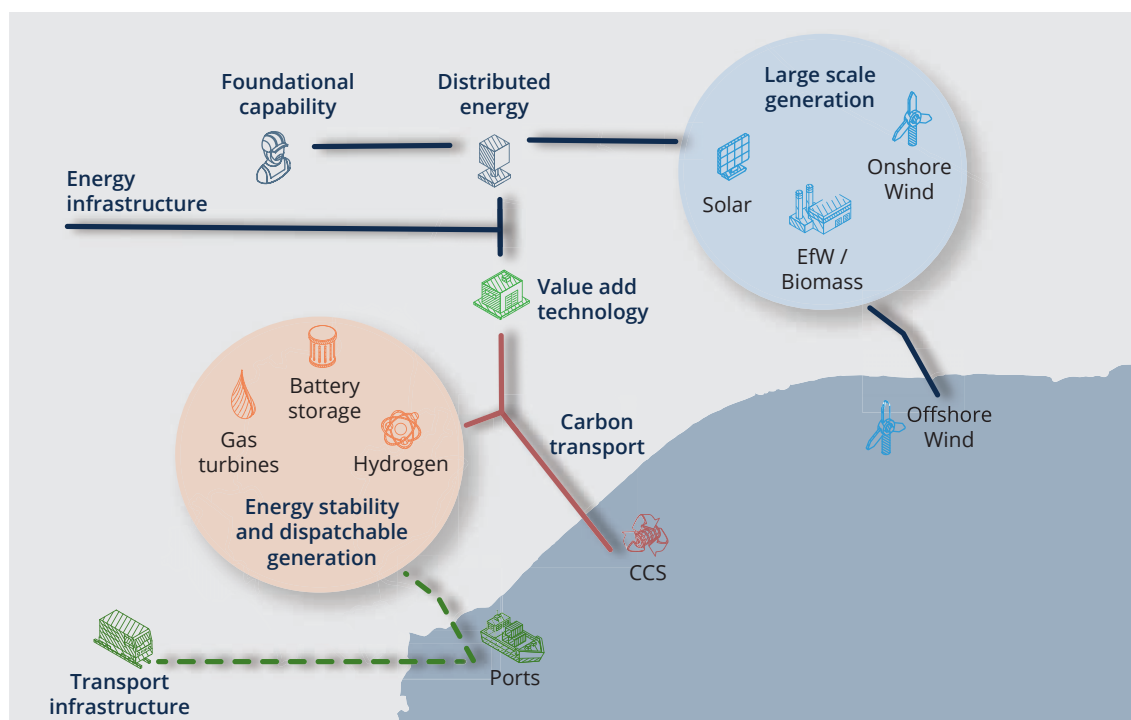
Clean energy can bring economic and social benefits to a region that is exposed to the costs of decarbonisation. The jobs created by clean energy development and operation will support communities across the region. The benefits to Gippsland can be multiplied³⁶ as clean energy workers spend their incomes locally and clean energy businesses contract with local businesses to supply goods and services.

The social fabric of the region will be strengthened by retaining and attracting workers and their families who will comprise our future communities.

The Victorian and Australian Governments have established policies and programs to grow renewable energy production, increase energy storage such as pumped hydro and big batteries, and develop low-emission technologies such as carbon capture and storage.

Gippsland is focused on these through its growth as a Renewable Energy Zone (REZ) and hydrogen hub, the Hydrogen Energy Supply Chain pilot project, and CarbonNet. Investors and stakeholders see the region's potential for major clean energy investments and are laying down plans.^{37 38}

These initiatives are a welcome start that must be built on for Gippsland to thrive and contribute to a clean energy future. We will need investment to grow to levels that are comparable to those which established our current energy industries. This will need to be done in close partnership with our communities, with the explicit aim of providing real and lasting benefits to our region.





3. OUR VISION AND GOALS

The Committee for Gippsland, in close consultation with business and industry, local government, regional leaders and the community from across the region, has defined a clean energy vision and goals. The Committee for Gippsland will play three roles in achieving this vision:

1. Promote Gippsland’s clean energy opportunities in this document.
2. Engage the community, policymakers and the private sector and contribute to ongoing dialogues about Gippsland’s potential.
3. Connect stakeholders with aligned interests using our deep local knowledge and broad network.

Our vision

Establish Gippsland as a leading clean energy region creating highly valued, sustainable jobs and growth that underpins thriving local communities as part of the transition to net zero emissions.

In realising this vision, we aim to:

- Make full use of **existing resources, infrastructure, skills and community support** to grow Gippsland
- Create **highly valued energy jobs** in Gippsland which are attractive to local workers
- Deliver positive **economic and social benefits** for the Gippsland community by supporting the region’s transition from traditional fossil fuel energy production
- Attract more local, **domestic and international investment** into Gippsland that creates lasting benefit to the region
- Make a positive contribution to the **energy transition** and decarbonising of the economy
- Support the development and commercialisation of **new energy technologies** for achieving net zero
- Foster the development and growth of **local start-ups and businesses** in clean energy and related industries

4. GIPPSLAND'S CLEAN ENERGY PROSPECTS AND GOALS

Gippsland's investment opportunities in clean energy and the clean economy include:



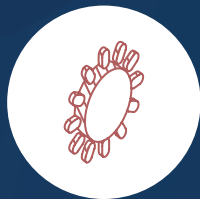
GROWING LARGE SCALE RENEWABLES

as the new anchors for the electricity grid



CARBON CAPTURE AND STORAGE

to mitigate emissions from other technologies



STABILISING THE ENERGY SUPPLY

to enable the scale-up of variable renewable generation



CULTIVATING DISTRIBUTED PRODUCTION

and use to decentralise energy



CHAMPIONING VALUE-ADD TECHNOLOGY

such as regenerative agriculture, to accelerate the move to a clean economy



BUILDING FOUNDATIONAL CAPABILITY AND INFRASTRUCTURE

that will be the backbone of a clean energy economy

GROWING LARGE SCALE RENEWABLES



The future clean energy grid will require major contributions from large scale renewable generation to replace the workhorses of Victoria's electricity supply – the Yallourn coal-fired power (20% of the state's power production) which is slated for closure in 2028, and Loy Yang A and B power stations (50%) which will close in the 2040s at the latest. The electrification of transport and heating, combined with population and economic growth, will further increase Victoria's demand for electricity in the future, even with major improvements in energy efficiency.

Gippsland presents major opportunities for wind power and has been identified by the Australian government as Australia's first priority area to be assessed for suitability for offshore wind development. Onshore wind capacity of at least 2,000 MW, and offshore wind is an even larger opportunity.³⁹ The Victorian Government has committed almost \$40 million through its Energy Innovation Fund to support 4,700 MW of offshore wind energy projects (see examples below).⁴⁰ The Bass Strait has large areas of shallow water suited to current offshore wind technology (fixed platforms, which require depths less than 60 metres). Offshore wind, while new to Australia, is established in the UK and Europe, and is growing rapidly there and in East Asia and North America.

Star of the South^{41 42}

Star of the South is pioneering offshore wind generation for Australia. The project is drawing on international experience and expertise to develop a wind farm off Gippsland's south coast that could become one of the world's largest offshore wind projects, meeting a significant share of Victoria's electricity needs at 2,200 MW of nameplate capacity. Star of the South will invest \$23.6 million for the project and the Victorian Government has committed to contributing \$19.5 million to co-fund preconstruction and development activities.

The Great Southern Offshore Wind Farm⁴³

Macquarie Green Investment Group is undertaking preliminary works to help identify a site for an offshore wind farm off the Bass Coast in Gippsland. The Victorian Government has awarded \$16.1 million to the project to support initial development phases. Preliminary estimates indicate offshore wind potential of 1,000 MW.

There is potential for solar power in the region, with rooftop solar already being deployed and large-scale projects under development, including proposals to optimise the use of valuable land by combining solar panels with agriculture.

Gippsland's established agricultural, forestry and industrial sectors provide opportunities for bioenergy and energy-from-waste (EfW).

Initial studies have estimated that by 2030, central Gippsland could have 785,000 tonnes per year of plantation forest biomass for bioenergy, and preliminary assessments of food and fibre waste show that close to 800,000 tonnes of material could be used for energy production.^{44, 45} While there are no specific estimates for bioenergy generation potential due to lack of data and high resource competition, the opportunity remains open.

Gippsland also processes 363,000 tonnes of other waste that could be converted to energy. Investments that carefully consider the Victorian government's 1,000,000 tonne limit on waste that is converted to energy and the current landscape of other EfW projects could be successful.

Geothermal energy has potential in Gippsland, though its historical take up for large scale development proposals has been limited.⁴⁶ One small though notable project now in operation is the Gippsland Regional Aquatic Centre, the first Victorian use of geothermally heated water in a swimming pool.

Seadragon⁴⁷

Flotation Energy is undertaking the Seadragon project to investigate 1,500 MW of offshore wind capacity in the Bass Strait. The Victorian Government is contributing \$2.3 million towards scoping studies and surveys. The proposed wind farm will be situated next to offshore oil and gas platforms and look to re-use these existing assets.

Delburn Wind Farm in the Latrobe Valley area⁴⁸

OSMI Australia, a renewable energy developer, has proposed to install 33 wind turbines in the Latrobe Valley area. The wind turbines are planned to be built in an existing forest plantation to maximise the value of the land. The project has a proposed capacity of up to 200 MW. OSMI has pledged to share project benefits through a Community Benefits Scheme.



Perry Bridge solar farm and sheep grazing site⁴⁹

Project Perry Bridge is a planned 44 MW solar farm and 50 MWh battery covering 232 acres by Octopus Energy and Clean Energy Finance Corporation. The pilot project seeks to demonstrate the feasibility of combining solar electricity generation, battery storage and sheep grazing in one site. It aims to be operational in 2023 subject to planning approvals, and will act as a proof-of-concept for other dual-purpose solar and agriculture sites such as the much larger 500 MW Gippsland Renewable Energy Park project. A similar project is being undertaken at the 80 MW Fulham Solar Farm that will also have a battery (up to 80 MWh).

Maryvale EfW facility⁵⁰

Opal Australian Paper, SUEZ and Masdar Tribe Australia have partnered to develop an EfW facility that will divert 325,000 tonnes of residual waste annually from landfill and use it to generate energy for the Maryvale Mill. With an investment of over \$500 million, the EfW facility will create 220+ jobs during construction and 130+ ongoing in the Gippsland region. The investment in this alternative energy solution will reduce the Mill's reliance on fossil fuels. Construction of the facility's first phase is planned for completion by 2025.

Gippsland Regional Organics' waste management expansion⁵¹

Gippsland Regional Organics (GRO) is seeking to expand its organic waste recycling facility at Dutson Downs. The expansion will bolster Gippsland's circular economy by enabling GRO to process up to 160,000 additional tonnes of organic waste. The organics will be converted to compost or used in a planned EfW facility.



CARBON CAPTURE AND STORAGE



Carbon capture and storage (CCS) is a key enabler of many prospective clean energy sources such as blue hydrogen and low-emission power from coal or gas, and clean production such as low-emission cement making.

Permanent storage in suitable geological formations is a major focus of research. Initial assessments have given the Gippsland Basin the highest technical ranking of 25 major basins across Australia, and the largest storage potential of any east coast basin.⁵³ The Victorian Government is undertaking more in-depth studies of Gippsland's geological structures that can safely and permanently store carbon dioxide.⁵⁴

The CarbonNet project⁵²

The CarbonNet project is led by the Victorian Government with Australian Government co-funding to develop a large-scale multi-user CCS hub in Gippsland. Engineering and geological investigations have identified 'Pelican' as the most promising site. Pelican is a porous sandstone formation capped by layers of shale and coal, 8 km off the Gippsland coast and 1.5km below the seabed. It has been assessed as capable of safely and permanently storing about 5 million tonnes of carbon dioxide per year.



STABILISING THE ENERGY SUPPLY



The electricity grid requires variable renewable sources such as wind and solar to be developed in tandem with ‘firming’ assets to provide a secure and reliable supply. Firming assets are those that can be ‘dispatched’ (called on to produce) when renewable generation does not meet demand. They can also provide the grid with ‘inertia’ to keep electricity flowing at the right frequency. A range of technologies can provide firming, and Gippsland has significant advantages for their development.

Gippsland’s existing transmission network makes it an appealing place to install utility-scale batteries that store electricity when energy supply exceeds demand, and release it when demand exceeds supply and/or the grid needs to be stabilised with fast injections of power. Batteries have been installed in Gippsland, and more investment is likely in future.

The high annual rainfall and mountainous landscapes in some parts of Gippsland may provide opportunities to balance the grid with pumped hydro power. Pumped hydro power stations function similarly to batteries, by using excess energy from renewable sources to move water uphill into a storage reservoir, and running the water downhill through turbines to produce electricity when demand requires. Several sites across Gippsland have been identified as technically suitable for pumped hydro.^{55, 56}

Gas-fired generators will provide the grid with essential firming services by using low volumes of gas to balance the variable output of wind and solar. This will help to reduce carbon emissions by enabling renewables to replace coal-fired power while keeping the power supply reliable. Gippsland hosts gas-fired power and is the site of additional generators. As the renewable share grows to achieve a surplus over domestic use, green hydrogen could replace gas as the firming fuel for these power stations.

Commercial-scale hydrogen production is expected to provide clean fuel for many potential uses: industrial heat, long-distance heavy transport, export, and in power stations that provide firming. Blue hydrogen can be produced in Gippsland by gasifying coal or reforming natural gas and permanently store the resultant carbon dioxide using CCS. Green hydrogen can be made through the electrolysis of water using renewable power.

In the near term, emissions from gas turbines could be reduced by blending hydrogen with natural gas fuel, as is planned at NSW's Tallawarra B power station, Australia's first dual-fuel gas-hydrogen power station.⁵⁷ In the longer-term, power plants fuelled by pure hydrogen are being developed.

Gippsland could become Australia's leader in the development of hydrogen-based industries as the region transitions from brown coal power generation to renewables. Existing pipeline easements in Gippsland for natural gas and liquid fuels could provide a starting point for a hydrogen pipeline network which would carry clean fuel to the Melbourne market and to an export port, for example at Hastings.

New coal-fired power stations integrated with CCS are also prospective investments in Gippsland, subject to the development of commercially viable coal-CCS technology and the discovery and commercialisation of enough carbon storage capacity under Bass Strait.

The Hydrogen Energy Supply Chain (HESC) Project

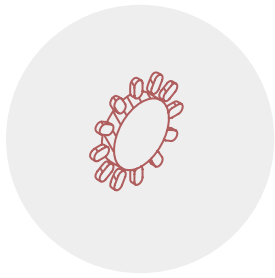
The HESC Project is a world-first clean liquid hydrogen project that aims to demonstrate the end-to-end supply chain from Gippsland (where the gas will be produced) to Kobe in Japan (where the gas will be received and distributed to users). The HESC Project aims to create 'blue' hydrogen at commercial scale by combining carbon capture and storage with the gasification of coal. A pilot plant (jointly funded by the Japanese, Victorian and Australian governments) commenced operation in 2021.

A long-range liquid hydrogen ship was launched in Kobe in 2019 to trial the export of fuel to Japan. The HESC is a world-first and highlights Gippsland's clean energy potential.

Gippsland's Hydrogen Cluster⁵⁸

Gippsland has been chosen by National Energy Resources Australia (NERA) as one of a handful of clusters across Australia that will play a pivotal role in accelerating the development, deployment, and commercialisation of the Australian hydrogen industry.

The Gippsland Hydrogen Cluster is auspiced by the Committee for Gippsland and is supported by business, industry, local government and state government departments. The project aims to grow Victoria's and Australia's hydrogen supply, develop training programs to build a skilled workforce and be an early adopter of hydrogen. The cluster is funded by NERA as part of their program to create an Australia-wide network of hydrogen technology development.



The Wooreen Energy Storage System⁵⁹

The Wooreen Energy Storage System is Australia's first committed four-hour battery and will be larger than any battery operating in the world today, at 350MW. EnergyAustralia, supported by the Victorian Government will build the Wooreen facility in the Latrobe Valley by 2026. It will provide cover for more than 230,000 Victorian households for four hours (before being recharged) to help stabilise energy supply and enable more renewable energy to enter the system, while supporting local employment.

The Loy Yang Battery⁶⁰

AGL is progressing its development of a 200 MW battery based at Loy Yang in the Latrobe Valley. AGL has lodged a planning application to the Victorian Minister for Planning and the Department of Environment, Land, Water and Planning. The battery is part of AGL's broader plans to develop 850 MW of grid-scale batteries by 2024. The four-hour duration battery will play an important role in transforming the reliability of renewables in Victoria, providing essential firming capacity and storage.



CULTIVATING DISTRIBUTED ENERGY PRODUCTION AND USE



Gippsland's clean energy opportunity includes small-scale or distributed energy production and storage, and energy use which is more efficient and more flexible. It encompasses grid-connected customers and self-sufficient off-grid households.

Rooftop solar allows households and businesses to generate their own power when the sun shines. Storage batteries complement solar by storing energy for use at night. Victorian Government subsidies have made solar and storage attractive for many. Gippsland has embraced solar power with a range of local businesses offering solar panel installation services.

Microgrids involve distributed solar at community scale, enabling local residents and businesses to produce, store and use their own energy, reducing reliance on the main grid and increasing reliability in remote areas. Gippsland is well-suited to community microgrids with 40 per cent of residents living in towns or settlements with less than 1,000 people – an ideal size to establish a community microgrid.⁶¹

The clean energy transition is not only concerned with building new energy supplies, but also reducing 'demand' (consumption) and making it more flexible. 13 per cent of Australia's greenhouse gas emissions are associated directly with households, and improving their energy efficiency is key to achieving net zero.⁶² Investment to accelerate Australia's transition to sustainable homes could deliver environmental benefits and save Australians \$600 million on energy bills by 2030.⁶³

Governments provide support for efficient energy usage, through the Victorian Energy Upgrade Scheme the Clean Energy Finance Corporation's (CEFC) discounted home loans for seven-star rated homes.⁶⁴

Supporting electric vehicles and transport is a growing opportunity. Electric vehicles already have a presence in the region and are expected to grow to 20 per cent of all new vehicles sold in Gippsland by 2030.⁶⁵ Investing in charging infrastructure across Gippsland can achieve economies of scale that incentivises clean energy usage.⁶⁶ Hydrogen-powered vehicles (e.g. long-distance heavy trucks and passenger and freight trains) presents a possible source of demand for clean hydrogen produced in the region.

Micro-grid trial in Heyfield

The 1,000-person town of Heyfield, located 30 km northwest of Sale, is undertaking a three-year community microgrid feasibility study. The aim is to give Heyfield control of its energy supply and reduce its dependence on the main grid, with the project led by the University of Technology Sydney and backed by the Australian Government and Latrobe Valley Authority.^{67,68} The town uses rooftop solar on households and businesses for electricity production, and smart meter technology to monitor usage. The study plans to use Heyfield as a test case for other communities in Gippsland and nationally.

Mount Baw Baw Alpine Resort microgrid project

Mount Baw Baw Alpine Resort's microgrid embedded network project will deliver significant environmental and energy cost savings. The project is supported by stakeholders, resort businesses, industry bodies and government departments and aims to achieve a sustainable future for the resort and its visitors and business partners. The project is at the feasibility and trial project phase.

Cape Paterson sustainable living housing development

The Cape, in Gippsland's Cape Paterson, is a unique housing development that demonstrates the potential of widespread efficient residential energy usage. The development's 230 sites feature 7.5 to 8-star efficient homes with highly efficient lights and appliances.⁶⁹ These homes are carbon-neutral, resilient in hot spells and have low running costs – the consumer uses 88 per cent less grid energy than a typical 6-star house in Victoria.⁷⁰ The Cape leads a substantial push to minimise household energy consumption and publishes house designs free online, to be replicated.

Gippsland hydrogen vehicle assembly plant

Gippsland Circular Economy Precinct (GCEP) and H2X Global have signed an agreement to build hydrogen fuel cell electric vehicles in Gippsland. H2X is Australia's first hydrogen vehicle manufacturing company and is developing a range of hydrogen vehicles and equipment including a van, minibus, SUV, ute, tractors and agricultural equipment. Proposed manufacturing facilities will also produce hydrogen fuel cells, electrolyzers and a range of hydrogen power units including generators and emergency power supplies in the region.

CHAMPIONING VALUE-ADD TECHNOLOGY



Gippsland's aim to be a national leader in clean energy extends to the broader goal of being at the forefront of the transition to a clean economy. Technologies for clean industries can be developed and deployed in the region.

CCS has non-energy applications for emissions-intensive industries where electrification is not a straightforward option. Translating CCS technology for application in manufacturing, processing and other heavy industry may be critical for hard-to-abate sectors, especially in the context of a market that is increasingly seeking low-carbon products.

Gippsland has obvious advantages in regenerative agriculture as a natural form of CCS – the region has 28% of Victoria's food and fibre land area, and 25% of Victoria's plantation timber.⁷² Fixing carbon from the atmosphere through targeted crop selection and enhanced farming practices can improve soil health and increase profitability.⁷ The environmental benefits of restoring ecosystem chemical balances and capturing atmospheric carbon command a premium from buyers while making farms more resilient.

The decline of coal-fired power stations may not mean the end for coal in Gippsland. Apart from its potential role in blue hydrogen production and low-emissions power, the region's plentiful reserves of coal can be used for non-energy applications in processes like cement and material manufacturing. While some coal applications are net zero such as the manufacturing of carbon fibre, others combined with CCS and the transitional use of offsets, can be part of the pathway to net zero emissions.

Like coal, hydrogen produced in the region could also have many non-energy uses. Hydrogen is a highly flexible and valuable feedstock that plays a role in processes from producing plastics to making margarine.

Promoting regenerative agriculture in Gippsland⁷¹

Regenerative agriculture has sparked interest across Gippsland as a way to improve plant and animal health, and improve farm productivity. The South Gippsland Landcare Network and West Gippsland Catchment Management Authority supported the Soilkee Renovator project – a trial to test the effects of new tilling and cropping technology. The study found that application of new technology at the South Gippsland test site improved soil carbon, plant available nutrients, dry matter and crude protein over three years.

Gippsland Carbon Fibre Production Centre

Australian Carbon Innovation (ACI) is a Gippsland-based not-for-profit business established by the Victorian Government that is leading the development of technology to derive precursor carbon fibre material from coal at a fraction of the cost of existing oil-based production. ACI has proven the concept, capable of delivery properties close to the US standard for carbon fibre. With support from Federation and Deakin University, ACI is scaling and optimising the spun carbon fibre to be market ready. Following detailed technical and economic assessments, ACI's goal is to commercialise the product in 2-5 years with a production facility in Gippsland.

Developing clean hydrogen and value-add products

Environmental Clean Technologies (ECT), and GrapheneX are developing a new project in the Latrobe Valley that will deliver clean hydrogen, biochar, and other valuable products with a net zero emissions footprint. The project aims to establish a new regional hydrogen hub that is underpinned by a commercial scale hydrogen refinery. Planned facilities will refine waste biomass and lignite from Yallourn – upgrading them into their valuable chemical constituents to deliver Australia's largest producer of agricultural char for soil health along with hydrogen – formic acid and electricity.

BUILDING FOUNDATIONAL CAPABILITY AND INFRASTRUCTURE FOR THE CLEAN ENERGY ECONOMY



The clean energy sector needs skilled workers to build and operate clean energy assets, technology to transform resources into useful output and infrastructure to construct production facilities and transport their output to where it is needed. Strengthening Gippsland's workforce capability and infrastructure will help the region to fully capture the clean energy economic opportunity.

Retraining and upskilling will build the workforce for the needs of the immediate future. Clean energy developments will create new jobs that require skilled workers in regional areas.⁷⁴ Gippsland has a large existing workforce in and adjacent to the energy sector – construction and project management workers, engineers, electricians and mechanical tradespeople – that have skills demanded by clean energy.⁷⁵ As traditional fossil fuel usage declines, this local workforce will be increasingly available and seeking employment. Government support to provide pathways to retrain and upskill workers is critical to service the specific needs of a clean energy⁷⁶ economy and help smooth the economic impact of the energy transition.

The Hi-Tech Precinct Gippsland⁷⁷

The Hi-Tech Precinct Gippsland creates a physical space for collaboration between education providers, researchers and industry to strengthen skill development and innovation across the clean energy supply chain. The \$17 million Morwell Innovation Centre sits at the heart of the precinct, where the founding partners of Federation University, TAFE Gippsland, Gippsland Tech School and Latrobe City Council work together with private industry to support workforce training, increase technology adoption and accelerate industry growth. New energy is one of the Precinct's six growth areas as it seeks to attract attention from major investors and upskill local workers to support clean energy development.

Gippsland's clean energy region will need a skilled workforce well into the future. Education and training will enable the region's young population to meet this demand. Young people in Gippsland are keen to develop technical skills and are more likely to start apprenticeships and traineeships than their metropolitan counterparts.⁷⁸ Educational providers and industry can partner to create skills based vocational pathways to high value, desirable careers. Enabling local skill development is critical for the future of the clean energy sector and will provide Gippsland's next generation with strong employment prospects close to home.

Gippsland can support clean energy research, innovation and commercialisation. Technology helps efficiently translate natural resources into useful clean energy and is typically developed and tested by researchers in the field before commercialisation. Gippsland's large natural resource endowment positions the region well to investigate innovation opportunities and test new technologies in the field. Studies into Gippsland's geothermal and bioenergy potential are underway,⁷⁹ and the region is well positioned to support research and development for offshore wind and carbon capture storage.

The region also has the potential to support local businesses to adopt new clean energy innovations, through industry-researcher collaboration at the Hi-Tech Precinct Gippsland and proposed Carbon Innovation Centre.

Supporting infrastructure and assets are needed to create and transport clean energy. The region's infrastructure can be extended to connect renewables to the main grid in the Latrobe Valley. The lines from the Valley to Melbourne will also need to be expanded to supply increased power demand (due to expected increase in the electrification of vehicles and heating). In the longer term, a pipeline network to transport hydrogen and/or its derivatives for export and domestic use is also likely to be needed.

Road and rail transport upgrades will support clean economy developments and bring broader economic and social benefit to the region. Targeted and co-ordinated infrastructure investment can enable Gippsland to fully realise the economic and environmental benefits of clean energy. The roadmap provides a high-level overview of Gippsland's infrastructure needs in the next five years to advance existing clean energy developments and attract new investment.

Regional Carbon Innovation Centre

The establishment of a Regional Carbon Innovation Centre will bolster Gippsland's research commercialisation capability and bring substantial economic, social and environmental benefit.⁸⁰ Australian Carbon Innovation, a non-profit company created by the Victorian Government, partnered with Federation University's Carbon Technology Research Centre to evaluate the potential of a large-scale lignite research and feasibility centre in the Latrobe Valley. The centre will help demonstrate research on a commercial scale and play a pivotal role in commercialising high-value carbon related products for domestic use and export. The centre estimates \$25-30 million in government investment will be required to establish the centre, which could deliver over 1,000 jobs to Gippsland.



The Australian Renewables Academy⁸¹

The Australian Renewables Academy (ARA) was established by Gippsland businesses and stakeholders to develop the renewable workforce for the future. The ARA acts as a conduit between industry, education and skills providers, and the renewable energy workforce. Current courses centre around the renewable energy economy, include training for the regional transition and training for the new hydrogen economy.

Marinus Link⁸²

Marinus Link is a proposed 1,500 MW capacity undersea and underground electricity connection to further link Victoria and Tasmania as part of Australia's future electricity grid. Marinus Link involves approximately 345 kilometres of High Voltage Direct Current (HVDC) cable that will run from the Latrobe Valley to North West Tasmania. Marinus Link and supporting transmission will add up to \$1.5 billion in economic stimulus through construction and operation and create 1,400 jobs at peak construction. The project is in its design and approvals stage with construction anticipated in the coming years.





5. PRINCIPLES FOR INVESTMENT IN THE REGION

Gippsland welcomes investment that builds empowered and connected communities by supporting the people and businesses of the region. Healthy investment involves sharing the benefits (including by providing local jobs and contracts to local businesses), minimising costs (such as reduced amenity from new infrastructure), and fairly compensating affected residents and communities.

Investment in Gippsland must be guided by principles that will help ensure our communities benefit.

Engage early and with a broad range of local stakeholders by, for example, informing them before infrastructure proposals are made public and 'locked in' by approval processes

Reach **fair and reasonable agreements** with local Gippsland landowners and Traditional Owners to host infrastructure or assets on their land

Meaningfully consult and collaborate with key stakeholder groups, including local Traditional Owners

Create genuine **employment opportunities** in Gippsland

Maintain strong **community trust and ethical practices** throughout the life of the project

Leverage existing infrastructure through joined-up planning where possible, and coordinate with stakeholders to ensure that new infrastructure causes minimal disruption

Share the benefits with communities by investing in facilities and programs in close consultation with the community

The Victorian Government has developed a guide for developers that provides detailed and practical guidance on community engagement and benefits sharing.⁸³ The Clean Energy Council details additional methodologies and examples.⁸⁴ The RE-Alliance has published guidance on engagement and benefit sharing approaches to build support for transmission powerlines to Renewable Energy Zones.⁸⁵



6. ROADMAP

Committee for Gippsland plans to realise the clean energy potential of the region by working with governments, investors and communities. Most investment is expected to come from the private sector, but governments can facilitate investment through planning, regulation, and through targeted funding to unlock new industries (such as offshore wind and CCS).

Three horizons of activity define the pathway for Gippsland to become Victoria's leading clean energy region. This roadmap will guide the Committee in mobilising action by governments to create the right settings for productive investment.

The Committee for Gippsland will refresh the roadmap periodically as a high priority.

Horizon 3 Escalate operations (10 – 15 years)

Turbo charge Gippsland's clean energy capabilities to cement the region as a powerhouse in Victoria and nationally.

- Rapidly expand clean energy production and supporting infrastructure to export energy to other states and countries
- Export knowledge to support other regions to develop clean energy capability
- Make significant contributions to achieving net zero in Victoria and nationally

Horizon 2 Expand opportunities (5 – 10 years)

Build upon the region's firm foundations to fully capture the opportunity in clean energy and related industries.

- Step up private sector investment in commercial-scale clean energy developments that create local jobs
- Expand clean energy supply chains to maximise local economic value from those investments
- Ensure the region's other industries are interlinked with clean energy operations to grow collaboration opportunities

Horizon 1 Establish the region (now – 5 years)

Advance existing investments and cultivate the right environment in Gippsland to attract clean energy developments.

- Work with governments to ensure that policy, regulation, funding and workforce development supports investment in flagship clean energy projects
- Support grid planning and coordination of infrastructure
- Identify new opportunities and leverage the region's success stories of past and current projects to attract a critical mass of private sector investment
- Seek public support to establish new large-scale clean industries and remove barriers to commercialisation



7. RECOMMENDATIONS

The next five years will be crucial to setting Gippsland up for success. Working in partnership with government and industry, the Committee for Gippsland proposes a range of recommendations to propel Gippsland towards a clean energy future.

Developing Gippsland as a clean energy region is not only urgent to meet the region's needs; it is urgent because the pressure on Australia to decarbonise rapidly is growing, and Gippsland is well placed to contribute.

Gippsland's largest investment prospects are mostly in new industries that are not yet established in Victoria or Australia, but have high potential to contribute to State and national energy security and export income. They will need government support to become large enough to deliver serious benefits.

We will achieve the greatest progress if the Victorian and Australian Governments collaborate with industry to develop Gippsland as a clean energy region. We provide the state and federal governments with these recommendations to support the Region's ambition to be a net zero engine powering the economy, bringing with it new hope and prosperity for its people.

There are a range of actions the Committee for Gippsland have recommended to secure Gippsland's clean energy future, with the following 3 priority recommendations;

1. Government and industry partnering to co-fund a series of flagship clean energy projects in Gippsland and deliver necessary regulatory reform to enable these projects.
2. Support Gippsland's world class CCS potential to secure investment by 2025 and enable a range of new clean industries to emerge, such as hydrogen and high value carbon products.
3. Develop and implement a Gippsland workforce transition and development plan that identifies local jobs from clean energy investments in the region and provide an orderly and just transition for current coal workers, younger people and service businesses.

Support flagship clean energy projects

We recommend that the Victorian and Australian Government support co-funding and regulatory reform to deliver a series of flagship clean energy projects in partnership with industry.

By the end of 2022, governments should commit to developing at least 5 large scale clean energy flagship projects to create the foundation and catalyst for a thriving clean energy industry in Gippsland. These projects must be compatible with a pathway to net zero emissions, include proactive engagement with the community, source local content and create local jobs, and meet rigorous environmental, safety and planning requirements.

Initial priorities are outlined below.

Champion large scale renewable investment

Financial and regulatory support for a Gippsland offshore wind zone to:

- ensure Gippsland is granted appropriate licences to begin commercial activities
- secure investment in 2 GW by 2025, with construction starting before 2028
- attract investment in a minimum of 10 GW by 2035
- prioritise Gippsland ports to build and service new capacity
- commit support for at least 200 MW of onshore wind and solar by 2022 (through the Victorian Renewable Energy Target auction) and a further 1 GW by 2030

Stabilise renewable energy

Co-invest with industry and provide regulatory support for energy technologies that can back-up Victoria's growing renewable energy supply as coal fired power closes and provide local jobs, including in:

- large scale battery technology
- pumped hydro
- waste-to-energy
- net zero gas fired power that is hydrogen-ready

Support carbon capture and storage

Financial and regulatory support by 2022 to secure investment by 2025 in:

- permanent storage of carbon under Bass Strait of five million tonnes per year
- commercial-scale hydrogen production from coal and/or natural gas that is consistent with net zero emissions through CCS
- other carbon capture projects for which large-scale capture is feasible and storage capacity is available, such as natural gas processing, cement making and/or biomass gasification

Cultivate value add technology

Provide financial and regulatory support to develop emerging technologies such as:

- the production or expansion of Australian Carbon Credit Units
- net zero coal applications and high value carbon products (i.e., carbon fibre)

Establish a Regional Carbon Innovation Centre to help commercialise high-value carbon related products for domestic use and export.

Develop a hydrogen industry in Gippsland

Establish Gippsland as a hydrogen hub by funding projects that are operational by 2025, including:

- at least one MW-scale electrolyser to make hydrogen for research and demonstration
- supporting Gippsland businesses to use clean hydrogen for industrial process heat in manufacturing (e.g. in pulp and paper production or dairy processing)
- demonstration of hydrogen-fuelled passenger trains and buses for V/Line services
- a demonstration fleet of hydrogen-fuelled trucks, in partnership with a Gippsland freight company
- a trial 'hydrogen town' in Gippsland based on the UK's Levenmouth project
- a plan for the next phase of Gippsland's hydrogen hub (2025-30), including assessing the region's hydrogen storage potential
- ensure hydrogen and gas pipeline regulation keeps up with technological process

Promote distributed energy uptake

Support Gippsland to become a hydrogen vehicle and fuel cell assembly and manufacturing centre.

Grow the use of electric vehicles (EV) in the region by:

- including Gippsland as one of the regional centres that receive charging infrastructure investment through the Future Fuels Fund
- supporting take-up of EVs for passenger and light commercial use, including public transport

Bolster Gippsland's enabling infrastructure

Complementing the energy and precinct commitments, the Victorian government, with the Australian government and national agencies where relevant, should:

- Develop a master plan by 2023 for the integrated development of network infrastructure to support clean energy, including electricity transmission, hydrogen pipelines and carbon dioxide pipelines – and minimise landowner and community impacts by developing common user infrastructure and sharing benefits
- Develop a master plan by 2023 to upgrade Gippsland's ports to support clean energy, by enabling the construction and maintenance of offshore wind farms; construction and maintenance of carbon storage pipelines and injection facilities; and hydrogen exports
- Assign the network and port master planning roles to an expert planning body, working in collaboration with AEMO, VicGrid, Ports Victoria, Infrastructure Victoria, clean energy project developers, communities and stakeholders
- Implement the master plans with funding and regulatory improvements so that infrastructure development enables commitments to new industries and precincts to be delivered on time
- In partnership with oil and gas companies, facilitate the repurposing of oil and gas infrastructure to clean energy (offshore wind construction and operation; clean hydrogen production, transport and storage; CO2 transport and storage) or non-energy uses where feasible. The first plan should be produced by 2023 and revised periodically thereafter

Identify and train the next generation of clean energy employees

The Victorian government, with support from the Australian Government should develop and implement a Gippsland workforce transition and development plan that identifies local jobs from clean energy investments in the region and provide an orderly and just transition for current coal workers, younger people and service businesses. The plan should:

- identify the construction and operation schedule and employment requirements of new clean energy projects in Gippsland, match them with training opportunities at local education institutions, and identify gaps in training provision.
- be designed with educational institutions (e.g. TAFE Gippsland, Federation University, The Australian Renewables Academy and other RTOs) and informed by industry, union and community input
- support industry and local educational institutions to secure funding to map and deliver training that meets the needs of the clean energy workforce during the transition
- include transition packages for coal and gas workforces facing plant closures given that some will not find work in new industries
- consider the social infrastructure and a diversity of jobs required to attract families and sustain communities.
- be refreshed periodically through the transition

Invest in economic opportunities to support the community transition

It is recommended the Victorian and Australian governments:

- provide a Regional Transition Fund, to co-invest with the private sector in economic opportunities in Gippsland to create new employment opportunities as the region transitions away from traditional energy production such as coal and gas
- promote Gippsland to international and domestic clean energy investors including through InvestVic and Austrade, starting in 2022
- support more detailed investigations of clean energy resources where required to understand the investment potential (e.g. measuring the region's bioenergy potential)
- engage Gippsland communities and Traditional Owner groups to understand how new investment can best deliver value for them
- support investment in social infrastructure to enhance Gippsland's lifestyle as an attractive place to live, work and visit

Create the right regulatory settings

The Victorian government, in cooperation with Gippsland's local governments, should:

- adopt best-practice community engagement and benefit-sharing guidelines in 2022 as mandatory requirements to be met by industry and infrastructure developers seeking planning approvals – building on existing guidance developed by the Victorian Government, Clean Energy Council and RE-Alliance ^{86 87 88}
- ensure that economic regulators of energy networks are required to make adequate allowance for benefitsharing in price paths for regulated network infrastructure, in 2022
- ensure that the clean energy opportunities for Gippsland are facilitated by water policy, water allocation and the planning of water infrastructure
- ensure the clean energy opportunities for Gippsland are incorporated into land use planning
- expand Victorian Government services in Gippsland by broadening Solar Victoria to be a Clean Energy Service Centre administering an array of government programs from increasing electric vehicle take-up, to increasing energy efficiency, to bringing clean energy jobs to the region

Thank you

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