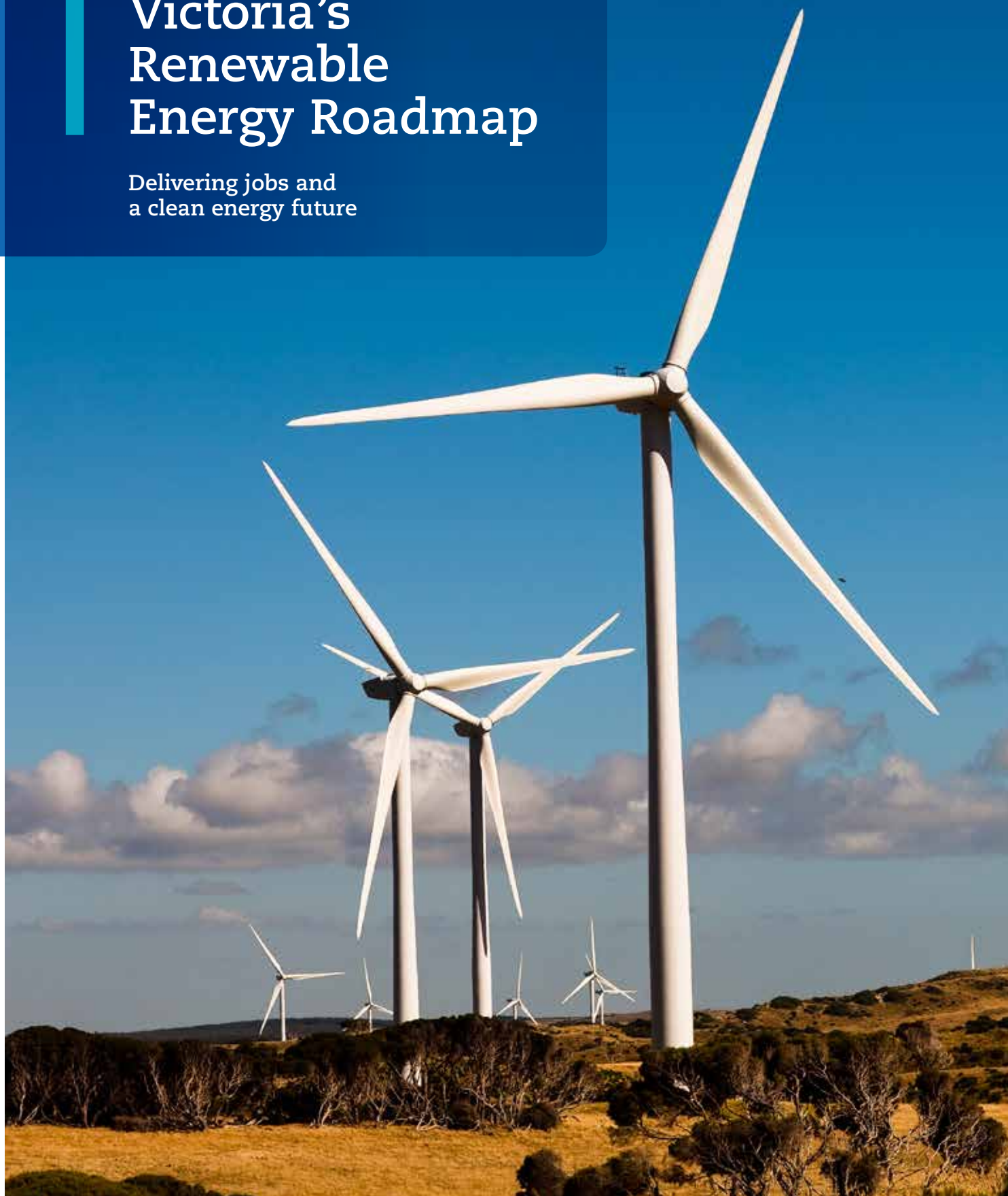


Victoria's Renewable Energy Roadmap

Delivering jobs and
a clean energy future



Authorised by the Victorian Government
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Contents

Minister's Foreword	2
1. A Roadmap for renewable energy in Victoria	4
2. Renewable energy in Victoria today	8
3. Transforming Victoria's generation stock towards renewable energy	11
4. Addressing barriers to distributed generation and storage	14
5. Encouraging household and community renewable generation	19
6. Government role in facilitating the uptake of renewable energy	22
7. Next steps	24

Minister's Foreword

Major economies around the world are transitioning their markets to deliver sustainable outcomes. They are repositioning industries and labour forces towards modes of production which are driven by renewable energy sources and new energy technology, to avoid the economic and environmental costs associated with non-renewable fuels.

Governments which act now to facilitate market transition will be better placed in the future to take advantage of the economic opportunities which arise from sustainable industries. Conversely, economies which don't transform will be exposed when the rest of the world shifts away from non-renewable sources.

A critical element towards delivering a sustainable economy is to increase the supply of renewable energy generation in a market. Currently, Victoria only produces 12 per cent of its energy from sustainable sources.

The Andrews Labor Government recognises the importance of facilitating a sustainable energy market. Therefore, we consider it vital to establish a framework to further incentivise the growth of renewable energy in Victoria, to achieve sustainable jobs and environmental benefits.

To grow renewable energy in Victoria, the Labor Government is developing a Renewable Energy Action Plan. This Action Plan will set out a range of measures to help drive the utilisation of sustainable energy sources in Victoria. This will include establishing a renewable energy generation target and policies to assist communities to power their neighbourhoods from renewable sources. Through these measures, the Labor Government will promote clean energy and deliver jobs.

The Action Plan is being developed in consultation with the Victorian community.

This Roadmap informs our consultation. It will:

- identify policy and regulatory barriers which are stifling renewable energy development at a state level;
- provide information and facilitation services to support renewable energy projects; and
- investigate options for Victoria to take action independently where Federal policy is failing, and complementary actions to attract investment and jobs for Victoria.

The Roadmap complements work already undertaken by the Labor Government to open up Victoria to additional investment in renewable energy. We have promoted wind energy, by reducing the required consent distance from two kilometres to one kilometre from a dwelling, and returned responsibility for wind farm planning approvals from local councils to the Minister for Planning. We have also awarded funding to two pioneering community energy projects, at Newstead and at Woodend, to develop projects which provide clean energy to their local communities.

Alongside this work, the Government is developing an Energy Efficiency and Productivity Strategy, and a New Energy Technologies Strategy. The *Climate Change Act* is under review and we are investigating the benefits of introducing a state greenhouse gas emissions reduction target.

I look forward to working in partnership with all Victorians to achieve a sustainable energy future.



A stylized, handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke.

Hon Lily D'Ambrosio MLA

Minister for Energy
and Resources



1. A Roadmap for renewable energy in Victoria

Victorian Government objective: Accelerating development of renewable energy generation in Victoria to reduce emissions, create jobs, and put downward pressure on energy prices

1.1. Victoria's energy sector challenge

The energy sector is a vital element of any economy. Energy is an important input into business operations and an essential service for households. Therefore, energy costs are a significant factor in the cost of living and doing business. The development of energy resources also provides economic development opportunities and can itself be an important creator of wealth in an economy.

Victoria has traditionally relied on brown coal from the Latrobe Valley and oil and gas from the Bass Strait to power the state. This has provided Victoria with a comparative advantage as a place to invest in operations such as manufacturing, and has provided the Victorian economy with value from the utilisation of our natural resources.

This traditional operating environment is now rapidly changing. Electricity prices have risen substantially in recent years, partly driven by changing demand patterns increasing peak electricity demand.

The integration of Australian gas production with the global economy is set to significantly influence gas prices in coming years. New technologies such as solar PV, smart appliances and digital meters, and emerging storage technology, are changing the way customers use and produce energy and engage in the energy market. There is also a growing understanding that we need to move to a more environmentally sustainable way of producing our energy. Policy frameworks associated with climate change issues are affecting, and will continue to affect, developments in the energy sector.

The Victorian Government recognises these challenges. The Victorian energy sector is well placed to respond – Victoria has a dynamic and competitive energy industry in which participants have the flexibility and commercial imperative to respond to emerging market trends, and it is well endowed with the energy resources of the future. However, the sector needs government policy leadership to reach its full potential in this new environment.

The Government's policy priorities in renewable energy, energy efficiency, new energy technology and consumer protection provide important components of the policy framework for the energy sector to address these challenges.

Our traditional energy operating environment is now rapidly changing. The Victorian energy sector is well placed to respond.

1.2. Shifting Victoria's economy to a low-emissions future

Climate change is one of the most critical issues facing our state. All national, state and local governments need to play a role in re-orienting the global economy to achieve emissions reductions equal to what is required to mitigate against climate change. Those jurisdictions making early investments will realise economic benefits sooner, and avoid potentially more significant changes and costs into the future. They will be better positioned to be competitive in the international marketplace, and to take advantage of the economic opportunities that such transformation presents.

The Victorian Government is adopting a multi-faceted approach to facilitate the creation of clean energy jobs and transition Victoria's energy industry towards a low carbon future. The approach includes:

1. Accelerating deployment of renewable energy generation in Victoria;
2. Initiating state actions to drive down carbon emissions across all industry sectors, supported by an independent review of the *Climate Change Act 2010* and investigation of a state emissions reduction target;
3. Driving the state's transition to an energy efficient and productive economy; and
4. Developing a New Energy Technologies Strategy.

1.3. Re-establishing Victoria as a leader in renewable energy

The Victorian Government aspires to re-establish the state as a global leader in renewable energy development, and to be seen internationally as an example of best practice in supporting renewable energy.

In recent years, Victoria has lost its reputation as a national and global leader in support of renewable energy.

This Roadmap, and the priorities and initiatives contained within it, represent the first step in re-establishing Victoria's position as the leading state in Australia for renewable energy investment.

Driving jobs and investment

The Victorian Government is committed to sustainable development and to decreasing Victoria's reliance on non-renewable sources of energy. This commitment is important in addressing the environmental consequences of climate change and is also vital for the future of job creation and economic development in Victoria. Transforming our energy generation sector towards renewable energy provides important opportunities for new businesses and jobs in Victoria.

Internationally, the renewable energy sector is an area of dynamic growth and activity. Bloomberg New Energy Finance has estimated that the Australian renewable energy industry will attract around \$14.7 billion of investment by 2020.

This Roadmap is one of the elements underpinning the Government's economic agenda and its commitment to grow jobs through the *Back to Work Jobs Plan*. The Plan has identified the new energy technology sector as one of six priority industry sectors where significant economic growth can be achieved through the value chain. A *Future Industries Fund* has been established to help grow Victoria's comparative advantages and to support initiatives arising from the strategies developed. A *New Energy Jobs Fund* of \$20 million has been established as part of this broader initiative.

Supporting consumers, businesses and communities to invest in renewable energy

Renewable energy has an important role to play in supporting consumers to take action to reduce their energy bills.

Recent years have seen a significant take-up of solar PV systems at a household, small business and commercial level, with over 245,000 systems now installed across the state with a total generation capacity over 700 megawatts (MW). Consumers and businesses generating their own power locally have benefited with bill reductions from feed-in tariffs for energy exports to the grid, as well as avoiding paying for grid-supplied power during times their systems are generating power. The broader market has also benefited, with distributed generation dampening demand periods during the day.

The Government supports the growth of distributed generation systems at a local level. In particular, this Roadmap includes initiatives to make it easier for consumers previously unable to invest in solar PV – such as rental tenants and low income households who cannot afford the upfront cost of PV systems – to share in the benefits which local generation provides.

In addition, the Government will actively support the development of pioneering community renewable energy projects, where the benefits of distributed generation are shared at a community level. Two such projects, at Newstead and Woodend, have already been awarded funding in 2015 to develop community-led solar generation projects.

Action required at a state level

Growing renewable energy requires action from all levels of government.

The Victorian Government recognises the importance of its role to achieve growth in renewable energy.

While policy measures overseen by the Federal Government are important, such as the Federal Renewable Energy Target (RET), the Clean Energy Finance Corporation (CEFC) and the Australian Renewable Energy Agency (ARENA); state and territory governments need to establish tangible programs and mechanisms to ensure a broad suite of effective outcomes are achieved.

Therefore, the Victorian Government will play a critical role in promoting the growth of renewable energy in this state by:

- restoring Victoria's position as a supportive environment to do business in the renewable energy and new energy technology sector;
- reforming Victorian policies and regulation, including wind farm planning rules and rules affecting distributed generation;
- supporting large-scale renewable energy projects through multiple funding sources, including leveraging off state and national funding streams, such as ARENA;
- supporting community efforts to develop renewable energy projects; and
- introducing Victorian programs, facilitating inter-jurisdictional cooperation, and advocating to the Federal Government on renewable energy policy.

1.4. A Roadmap for renewable energy in Victoria

This Roadmap defines the actions the Victorian Government will take to accelerate renewable energy generation and promote sustainable jobs in Victoria. These objectives require concerted action by the Victorian Government across four priority areas:

1. Transformation in the wholesale electricity market toward renewable energy.
2. Reducing barriers to continued development of distributed generation and energy storage.
3. Encouraging household and community development of renewable generation, products and services.
4. Government support for renewable energy development, with a focus on job creation in Victoria.

The steps outlined in this Roadmap range from actions we are implementing right now, to important issues that will require extensive policy development and consultation.

The process for decision making on many issues will occur during 2015, with outcomes identified in the Renewable Energy Action Plan (Action Plan). The actions outlined in the Action Plan will be effective and practical and take into account the costs and benefits of action for the Government, industry and the Victorian community.

1.5. How success will be measured

The Victorian Government believes targets are critical for ensuring growth in renewable energy generation. Therefore, as part of the Action Plan, the Victorian Government will establish two targets for renewable energy generation in this state, including for 2020 and 2025. The Government aims to produce at least 20 per cent of the state's electricity generation from renewable sources by 2020. The Government is asking for community feedback on what the 2020 and 2025 targets should be, as part of broad public consultation on this Roadmap.

Increasing deployment in renewable energy is not an end in itself. Growing the share of renewable energy in Victoria is a key part of the Government's strategy to create jobs, particularly in rural and regional Victoria and with a focus on addressing the reduction in employment occurring in areas such as automotive manufacturing. Renewable energy projects offer opportunities for job creation in a range of fields and skill types. A steady pipeline of projects will also encourage greater development of local supply chains in components and professional services.

So while our targets will be one way to measure our success, securing existing jobs and growing employment overall in the renewable energy industry is a key aim.

Additionally, renewable energy policies implemented through the Roadmap will help to contribute to the Government's commitment to consider an achievable emissions reductions target for Victoria. The Government is currently reviewing legislation and programs that will inform the emissions reductions target.

1.6. Public consultation

While the Victorian Government is in the process of implementing many of the initiatives outlined in this Roadmap, you are invited to provide feedback on the Roadmap and the direction proposed for Victorian renewable energy policy.

You will be able to provide your input through Government hosted public forums and via written submission. Further information on the process and how to get involved is available at www.energyandresources.vic.gov.au.

The Government is interested in feedback on:

- the objectives and priorities of renewable energy policy outlined in this Roadmap;
- the actions and initiatives identified as priorities; and
- whether there are other actions that should be considered in supporting renewable energy development in Victoria.

The feedback obtained from the public consultation process will be considered in the development of the Action Plan.

You are invited to provide feedback on the Roadmap and the direction proposed for Victorian renewable energy policy.

2. Renewable energy in Victoria today

Renewable energy in Victoria has increased substantially in recent years, growing from 6 per cent in 2009 to 12 per cent in 2014. Over that period, Victoria's total installed renewable generation capacity grew by 50 per cent, rising from 2817 MW to 4221 MW.

Renewable energy growth has been driven by a number of factors, including the expansion of the Federal Government's RET in 2011, and initiatives adopted by the previous state Labor governments (see Figure 1). It is also attributable to the importance the community assigns to renewable energy. In a 2014 survey conducted by JWS Research for the Climate Institute, 70 per cent of respondents supported a renewable energy target of 20 per cent or more by 2020.

Falling technology costs and easier installation processes, particularly for solar PV, are also assisting Victorians to transition to cleaner energy sources. At the end of 2014, there were 246,597 small-scale solar PV units installed in Victoria with a combined generation capacity of over 720 MW.

In addition to rooftop solar, Victoria has established, high-quality renewable resources for large-scale production of power. This includes wind, hydro, solar and bioenergy.

Victoria's wind resource is one of our competitive advantages. The relative maturity and low cost of wind turbine technology has also led to wind farms being the dominant source of large-scale generation technology growth in Victoria, with over 1,000 MW of generation capacity installed (see Table 1).

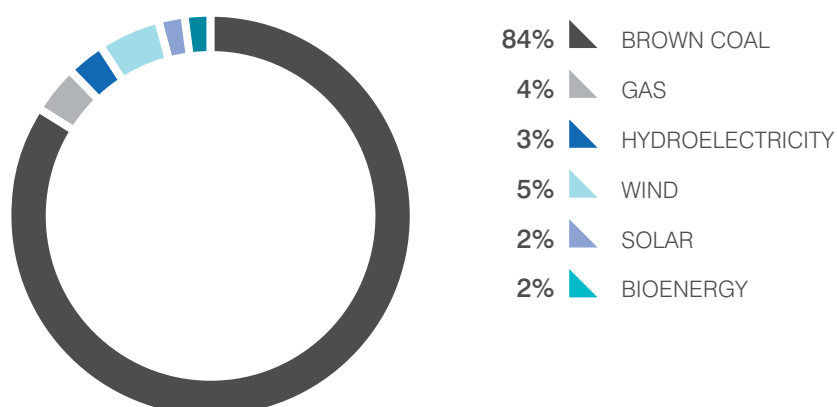
While Victoria has good resources for hydroelectricity, these have already been largely developed prior to the RET, meaning recent growth has been low. A smaller number of large-scale solar farms (both PV and concentrating PV) have also been commissioned in recent years.

Victoria has a comparative advantage in bioenergy as it has a diverse range of secure and stable supplies of biomass feedstock available which are capable of being readily utilised for energy production. A range of bioenergy generators currently operate in Victoria, using fuel sources such as agriculture, urban and industrial waste. These generators range from micro-scale at locations such as small farms to large-scale at industrial facilities.

Other sources of renewable energy, such as wave, are the subject of Victorian pilot or demonstration projects that are either completed or in development.

Victoria's manufacturing sector also contributes to the renewable energy supply chain through the manufacture of products such as:

- solar hot water systems;
- wind towers; and
- components for solar PV projects and small-scale wind turbines.

FIGURE 1: Electricity generation mix in Victoria, 2014**TABLE 1:** Main non-hydro renewable energy plants in Victoria, 2014

NAME	CAPACITY (MW)	TECHNOLOGY
Macarthur wind farm	420	Wind
Waubra wind farm	192	Wind
Mt Mercer wind farm	131.2	Wind
Oaklands Hill wind farm	67.2	Wind
Cape Bridgewater wind farm	58	Wind
Maryvale paper mill	54.5	Bioenergy *
Challicum Hills wind farm	52.5	Wind
Cape Nelson South wind farm	44	Wind
Yambuk wind farm	30	Wind
Toora wind farm	21	Wind
Mortons Lane wind farm	19.5	Wind
Codrington wind farm	18.2	Wind
Clayton landfill	12	Bioenergy **
Wonthaggi wind farm	12	Wind
Werribee sewage treatment plant	10	Bioenergy ***
Carrum Downs sewage treatment plant	9.1	Bioenergy ***
Hallam Road renewable energy facility	8.9	Bioenergy **
Wollert renewable energy facility	6.7	Bioenergy **
Broadmeadows landfill	6.2	Bioenergy **
Berwick landfill	4.6	Bioenergy **
Springvale landfill	4.2	Bioenergy **
Leonards Hill wind farm	4.1	Wind
Mildura Solar Park 1 – Koorlong	3.2	Solar
Coolaroo clean energy plant	3	Bioenergy ****
Brooklyn landfill	2.8	Bioenergy **
Wyndham renewable energy facility	1.9	Bioenergy **
Mildura solar power station – Carwarp	1.5	Solar

Note: Bioenergy

* = pulpwood waste; ** = landfill methane; *** = sewage methane; **** = other bioenergy.

According to the Clean Energy Council, there are over 4000 people employed in the Victorian renewable energy industry. These jobs are driven by the small-scale solar PV and large-scale wind industries. However, the renewable energy workforce also extends to the solar hot water, marine energy and battery storage industries.

The potential pipeline for renewable energy projects in Victoria is strong. There are currently 18 wind farms across the state, with a combined generation capacity of approximately 2,500 MW, with planning approval that could quickly commence. The Government will act to improve the investment environment, in order to realise this potential.



3. Transforming Victoria's generation stock towards renewable energy

Priority Area – Transforming the generation stock in the wholesale electricity market towards renewable energy

The investment environment for renewable energy projects in the National Electricity Market (NEM) is currently uncertain, largely due to policy failure at the Federal level.

The policy framework of a strong national RET was established to provide commercial incentives for investment in new renewable generation.

In the past few years we have seen the erosion of this policy framework for achieving renewable energy transformation across the NEM, including reducing the RET from 41,000 gigawatt hours to 33,000 gigawatt hours by 2020.

The result has been an inability for large-scale renewable energy proponents to finance renewable investment and no incentive for emissions-intensive generation, which is faced with barriers to market exit, to shut down.

This situation, coupled with decreased demand for electricity, has resulted in large overcapacity in the NEM, further reducing the commerciality of investment in renewable energy, and entrenching the current generation mix.

Bloomberg New Energy Finance recently reported that renewable energy investment in Australia has fallen 90 per cent in the 12 months to March 2015. Annual investment has fallen from \$2 billion in 2013 to \$238 million in 2014, and just \$6.6 million in the first quarter of 2015.

Action is needed to advocate for strong policy leadership at the Federal level, and to implement appropriate policies in Victoria to change the mix of generation in the wholesale electricity market.

3.1. Advocate for strong Federal Government policy on renewable energy

The Victorian Government will advocate for strong, forward-looking outcomes to Federal renewable energy policies. The current Federal Government's review and reduction of the RET has led to a major decline in investment in renewable energy since 2013.

In 2015, the Victorian Government has, and will continue to, advocate to the Federal Government for:

- an overall RET outcome which facilitates job growth and provides certainty for the renewable energy industry; and
- other national policy and regulatory processes which drive the renewable energy sector.

3.2. Reform of Victoria's wind farm planning laws

The Victorian Government has recently reformed Victoria's wind farm planning laws to encourage greater investment in Victoria's strong wind resource. Planning controls have been changed to reduce the distance from two kilometres to within one kilometre in which a landowner's consent is required to make an application for a turbine nearby a dwelling, and primary responsibility for wind farm planning approvals has been returned to the Minister for Planning.

We have also committed to assess how to address community-owned wind generation facilities in the planning system. A community discussion paper will be released later in 2015 for consultation.

The Victorian Government will also examine whether there are other anomalies in relevant regulations or guidelines. Also the transmission or distribution of power lines to connect the wind farm to the electricity network can now be considered holistically as part of the wind farm planning proposal.

3.3. Using Government energy purchasing to support renewables

The Victorian Government is a large user of electricity. Therefore, the Victorian Government will use its electricity purchasing power to promote investment and jobs growth in the renewable energy industry.



3.4. Review policy options to transition generation stock in Victoria

The Victorian Government will undertake a review of suitable policy options to transition Victoria's wholesale generation stock to renewable energy (such as large-scale solar and wind energy).

Suitable policies developed by this work may be advocated for at the Federal level, be the subject of potential inter-governmental cooperation across states and territories, or be directly implemented by Victoria.

Policy options to support renewables will focus on supporting the Government's targets for renewable energy generation. These measures will be informed by other policy settings, including the operation of RET schemes.

The actions outlined through this review will be effective and practical and take into account the costs and benefits of action for the Government, industry and the Victorian community.

The Victorian Government has recently reformed Victoria's wind farm planning laws to encourage greater investment in Victoria's strong wind resources.

4. Addressing barriers to distributed generation and storage

Priority Area – Addressing barriers to distributed generation and energy storage

The development of renewable energy generation is no longer just about what happens at a large-scale in the NEM. Strategies to encourage the transition to renewable energy need to increasingly focus on the policy and regulatory frameworks governing distributed generation and energy storage.

Distributed generation refers to electricity which is generated locally and fed back into the electricity distribution network. These technologies range from household solar PV, right up to community wind farms and commercial-scale solar and bioenergy facilities.

Distributed generation has expanded greatly in recent years, particularly as the cost of solar PV technology (the most common form of distributed generation) has fallen.

While distributed generation has increased significantly in Victoria, there are still a number of issues affecting its development. The process for connection of distributed generation to the grid is not transparent, consistent or customer-friendly.

Furthermore, the current regulatory framework prevents the development of innovative distributed generation projects and business models, including new innovative models which enable the benefits of distributed generation to be shared with rental tenants and low-income households.

Added to this, is the potential for widespread uptake of energy storage technologies within the next few years. Storage technologies will provide customers with distributed generation the flexibility as to when their power is stored and used, with potentially significant benefits in reducing reliance on the grid and therefore reducing overall energy costs for those customers. Energy storage is an emerging market, with significant potential for growth and creation of local business opportunities and skilled jobs.

There are also emerging market opportunities for the use of heating/cooling pumps and geothermal heat source applications. Further, new business models, such as virtual net metering, should be explored.

A number of actions are required to address these issues to ensure the potential for investment in distributed generation and energy storage is met.

Energy storage is an emerging market, with significant potential for growth and creation of local business opportunities and skilled jobs.



4.1. Improving connection processes for distributed generation

Initiative 1 – Improved process for distributed generation connections

The existing Victorian arrangements for connecting distributed generation to the network are overly complex and lack transparency. To address this issue, the Government is considering options to improve the connection process for distributed generators.

The objective of these changes will be to streamline connection processes by providing greater clarity of connection requirements, clearer timeframes for connection, and improved processes for dispute resolution.

Initiative 2 – Investigate technical grid constraints impacting on distributed generation

Increasingly, customers seeking to connect distributed generation are unable to do so due to technical constraints on the grid at the point of connection. This impediment appears to be most common in rural areas, where connection of distributed generation may exceed technical limits of the local network.

Customers seeking to connect distributed generation in constrained areas are increasingly being required to either:

- reduce the size of their proposed distributed generation system;
- pay for a local network upgrade to alleviate the constraint; or
- use special equipment at point of connection (such as smart inverters) to limit the export of distributed generators at certain times.

The Government has commenced a review to investigate the technical constraints which limit the connection of small to medium-scale distributed generation to the Victorian network and identify possible technical solutions to address the issues.

4.2. Removing barriers to innovative projects and business models

Initiative 1 – Address barriers to precinct-scale distributed generation

Precinct-scale distributed generation refers to projects that intend to sell/ supply electricity (and in some cases heating and cooling) across multiple land title boundaries or public land.

These projects tend to involve the generation of electricity using renewable and low-emission technologies, such as solar PV, co-generation or tri-generation facilities. On-selling electricity generated at one premises to another increases the financial viability of these renewable and low-emission distributed generation projects.

There are a number of potential barriers specifically affecting precinct-scale distributed generation, namely:

- an inability to gain easy connection to the electricity network;
- issues with obtaining planning permits to construct local infrastructure networks;
- difficulty in on-selling the electricity due to a complex electricity licencing framework; and
- an inability to provide district heating and cooling services to customers.

The Government will investigate the extent to which these and other barriers are impeding investment in precinct-scale distributed generation and consider regulatory reform options to address any material barriers identified.

The Victorian Government will also consider appropriate mechanisms to support innovative financing models for communities and proponents seeking funds to establish viable renewable energy projects. As part of this work program, we will also establish a framework which can assist these proponents to leverage off existing funding streams.

Initiative 2 – Enable solar purchase agreements in Victoria

New solar business models are being developed that enable customers who may not otherwise be in a position to invest in solar panels the ability to access the benefits of distributed generation. These customers include businesses, renters or low-income households.

One of these business models is a solar power purchase agreement (PPA), which enables customers to access solar panels through a leasing arrangement with the solar PV provider, allowing these customers to access the benefits of distributed generation without the upfront capital cost.

The authorising framework and availability of exemptions from retail licensing requirements for emerging innovative business models (such as solar PPAs) in Victoria is currently unclear.

To address this issue, the Government is reviewing the current process for gaining an exemption from retail licensing, to ensure that new innovative business models are not being unfairly restricted. The review will ensure that Victoria remains an attractive place to do business for innovative energy business models and that Victorian consumers are appropriately protected.

Initiative 3 – Investigating new distributed generation business models

The Victorian Government will investigate the viability of models employed at a local and state level, both around Australia and internationally, in supporting innovative purchasing and leasing arrangements for distributed generation.

This includes consideration of rates-based schemes employed by local government, other financing and contracting models (such as South Australia's three-way contracting model to support public housing tenants investing in solar PV), and innovative ideas such as a 'roof register' matching potential solar investors with parties with available roof space to accommodate PV systems on behalf of investors. The investigation will also look at overcoming barriers to use of solar on strata title buildings (such as apartment blocks).

Consideration will also be given to emerging new markets, such as heating markets, and actions the Government can undertake to support their development.

Initiative 4 – Legislate to allow for Environmental Upgrade Agreements

Environmental Upgrade Agreements (EUAs) are a council-based financing mechanism that allows owners of existing non-residential buildings to undertake environmental upgrades, including energy efficiency and renewable energy retrofits, with repayments recovered through local council rates. The City of Melbourne is currently the only Victorian council that can enact EUAs.

The Victorian Government will enact legislative changes to ensure that all local governments can provide EUAs. This will potentially facilitate millions of dollars in investment in commercial building energy upgrades across the state.

4.3. Review of market status and regulatory settings for energy storage

An increased uptake of energy storage technologies has the potential to significantly benefit energy consumers, particularly those with distributed generation systems such as solar PV. Households and businesses with distributed generation and storage devices will be able to choose when to store and when to utilise the power generated onsite in order to maximise value and thereby reduce overall energy costs.

Storage technologies should therefore be seen as a significant enabling technology to improve the commerciality and attractiveness of distributed renewable energy generation and to enable the deployment of electric vehicles. Such technology also provides significant business opportunities for the Victorian economy, from the potential manufacture and sale of storage technology to the development of businesses to provide services to customers enabled by energy storage – such as energy management services.

However, an industry requires a transparent and comprehensive regulatory framework to provide the certainty and confidence to develop effectively. There is currently a gap in both the national and Victorian policy and regulatory frameworks in terms of how storage technologies should be treated. In particular, there is currently no energy storage specific framework in place to control the technical and safety components of either the storage technologies or how (and by whom) they are installed, maintained and operated.

The Government will commence a review to assess the current state of the energy storage market in Victoria and the areas where policy and regulatory reforms may be warranted. This review will be a critical first step to facilitate the efficient and safe uptake of energy storage technology in Victoria.



5. Encouraging household and community renewable generation

Priority Area – Encouraging household and community development of renewable generation, products and services

Take-up of distributed generation at the household and SME level (particularly solar PV) continues to be very strong in Victoria; with an estimated 2,500 new solar PV systems installed each month. The Government intends to support the continued growth of distributed generation in Victoria by:

- ensuring distributed generators are receiving fair value for electricity produced;
- ensuring distributed generation customers are treated fairly by solar PV companies and energy retailers;
- supporting innovative community driven approaches to increasing local jobs and investment in renewable energy; and
- considering mechanisms to assist low-income households to utilise cleaner energy products, such as solar hot water.

At a community level, public support for renewable energy is strong and many communities want to develop projects of their own. Such projects can provide a wide range of benefits for communities, from direct financial returns from investment in renewable energy, to broader benefits from supporting community sustainability action and encouraging eco-tourism.

A range of new business models have been developed by communities, which offer opportunities for the Government to accelerate the growth of jobs and investment in renewable energy.

Communities are working together to drive down the up-front cost of clean energy technologies through bulk purchase campaigns for solar PV and solar hot water, run by local councils or community groups.

Victoria is already home to an innovative, community funded, worker-owned cooperative that is manufacturing and installing solar hot water systems. Further, we are now supporting local communities, such as Newstead and Woodend, to integrate renewable energy into their energy needs.

In New South Wales, there are plans for Australia's first community owned electricity retailer, which would have a focus on supporting renewable energy projects.

However, communities often lack knowledge about how to go about project development and are not provided with sufficient support to ensure success.

The Government will establish programs and processes to assist communities to develop their projects.

5.1. Provide support for pioneering community energy projects

The Government will actively support the development of community renewable energy projects.

The Government has already committed to provide clean energy grants to two pioneering community energy projects. Newstead 2021, a community group in central Victoria, has been awarded \$200,000 in funding to develop a master plan for transitioning the town of Newstead to 100 per cent renewable energy. The Macedon Ranges Sustainability Group has been awarded \$100,000 to build a solar farm at the Black Forest Timber Mill in Woodend.

Lessons learned from the delivery of these projects will be shared with other community groups so that the full benefits of this funding are captured.

To provide support for communities who are interested in developing their own projects, the Victorian Government will prepare a how-to guide for developing community renewable energy projects in Victoria. It will do this by:

- engaging stakeholders about what information community energy projects need to succeed in Victoria;
- creating a Community-Owned Renewable Energy How-to Guide for current Victorian conditions; publishing the guide electronically, and promoting it via stakeholders and at relevant industry events; and
- providing financial support through the New Energy Jobs Fund.

5.2. Ensure fair compensation for distributed generation

Distributed generation can provide important benefits to the energy supply chain. Where distributed generation is used in a constrained area of the network, it has the potential to defer the need for costly network upgrades. This potential benefit of distributed generation is often referred to as network value. It is important that any such network value provided by distributed generation is sufficiently captured and remunerated.

Victoria also currently has a number of regulated feed-in tariffs (FiTs) which provide households, businesses and community organisations producing their own renewable energy with a financial return for the excess power they feed into the grid.

The current tariff rates available to new solar customers are based on the wholesale price of electricity, broadly reflecting the price at which electricity retailers purchase power from generators through the NEM.

To ensure distributed generation customers are being fairly compensated for the value their systems provide, the Government will ask the Essential Services Commission (ESC) to undertake an inquiry into the true value of distributed generation to Victorian consumers. This work will review whether current policy and regulatory frameworks in Victoria adequately remunerate distributed generation for the full value it provides, including whether the current objectives of FiT policy in Victoria are appropriate.

Public support for renewable energy is strong and many communities want to develop projects of their own. The Government will actively support this.



5.3. Ensure fair treatment of distributed generation customers

Initiative 1 – Prevent unfair discrimination of solar customers by energy retailers

The Government is aware that some energy retailers are setting higher fixed supply charges for solar customers as compared to non-solar customers.

To address this issue, the Government will undertake action to ensure solar customers are not discriminated against by energy retailers.

This will occur as part of the strengthening of energy consumer protection arrangements currently being progressed by the Victorian Government through legislative amendments.

Initiative 2 – Promote solar PV retailer code of conduct

The Clean Energy Council (CEC) has developed a Solar PV Retailer Code of Conduct (the Code) to support good practice in the solar PV retail industry. The Code is a voluntary code, authorised by the Australian Competition and Consumer Commission. Signatories to the Code have been subjected to a rigorous screening process, are required to apply for renewal annually, and may be audited for compliance.

The Code imposes additional requirements on approved solar PV retailers, such as extended whole-of-system warranties and regulated sales activities. The procuring bodies also benefit significantly by having a robust standards program to rely upon.

The Victorian Government will ensure any Government programs that support solar PV will require the solar panel provider to be a signatory to the Code. This will in turn protect the integrity of the program and the interaction with the consumer.

6. Government role in facilitating the uptake of renewable energy

Priority Area – Government supporting renewable energy development, with a focus on job creation in Victoria

In addition to ensuring policy and regulatory frameworks are supporting investment in renewable energy, Government has an important role in funding support, information provision, project facilitation, and promotion of Victoria's renewable energy industry.

It is important that support and information is provided to renewable energy proponents throughout the project development process. The Government will provide comprehensive information resources and facilitation support to guide renewable energy projects to completion and take action to promote Victoria's renewable energy industry.

6.1. Promoting new energy jobs and technologies

The energy market is transforming rapidly. The traditional delivery model of electricity is being disrupted by new technologies and sources of supply. In our energy market, companies, businesses and families are starting to trial or adopt new approaches for producing and using energy, including combining solar panels with inverters and battery storage units.

The Victorian Government embraces this change. These technologies can drive greater efficiency and effectiveness in the market. They can enhance consumer welfare, by providing greater options for how Victorian businesses and households engage in the energy market. It can also deliver reduced greenhouse gas emissions, by enabling renewable energy sources to be utilised more effectively.

Policies which facilitate new energy technologies into the Victorian energy market can deliver jobs growth for the state. The Victorian Government recognises this opportunity, and will develop a New Energy Technologies Strategy to support the development of this sector in Victoria. This strategy will work alongside the New Energy Jobs Fund.

The New Energy Jobs Fund is a \$20 million funding package, focused on providing targeted financial support to businesses, research institutes or communities to facilitate their development or uptake of new energy technology. Eligibility for funding and processes for applying will be determined this year in consultation with key industry and community representatives.

The \$20 million New Energy Jobs Fund will support organisations and communities to take up new energy technologies.

6.2. Providing information to support renewable energy uptake

Initiative 1 – Develop industry development plans

The Government will develop industry development plans to support the growth of sectors such as bioenergy and marine energy. The objectives of these plans are to:

- assess the potential future share of these, and other, new energy technologies in the energy mix;
- identify key barriers to the development of these new energy sectors; and
- set out a framework and actions for accelerating the uptake of the identified technologies.

Initiative 2 – Update renewable energy project and resource maps

Updating Victoria's renewable energy project and resource mapping will aid the promotion of Victoria as a destination for renewable energy investment and better equip renewable energy project developers to undertake project planning activities.

The Victorian Government will work with national agencies to ensure that existing renewable energy project and resource mapping services are updated to provide information on large-scale wind and solar projects and resources. The Government is also participating in the Australian Biomass for Bioenergy Assessment project, funded by ARENA. The project aims to catalyse investment in the renewable energy sector by providing detailed information about biomass resources across Australia. This will assist in project development and decision making for new bioenergy projects.

6.3. Renewable energy project facilitation

Initiative 1 – Reinstatement of co-ordinated renewable energy project facilitation

The Victorian Government will reinstate its role to facilitate renewable energy projects in the state. This will involve the establishment of a whole-of-Victorian-Government facilitation service, including:

- joined-up arrangements for access to preliminary agency advice;
- agreed time schedules for application and approval processes;
- timely guidance on project issues, assessment requirements and draft responses;
- advice on stakeholder consultation; and
- assistance in addressing infrastructure connection requirements.

Initiative 2 – Investigate new models for renewable energy project facilitation

In addition to taking immediate action to enhance renewable energy project facilitation using the Government's existing support structures, the Victorian Government will investigate new measures to facilitate renewable energy projects in Victoria.

One possible measure is the appointment of an independent Renewable Energy Advocate for Victoria, as exists in New South Wales. The Renewable Energy Advocate would promote Victoria as a destination for renewable energy projects and liaise with project developers, financiers and Government to aid the development of renewable energy projects in Victoria.

7. Next steps

Victoria's Renewable Energy Roadmap commences a community discussion on the future of renewable energy in this state, with a focus on the economic benefits which may be derived from this Roadmap, such as jobs growth. Through this document, the Victorian Government has identified projects which it has commenced work on, and foreshadowed potential outputs of the Action Plan, including renewable energy generation targets.

Over the next few months, the Government invites you to take part in the public consultation process on this Roadmap. Consultation will help inform the Action Plan to ensure it delivers tangible and effective short, medium and long term outcomes for renewable energy in Victoria.

You will be able to provide your input through Government-hosted public forums and via written submission. Further information on the process and how to get involved is available at www.energyandresources.vic.gov.au.



