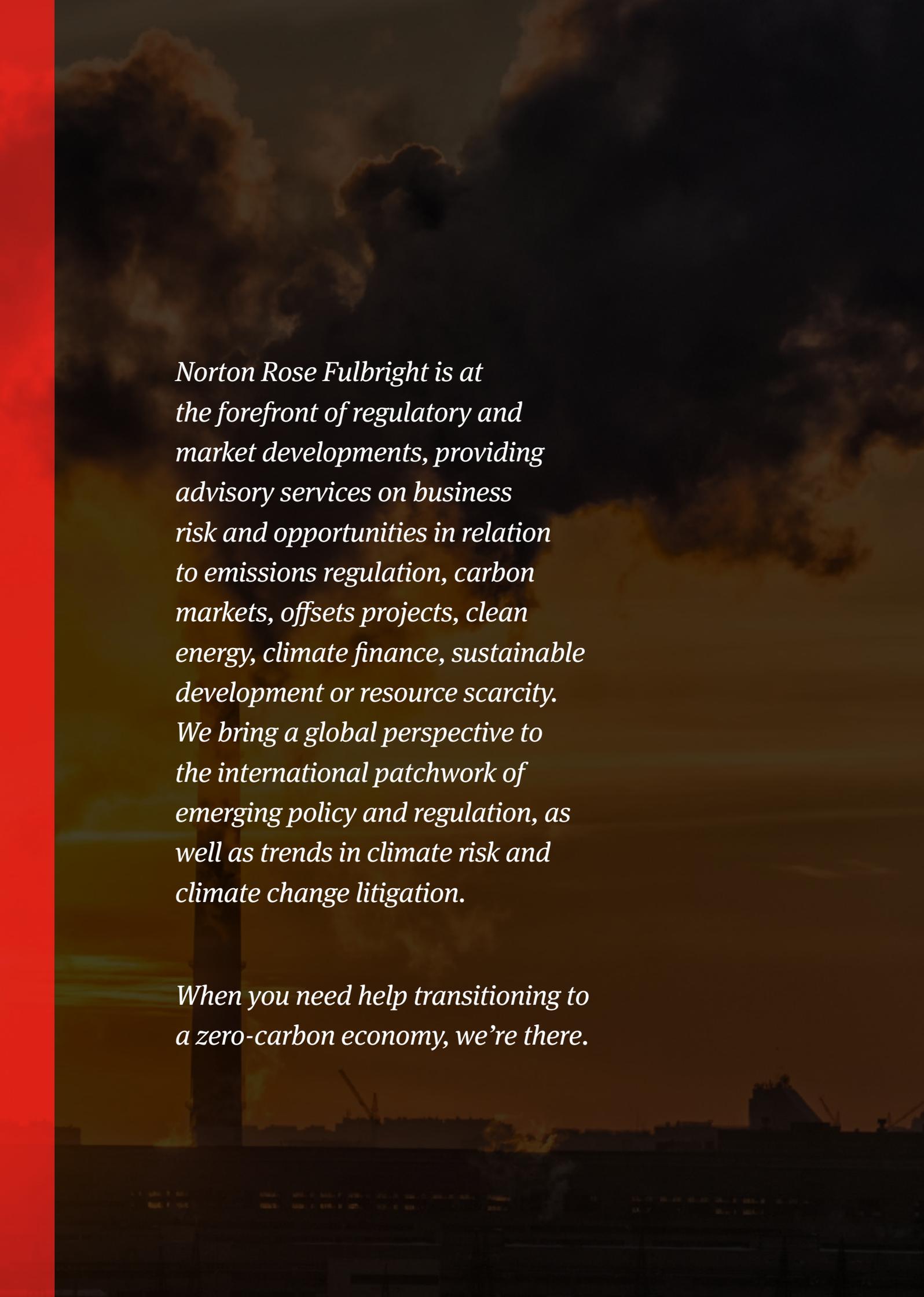


Australia's climate policy

A de facto net zero target | August 2020





Norton Rose Fulbright is at the forefront of regulatory and market developments, providing advisory services on business risk and opportunities in relation to emissions regulation, carbon markets, offsets projects, clean energy, climate finance, sustainable development or resource scarcity. We bring a global perspective to the international patchwork of emerging policy and regulation, as well as trends in climate risk and climate change litigation.

When you need help transitioning to a zero-carbon economy, we're there.

Contents

Introduction	04
State and Territory snapshot	05
Australian Capital Territory	06
New South Wales	08
Northern Territory	12
Queensland	16
South Australia	18
Tasmania	21
Victoria	23
Western Australia	26
Global Resources	29
Contacts	30

Introduction

This year, Australia experienced horrific bushfires, described as the most “evident and deeply traumatic experience of the huge impacts of climate change” by Christiana Figueres, the Former Executive Secretary of The United Nations Framework Convention On Climate Change.¹ Also this year, the 2015 Paris Agreement, which Ms Figueres helped to deliver, invites governments to set and communicate their long-term 2050 goals, and shorter term targets up to 2030 to decarbonise their economies.

Since the previous [edition](#) of this publication produced in January 2017, all states and territories have been steadily progressing their own policies and taking significant actions to reduce emissions, support renewable energy development, and increase energy efficiency. In the absence of a long-term target adopted by the Federal Government, on 9 July 2020, Australia achieved a de facto national target of net-zero emissions by 2050 when the Northern Territory Government released its Climate Change Response².

The Federal Government's current target under the Paris Agreement is to reduce emissions by 26-28 per cent on 2005 levels by 2030. This builds on Australia's target set under previous international conventions to reduce emissions to 5 per cent below 2000 levels by 2020. Based on the Federal Government's 2019 emissions projection report³, and with the existing policies in place at a Federal level, Australia is not expected to be able to meet the 2030 target without the use of Kyoto units carried over from previous commitment periods under the Kyoto Protocol (the predecessor to the Paris Agreement).

During this critical decade, meaningful actions and appropriate policy settings will be required to position the Australian economy for decarbonisation, consistent with the global trend. Several reports have recently been released to assist with taking meaningful actions by identifying investment and economic opportunities, including the Federal Government's '[Technology Investment Roadmap Discussion Paper](#)', the [King Review](#) and Beyond Zero Emissions' [The Million Jobs Plan](#). However, the private sector requires long-term policy certainty and direction to be able to deploy their capital with confidence for the large investments which will ultimately be required.

In March 2020, the Climate Change Authority released a report making 35 recommendations, directed primarily to the Federal Government, to assist with creating the policy settings necessary to meet our commitments under the Paris Agreement. Our update on that report can be found here [update](#).

As the business and financial community would attest to, having different regulatory and policy regimes across the jurisdictions in which they operate or invest is not desirable. In the absence of aligned climate change policies, we have prepared this second edition of our Climate Policy update to provide the private sector with:

- an insight into the current status of policy and legislative regimes across the States and Territories with respect to emissions reduction, renewable energy and energy efficiency; and
- an indication of the investment settings operating, or likely to develop, during the coming decade.

¹ Interview with the ABC Drum, 9 March 2020, <https://www.abc.net.au/news/2020-03-09/the-drum:-monday-9th-of-march/12040424?nw=0>.

² <http://newsroom.nt.gov.au/mediaRelease/33528>.

³ <https://publications.industry.gov.au/publications/climate-change/system/files/resources/4aa/australias-emissions-projections-2019-report.pdf>.

State and Territory snapshot

Emissions reductions target



Renewable energy targets



Australian Capital Territory



Emissions reduction

The Australian Capital Territory (ACT)'s emissions reduction targets are:

- A long term goal to achieve zero net emissions by 30 June 2045; and
- Interim targets to reduce emissions by:
 - 40% by 2020;
 - 50–60% by 2025;
 - 65–75% by 2030; and
 - 90–95% by 2040.

These are some of the most ambitious targets in Australia and are set under the [ACT Climate Change Strategy 2019-2025](#) and the Climate Change and Greenhouse Gas Reduction Act 2010 (ACT) (**CCGGR Act**). In addition to target setting, the objects of the CCGGR Act are to provide for monitoring and reporting on progress made to meet the targets, facilitate government action and encourage the private sector to take action to address climate change.

Released in 2019, the [ACT Climate Change Strategy 2019-2025](#) outlines the next stage of the ACT Government's climate change response and identifies actions to meet its emissions reduction targets and prepare for climate change. The key actions identified in the Strategy are focused on:

- Meeting the 2025 target;
- Building resilience to climate change impacts;
- Ensuring we don't 'lock in' future emissions; and
- Laying the foundations for achieving net zero emissions.

Renewable energy

In 2016, the ACT Government committed to two ambitious renewable energy targets:

- A target of 100 per cent renewable energy by 2020 – the highest incremental renewable energy target in Australia;
- The installation of 36MW of energy storage by 2020 – the first energy storage reverse auction in Australia.

The ACT Government has since met both of these targets. ACT is running on 100% renewable electricity, reducing the ACT's emissions by 40% below 1990 levels. The ACT is only the eighth major jurisdiction in the world to achieve this.⁴ The major initiatives the ACT has taken to achieve the ACT Government's renewable energy target include implementing:

- The micro-medium solar feed-in tariff scheme that operated between 2009 and 2011;
- The 40MW large-scale solar auction held in 2012 and 2013;
- The two 200MW wind auctions held in 2014 and 2015;
- The 1MW Community Solar Scheme that opened for proposals in 2015; and
- The 200MW Next Generation Renewables auction, awarded in 2016.⁵

⁴ <https://assets.cleanenergycouncil.org.au/documents/resources/reports/clean-energy-australia/clean-energy-australia-report-2020.pdf>

⁵ <https://www.environment.act.gov.au/energy/cleaner-energy/renewable-energy-target-legislation-reporting>

Most of the ACT's renewable electricity is generated outside the Territory under the reverse auction, feed-in tariff program.⁶ Since the reverse auction schemes began, the ACT has attracted over A\$2 billion in renewable energy investment.⁷

The ACT was the first Australian jurisdiction to use a reverse auction process to promote large-scale renewable energy and the ACT Government held an additional reverse auction in November 2019 to maintain its 100% renewable status.

The *Electricity Feed-in (Large-scale Renewable Energy Generation) Act 2011* provides the legal framework for the ACT reverse auction Feed-in Tariff (FiT) and the objects of the Act are to:

- Promote large-scale renewable electricity in the ACT;
- Develop the ACT's renewable energy industry;
- Reduce the ACT's greenhouse gas emissions; and
- Reduce the ACT's reliance on fossil fuelled power while also minimising cost to electricity consumers.

The ACT's current overarching policy for renewable energy, the [Sustainable Energy Policy](#), is due to expire this year, and while much has been achieved, the government recognises that maintaining the drive towards a zero-emission, reliable and competitive energy market is still of critical importance.⁸

The ACT Government has begun work on the ACT Sustainable Energy Policy 2020-25⁹ and a [discussion paper](#) was released in late 2019 seeking input on a range of potential policy options. Submissions on the discussion paper closed in November 2019.

The key goal of the 2020-25 Policy will be to focus on moving to renewable energy and zero greenhouse gas emissions in a way that is fair and equitable, cost effective, and maintains the reliability of the energy system.

Energy efficiency

In the ACT, targets for energy efficiency are set and achieved through the Energy Efficiency Improvement Scheme (EEIS), a compulsory scheme for energy retailers.

The EEIS is legislated through the *Energy Efficiency (Cost of Living) Improvement Act 2012*. The Act contains the legal obligations and options that electricity retailers have under the scheme, one of which is to undertake eligible energy savings activities. From 2016-2020, participating retailers were required to achieve an Energy Savings Target of 8.6 per cent per year.¹⁰

Since its introduction, the EEIS has delivered over 1.3 million energy saving products to around 74,000 ACT households and businesses and the ACT Government has extended the EEIS for another 10 years, from 2021 to the end of 2030.¹¹

Hydrogen

Having achieved its 100% renewable energy target, the ACT Government is now focusing on:

- Developing a plan for achieving net zero emissions from natural gas use by 2045; and
- Facilitating the transition to zero emissions vehicles, including by transitioning to a zero emissions bus fleet by 2040.¹²

The ACT is actively looking at renewable hydrogen to support this transition. The Australian National University has a broad portfolio of hydrogen research spanning across the hydrogen value chain. The ACT gas network operator Evoenergy has also established Australia's first 100% hydrogen test site at the Canberra Institute of Technology.¹³ This facility will be the first in Australia to test 100% hydrogen in preparation for its application to the existing gas network.

⁶ <https://www.environment.act.gov.au/cc/measuring-act-emissions>

⁷ <https://www.austrade.gov.au/international/invest/investor-updates/2019/australia-s-capital-looks-for-major-investment-in-renewables-to-meet-100-target#:~:text=To%20meet%20its%20existing%20energy,minutes'%20drive%20of%20central%20Canberra>

⁸ <https://www.environment.act.gov.au/energy/act-sustainable-energy-policy-2020-25>

⁹ <https://www.environment.act.gov.au/energy/act-sustainable-energy-policy-2020-25>

¹⁰ <https://www.environment.act.gov.au/energy/smarter-use-of-energy/energy-efficiency-improvement-scheme/summary-of-current-eeis-metrics>

¹¹ <https://www.environment.act.gov.au/energy/smarter-use-of-energy/energy-efficiency-improvement-scheme>

¹² <https://www.industry.gov.au/sites/default/files/2019-11/australias-national-hydrogen-strategy.pdf>

¹³ <https://www.industry.gov.au/sites/default/files/2019-11/australias-national-hydrogen-strategy.pdf>

New South Wales



In 2016, on the eve of the Paris Agreement coming into force on 4 November 2016, the NSW Government released its [Climate Change Policy Framework \(Framework\)](#) with an objective to achieve net zero emissions by 2050.

Since its release, in accordance with the Framework, the NSW Government has delivered a number of projects which have assisted in the overall reduction of NSW's emissions by 29 megatonnes, or approximately 18% on 2005 levels. Those programs have included:

- \$50 million Home Energy Action Program to reduce household energy bills by up to \$300 per year, with a forecast to reduce emissions by 32,000 tonnes by 2030;
- \$75 million grant program for emerging, on-demand electricity generation projects; and
- \$35 million to energy intensive manufacturers to upgrade their equipment to more energy-efficient models, which is projected to reduce emissions by up to 108,000 tonnes by 2030.

Whilst this progress is significant, the reduction in emissions is projected to stabilise by 2030 if no further action is taken.

On 14 March 2020, the NSW Government released its [Net Zero Plan Stage 1: 2020 – 2030 \(Net Zero Plan\)](#) which sets out the NSW Government's strategy to deliver a 35% cut in emissions by 2030 compared to 2005.

Emissions reduction

Under the Net Zero Plan, the NSW Government lists four priority areas for action, as follows:

1. Drive uptake on proven emissions reduction technologies that grow the economy, create new jobs or reduce the cost of living;
2. Empower consumers and businesses to make sustainable choices;
3. Invest in the next wave of emissions reduction innovation to ensure economic prosperity from decarbonisation beyond 2030;
4. Ensure the NSW Government leads by example, including by monitoring the State's progress against the targets set in the Net Zero Plan and by bringing sustainable goods, services and practices into the market and maximising the environmental value of the assets it oversees.

To meet these objectives, the NSW Government proposes to take the following actions including establishing a number of new targeted programs:

- Establish an Emissions Intensity Reduction Program: the NSW Government will establish a \$450 million program to support businesses to transition plant, equipment and processes to low emissions alternatives, with funds to be allocated over a 10 year period. This program will be complemented by the Commonwealth Government's \$450 million commitment to NSW from the Climate Solutions Fund;
- Establish a Clean Technology Program to develop and commercialise emissions reduction technologies, identified as a priority program for bilateral funding;
- Fast-track the delivery of NSW's first Renewable Energy Zone to connect investors with communities looking to invest in renewable energy;
- Establish an Energy Security Safeguard to ensure that NSW has access to cheaper, more reliable electricity supplies;
- Develop a Green Investment Strategy;
- Invest in a Coal Innovation Program to reduce emissions from mining and use of coal;
- Set an aspirational target of up to 10% hydrogen in the gas network by 2030 under a newly established Hydrogen

Program, which will offer grants for the research and development of hydrogen projects;

- Expand the existing Energy Efficiency Program:
- Encourage electric vehicle use by developing an Electric Vehicle Infrastructure and Model Availability Program to assist in overcoming shortages in both fast changing infrastructure and the availability of electric vehicles;
- Develop a Primary Industries Productivity and Abatement Program to support primary producers and landowners to commercialise low emissions technologies; and
- Build on the NSW Government's own commitments under the [NSW Government Resource Efficiency Policy](#), including doubling NSW Government's solar targets by 2024, replacing Sydney's bus fleet with electric buses and purchasing energy from low emissions sources of generation.

The next stage in the implementation of the Net Zero Plan involves the development of each of these programs.

The NSW Government will track the State's progress against the Net Zero Plan, including through:

1. The publication of the State of the Environment Reports between 2020 and 2030. The reports will include an assessment of the environmental impacts under the New Zero Plan;
2. Annual recommendations by the NSW Climate Change Council;
3. Biennial report from the NSW Chief Scientist and Engineer on emerging technologies; and
4. The establishment of the Bilateral Implementation Committee to design and oversee the implementation of jointly funded programs.

Renewable energy

NSW currently has:

- Several large scale operational windfarms in NSW which have capacity to generate over 330,000 homes each year. These include Sapphire Wind Farm (270 MW), Silverton Wind Farm (200MW), White Rock Wind Farm (175 MW Stage 1), Gullen Range Wind Farm (165.5 MW), Capital Wind Farm (140.7 MW), Boco Rock Wind Farm (113 MW), Bodangora Wind Farm (113 MW) and Taralga Wind Farm (107 MW); and
- Seven large scale operating solar farms, including Parkes Solar Farm (65 MW), Griffith Solar Farm (36 MW), Dubbo Solar Hub (24 MW), Gullen Solar Farm (10 MW), Nyngan

Solar Farm (102 MW), Moree (56 MW) and Broken Hill Solar Farm (53 MW).

NSW has attempted to increase the transparency of planning approvals for renewable projects in the State. The planning approval pathway under the Environment Planning and Assessment Act 1979 (NSW) for wind projects continues to be assessed in accordance with the Wind Energy Planning Framework (December 2016). In December 2018, the NSW Government released a [Large-Scale Solar Energy Guideline](#) to similarly support the assessment of large-scale solar projects.

The NSW Renewable Energy Action Plan, released in 2013 and funded by the NSW Climate Change Fund, established in 2007 under the *Energy and Utilities Administration Act 1987* (NSW), supported the achievement of the former national target of 20 per cent renewable energy by 2020 and this plan was implemented alongside a separate Energy Efficiency Action Plan.

The NSW Renewable Energy Action Plan contained the following three goals:

- Attracting renewable energy investment and projects;
- Building community support for renewable energy;
- Attracting and growing expertise in renewable energy technology.

These 3 goals were supported by 24 actions grouped under each goal. In December 2018, the NSW Government reported that it had completed the implementation of the NSW Renewable Energy Action Plan, releasing its [Completion Report](#) and [Implementation Summary](#).

- The NSW Government reports the following key achievements, among others, under the NSW Renewable Energy Action Plan:
- Contributing to the funding of Australia's first major solar farms at Nyngan and Broken Hill;
- Entered into an agreement with Dubbo Solar Hub to buy renewable energy, assisting the project to achieve financial close;
- Assisted five solar farms (including those at Nyngan, Moree and Broken Hill) with a total capacity of 160 MW to leverage a total of \$34.9 million from Australian Renewable Energy Agency (**ARENA**);
- Released streamlined planning guidelines for wind project and draft guidelines for solar projects;
- Delivery of important research, including with respect to community awareness and knowledge of renewable energy projects;

- Provided \$4.6 million to Australian biofuel company Ethtec to develop a purpose built bio-energy hub.

The Clean Energy Council reports that in 2019, NSW (including the ACT) generated 17.1 per cent of its total energy from renewable sources, which is an increase from 7.7 per cent in 2015.

Under the Net Zero Plan, the NSW Government has committed to fast-tracking the delivery of NSW's first Renewable Energy Zone which was first announced in November 2019 and which will be located in a region bordered by Tamworth, Nyngan and Orange.

Three zones in Central-West, New England and South-West of NSW will play a critical role in replacing retiring generators over the next two decades.

In light of decreasing production from fossil fuels, including the planned closure of the Liddell coal generator in 2023, the NSW Government has identified five key projects to ensure system security. They include four large-scale 50 MW batteries, proposed by AGL with Maoneng Group, a 50 MW Darlington Point Battery, 250 MW gas peaking plant proposed by AGL in Newcastle, a 320 MW gas peaking plant proposed by Energy Australia at Tallawarra and various projects that are funded by the [NSW Emerging Energy Program](#).

The NSW Government has continued to support the thermal treatment of waste to recover the embodied energy from waste, offset the use of non-renewable energy sources, and avoid methane emissions from landfill, including through the Environment Protection Authority's [NSW Energy from Waste Policy Statement \(January 2015\)](#).

Since 2014, there has been a voluntary State-wide rollout of "Smart Meters". These meters measure the amount of electricity being used at any given time and permit customers to switch between retailers more easily, and reduce electricity bills.

The national regulatory framework for smart metering was rolled out on 1 December 2017, which shifted the responsibility for supplying customers with electricity meters from operators to retailers and digital meters are installed whenever new or replacement meters are required.

Energy efficiency

The NSW Government claims to be a leader, both nationally and internationally, in energy efficiency. In 2011, the NSW Government set a target to realise annual energy savings of 16,000 GWh by 2020, which is the equivalent of saving enough energy to power over 2.6 million NSW homes for a year, as outlined in the 2013 NSW Energy Efficiency Action Plan.

The NSW Energy Efficiency Action Plan was designed to be implemented alongside the NSW Renewable Energy Action Plan (also released in 2013), recognising the common policy intent of these plans in attracting investment, building community support and reducing electricity costs for customers.

The Energy Efficiency Action Plan contains 30 actions to strengthen the energy efficiency market and help NSW households, business and government to use energy more efficiently. It aims to reach three goals:

- Achieve 16,000 GWh in energy savings per year by 2020;
- Support 220,000 low income households to reduce energy use by up to 20 per cent by 2014;
- Assist 50 per cent of NSW commercial floor space achieve a four-star National Australian Built Environment Rating System (NABERS) energy and water rating by 2020, through the delivery of high-standard building retrofit programs.

The NSW Climate Change Fund was charged with investing \$1.4 billion between 2017 and 2022 to help households and businesses save energy and money, and to bolster energy reliability and affordability through improved energy efficiency.

The NSW Energy Savings Scheme, established under the *Electricity Supply Act 1995* (NSW), has been extended to 2050 under the newly announced Energy Security Safeguard.

As part of the Net Zero Plan, the NSW Government is looking to support uptake of energy savings activities which reduce the demand of businesses and households on electricity and gas networks, like energy efficient lighting upgrades and replacing grid gas with onsite biomass. The expanded program has set an ambitious target of decreasing energy consumption by up to 13% by 2030.

The NSW Government released a new Electricity Strategy in November 2019 which calls for a major revamp of the State's Energy Savings Scheme.

The Strategy is intended to respond to the challenges posed by traditional generators and transmission systems, which are prone to congestion and deterioration over time, ultimately resulting in higher costs for households and businesses. The way it will do this is through:

- The delivery of three Renewable Energy Zones across NSW;
- Conserving energy, especially during times of peak demand;
- Providing support for the development of new electricity generators;
- Focusing on the State's energy resilience; and
- Simplifying energy business in NSW.

In August 2018, the NSW Government announced over \$72 million in energy efficiency measures which were designed to ease cost of living pressures and enable households and businesses to use new technology to reduce their energy costs.

The package included \$24.5 million for upgrades to over 20,000 rental homes for low-income families and \$35 million to assist businesses in installing energy efficient equipment.

The Government Resource Efficiency Policy provides targets for cost-effective actions to save energy by government agencies. The NSW Government, through that Policy, accelerated its planned roll-out of solar panels in August 2018, in setting a target to achieve 25,000 MW hours a year of rooftop solar on government buildings by 2021, and 55,000 MW hours a year by 2024.

In April 2020, the NSW Government struck a \$2 billion deal with Prime Minister Scott Morrison to reduce greenhouse gas emissions from the electricity sector.

It combines over \$900,000 worth of federal grants for emissions reduction initiatives to be introduced in the State, which is being matched with direct funding from the NSW Government. NSW Premier, Gladys Berejiklian, has stated that the funding is intended to ensure the State has a clear plan to reduce its emissions in line with growing public sentiment around energy efficiency.

Investment opportunities

NSW businesses have continued to show a strong interest in financing through the Clean Energy Finance Corporation (CEFC) for clean energy projects.

By 30 June 2019, the CEFC had A\$1.5 billion of investment commitments in NSW, with a total investment value of A\$4.2 billion. This included A\$397.7 million new commitments in the 2018–2019 financial year.

The CEFC contributed to the construction of the Griffith, Dubbo and Parkes Solar Farms in 2016–2017 and saw those investments realised in 2018–2019.

In the period between 2012 and 2019, ARENA had invested in 198 projects in NSW, investing a total of A\$731 million. ARENA has invested in Jemena's Power-to-Gas facility in western Sydney which will source renewable electricity and convert it into hydrogen via electrolysis. The majority of the hydrogen produced will be injected into the gas network, providing enough energy to meet the cooking, heating and hot-water requirements of approximately 250 homes.

Some hydrogen will be transmitted for electricity generation back into the grid (via a gas engine generator) with the remaining hydrogen to be stored underground for future use at an onsite Hydrogen Refuelling Station.

ARENA continues to invest in major renewable projects across NSW and into studies, research and feasibility studies.

Northern Territory



The Northern Territory (NT) Government released its climate change policy, *Northern Territory: Climate Change Response: Towards 2050 (Climate Change Response)* on 9 July 2020, following a period of public consultation from October 2019 (*Draft Response*).

The Climate Change Response creates a broad framework for long-term action which aims to maximise the economic, social and environmental well-being of Territorians while proactively responding to climate change risk and opportunities. It contains four objectives:

1. Net zero emissions by 2050: Progressively to reduce greenhouse gas emissions across the economy.
2. A resilient economy: Build resilience to climate change in the most vulnerable aspects of the community, economy and environment.
3. Opportunities from a low carbon future: Unlock opportunities for communities, industries and businesses in the transition to a low carbon future.
4. Inform and involve all Territorians: Inform Territorians about the potential impacts from climate change, the opportunities it provides, and what actions they can take.

The detailed strategies and actions to implement these objectives are proposed to be mapped out in a series of time-bound action plans. The first of these plans, *Delivering the Climate Change Response: Towards 2050 – A Three-Year Action Plan for the Northern Territory Government (Three-Year Plan)*, was also released on 9 July 2020 and contains 17 priorities and 34 deliverables to be achieved between the end of 2020 through to the end of 2023.

The NT Government recognises that the Climate Change Response will need to be reviewed from time to time in order to be responsive to national and international policy settings, new scientific information, advances in technology, and as new emissions reduction opportunities become available. The first review will be in 2025.

Emissions reduction

In 2018 the Northern Territory's carbon emissions were approximately 16 MtCO₂e. Its emissions have continued to increase since 2005, including from energy.¹⁴ On a per capita basis, the Northern Territory has one of highest carbon emissions levels in Australia, although its emissions profile is unique given its large land mass, small population, high rates of bushfires, large cattle industry and emissions intensive industries.

The first objective of the Climate Change Response is to achieve net zero emissions by 2050. Additionally, two of the Northern Territory's major cities, have committed to targets: City of Darwin has committed to net zero emissions by 2030¹⁵ and Alice Springs has committed to an emission reduction target of 30% by 2021 from a 2016 baseline.¹⁶

Since the early 2000s, many carbon farming projects, in the form of fire management, have been undertaken in the NT to reduce emissions from bushfires in areas with relatively high rainfall. In 2018, the NT Government released the Northern Territory Aboriginal Carbon Industry Strategy to expand the carbon farming industry to include carbon storage methodologies, and investigate proposals for fire management in lower rainfall areas. It also identified that the greatest potential for industry growth is related to development of the

¹⁴ <https://ageis.climatechange.gov.au/SGGI.aspx>.

¹⁵ City of Darwin. Switching on Darwin. (2019). <https://www.darwin.nt.gov.au/council/transformingdarwin/key-projects/switchingondarwin>.

¹⁶ Alice Springs Town Council. Alice Springs Town Council Climate Action Plan 2018-2021. (2018).

voluntary market. In the Climate Change Response, the NT Government confirms its commitment to grow this industry.

The Three-Year Plan lists various priorities and deliverables to achieve the net zero emissions objective in the Climate Change Response. In terms of emissions reduction, these include actions to understand NT's emissions profile and trajectory, developing an emissions reduction strategy, developing a policy outlining the NT Government's expectations for the mitigation and management of emissions from new and expanding large greenhouse gas emitters, and developing an offsets policy. In relation to offsets, the NT Government released an offsets framework on 9 July 2020 which states that the development of the offsets policy and supporting technical guidelines will be informed by the NT's Emissions Reduction Strategy, which is yet to be released.

Renewable energy

The NT has some of the best solar resources in the world, and also has sources of geothermal and tidal power. As at 2018, only 8 per cent¹⁷ of the NT's energy came from renewable energy sources with the main source being solar PV, while major sources of geothermal and tidal power are currently untapped.

In 2016, the NT Government adopted a renewable energy target of 50 per cent by 2030. The Roadmap to Renewables report, prepared by an expert panel chaired by Alan Langworthy and released in 2017, set out the options for achieving that target and strategies to attract investment and create jobs in the transition to renewable energy.

In 2018 the NT Government approved its first large scale solar project, a 25 MW plant near Katherine. It is currently under construction. More recently, Sun Cable's 10GW solar farm and 20-30 GWh storage facility to be located near Tennant Creek, has been awarded major project status due to its likely significant contribution to regional economic development. The electricity generated from that project will supply the Darwin and Singapore markets with export via a 4,500 km transmission network. The project is valued at \$20 billion and is backed by Andrew Forrest and Mike Cannon-Brookes as co-lead investors. It is reported to be the largest solar farm under development in the world, and estimated to create up to 1000 jobs during construction and 300 ongoing jobs during operation.¹⁸

The Climate Change Response continues to commit to the growth of the renewable energy industry, and focusses on solar energy and hydrogen. It proposes to deliver 70% of energy requirements for remote communities through renewable energy, reducing annual greenhouse gas emissions by 250,000 tonnes. The Three-Year Plan identifies that a strategy to achieve this commitment will be developed and implemented by end of 2020. Other deliverables in the Three-Year Plan to achieve the renewable energy target include to develop a hydrogen strategy, implement reforms to the Territory Electricity Market, deliver a competitive battery energy storage system for the Darwin-Katherine electricity grid, deliver power systems plans Darwin-Katherine and Alice Springs electricity grids to facilitate additional renewable energy deployment, commercial micro-grids and residential virtual power plants.

Other projects and initiatives identified in the Draft Response (but not repeated in the Climate Change Response or the Three-Year Plan) were:

- Installation of 10 MW of solar energy in 25 remote communities through the Power and Water Corporation's Solar Energy Transformation Program (SETuP), reducing reliance on diesel fuel. The program was co-funded by ARENA and the NT Government
- Funding the Intyalheme Centre for Future Energy (ICFE) in Alice Springs, a hub for best practice renewables research, development, and implementation
- Supporting the largest multi-technology solar demonstration facility in the southern hemisphere (DKA Solar Centre)
- Investing in research across the renewable energy technology life-cycle, including for end-of-life recycling and repurposing

On 10 July 2020, released the [*Northern Territory Renewable Hydrogen Strategy \(Hydrogen Strategy\)*](#), with a vision for NT to be a world leader in the transition to renewable hydrogen by becoming an international-scale renewable hydrogen technology research, production and downstream manufacturing centre. The Hydrogen Strategy is intended to be implemented in parallel with Australia's National Hydrogen Strategy. It is a high level document which articulates the potential opportunities and how the Territory can leverage its competitive advantages to achieve its vision. The Strategy contains a five-point plan to assess and minimise barriers, develop local industry capabilities and supply chains and maximise opportunities to facilitate the development of renewable hydrogen hubs.

¹⁷ <https://assets.cleanenergycouncil.org.au/documents/resources/reports/clean-energy-australia/clean-energy-australia-report-2020.pdf>

¹⁸ <https://assets.cleanenergycouncil.org.au/documents/resources/reports/clean-energy-australia/clean-energy-australia-report-2020.pdf>; Climate Change Response.

Some of the actions in the Hydrogen Strategy include:

- Secure access to transport and utilities corridors to provide project proponents certainty for energy export infrastructure
- Define the potential role of hydrogen in the net-zero emissions target
- Work with industries such as transport, mining and industrial manufacturing to understand opportunities to integrate hydrogen use
- Encourage trials of hydrogen technologies in applications high on the hydrogen cost curve, such as remote area power systems including remote work sites and commercial and long-distance transport
- Explore opportunities for demonstration projects that increase community confidence and understanding of hydrogen technologies
- Continue to enhance trade relationships with key trading partners and promote and secure export opportunities

The detail and timeframes for delivery of these actions are not specified.

Energy efficiency

Since 2016, the NT Government has provided \$14.3 million in funding under various programs to individuals and businesses to assist with energy efficiency initiatives and solar energy installations. The solar feed-in tariff scheme provides non-commercial electricity consumers who have renewable energy systems with the ability to receive payment for surplus energy generated.

These programs were estimated in the Draft Response as saving NT businesses almost \$10 million per year in lower electricity costs and reducing greenhouse gas emissions, equivalent to taking 7,000 cars off the road. Additionally, the Draft Response stated that the NT Government's existing Rooftop Solar for Schools program provides \$5 million for solar systems in schools which have programs to teach students about the solar energy.

Given the NT's growing onshore gas industry, the Draft Response stated that:

- in line with Recommendation 9.8 of the Independent Scientific Inquiry into Hydraulic Fracturing, the NT Government is continuing to work with the Australian Government to seek to ensure there is no net increase in the lifecycle emissions emitted in Australia from any onshore shale gas; and

- the NT Government will collaborate with industry to investigate approaches that achieve emissions savings.

These statements have not been repeated in either the Climate Change Response or the Three-Year Plan. The NT Government's position on onshore and natural gas may become clearer when the policy outlining the NT Government's expectations for the mitigation and management of emissions from new and expanding large greenhouse gas emitters is released.

Investment opportunities

The Territory Economic Reconstruction Commission established in May 2020 to assist with the NT's recovery following the impacts of COVID-19 on their economy released its [first report](#) on 20 July 2020. The report notes that the NT Government's ambition of creating a \$40 billion economy by 2030 will require bold action including significant growth across five main sectors of energy (renewables and gas), manufacturing (gas and non-gas), resources, agribusiness, and tourism. It makes 15 recommendations, all of which have been accepted by the NT Government. These include:

- quickly establishing a joint NT-Federal Government investment delivery taskforce to speed up investment decisions focussing on those projects (including mining) that could start within the next 3 to 12-18 months
- a joint NT-Federal Government investigation into an electricity highway based on high voltage direct current transmission links between Darwin and Alice Springs to enable multiple projects that both supply and make use of renewable electricity up and down the spine of the NT, potentially supporting the creation of renewable energy zones
- preparing masterplans to capture opportunities for the significant growth of manufacturing in a range of industries and downstream sectors including the development of renewables-driven manufacturing such as hydrogen, the production of ammonia, and minerals-processing, the manufacturing of petrochemicals, initially using gas from offshore sources, then gas and liquids from the Beetaloo Sub-basin
- accelerating projects in the pipeline, being the Beetaloo Sub-basin if it is commercially feasible, the Darwin-Katherine electricity network and Darwin battery energy storage system, and installation of solar PV and battery energy storage setups across ten remote communities under the Renewable Remote Power Program, concurrently with site planning for the next 13 sites.

It will be interesting to observe whether the final report due to be released in November, will consider or expand on other possible economic opportunities which appear in the Climate Change Response, Three-Year Plan, Hydrogen Strategy and Green paper on Operation Rebound, such as:

- exporting energy interstate and becoming a leader in renewable hydrogen and export to Asian markets such as Japan, South Korea, Indonesia, China and Singapore
- encouraging development of electric vehicles to reduce running costs of vehicles
- encouraging increased mining for minerals such as lithium required for the production of components required for renewable energy equipment, thereby increasing export revenue
- manufacturing renewable energy equipment locally, including solar PV panels, battery assemble, racks or solar PV panels and power cables
- repurposing or recycling renewable energy equipment such as solar PV panels
- capturing some of the Asian market for data centres for large multinational companies
- facilitating the sharing by remote communities of the revenues from renewable energy systems located on Aboriginal-owned land and installation and operation of renewable energy systems by Aboriginal-owned companies

Additionally, in relation to solar and renewable hydrogen, the Office of Sustainable Energy is reportedly developing an investment attraction strategy for the NT:¹⁹

¹⁹ <https://www.katherinetimes.com.au/story/6512288/nt-government-has-established-an-office-of-sustainable-energy/>.

Queensland



Emissions reduction

Queensland's emissions reduction targets are:

- A long-term goal to achieve net zero emissions by 2050; and
- An interim goal of achieving a 30% reduction in emissions on 2005 levels by 2030.

These goals have been set under the 2017 [Queensland Climate Transition Strategy](#), which envisages a net zero emissions future for Queensland that supports jobs, industries, communities and the environment.

The key priorities under the Strategy are to:

- Create an environment for investment shift and innovation;
- Facilitate existing Queensland industries to transition; and
- Work with Queensland's regional communities to transition.

²⁰ <https://www.dnrme.qld.gov.au/energy/initiatives/achieving-our-renewable-energy-targets>

²¹ Clean Energy Council, *Clean Energy Australia Report 2020*, p. 32.

²² QLD Dept. of Energy, [Achieving our renewable energy targets](#).

²³ <https://www.dnrme.qld.gov.au/energy/initiatives/achieving-our-renewable-energy-targets>

²⁴ <https://www.dnrme.qld.gov.au/energy/initiatives/achieving-our-renewable-energy-targets>

²⁵ <https://www.dnrme.qld.gov.au/energy/initiatives/achieving-our-renewable-energy-targets>

²⁶ <https://www.dnrme.qld.gov.au/energy/initiatives/achieving-our-renewable-energy-targets>

Renewable energy

Despite currently having the lowest installed capacity of large scale renewables in the National Electricity Market, Queensland has seen \$5.5 billion of investment in large-scale renewable energy projects since 2015.²⁰ In 2019, 14.1% of Queensland's electricity came from renewable sources.²¹

Released in June 2017, the [Powering Queensland Plan](#) sets out the Queensland Government's strategy to guide the State through the renewable energy transition. The Plan aims to deliver stable energy prices, ensure long-term security of electricity supply, transition to a cleaner energy sector and create new investment and jobs. Under the Plan, the Queensland Government has committed to a renewable energy target of 50 per cent by 2030. The State is expecting to supply 20% of its electricity consumption with renewable energy sources by the end of 2020, which would be significant progress in light of its 2030 target.²²

In terms of small-scale renewables, the Queensland Government set a target of one million solar rooftops (or 3,000 MW of solar generation capacity) by 2020. This goal was reached in October 2018.²³ With over 580,000 solar systems already connected, Queensland now has the highest number of solar installations in Australia.²⁴

In 2019, Queensland established its first publicly owned clean energy company, CleanCo, as part of the Powering Queensland Plan.²⁵ CleanCo's activities help to improve electricity affordability, contribute to the State's achievement of its 50% target by 2030, and support secure and reliable electricity generation in the State. CleanCo itself has a target to support 1,000 MW of renewable generation by 2025.

Other renewable energy initiatives in Queensland include:²⁶

- The Advancing Clean Energy Schools Program, which will deliver solar power and energy efficiency solutions for Queensland state schools;

- The solar for public housing trial, which will deliver up to 6 megawatts of solar, on up to 4,000 government-owned, detached houses;
- The Solar 150 program, which supports 4 projects through long-term revenue guarantees;
- The solar for remote communities program, which will see renewable energy systems installed in 4 Indigenous communities;
- The \$21 million interest-free loans scheme for solar and storage;
- The solar for rentals trial in Bundaberg, Gladstone and Townsville, which provided landlords and tenants with a financial incentive to install solar and share the financial benefits; and
- The Renewables 400 reverse auction for up to 400 megawatts of renewable energy capacity.

The Queensland Government has also commenced a review of its energy laws to ensure they stay relevant in light of the changes to the energy system, including the:

- *Electricity Act 1994*;
- *Gas Supply Act 2003*;
- *Energy and Water Ombudsman Act 2006*; and
- *Liquid Fuel Supply Act 1984*.²⁷

The Government held a number of stakeholder forums in mid-2018 and published a detailed options paper in October 2019. Consultation on that paper closed in January 2020 and a decision paper is under development.

Hydrogen industry

Released in May 2019, the [Hydrogen Industry Strategy paper](#) sets out the Queensland Government's strategy for the development of a sustainable hydrogen industry. Under the Strategy, the Queensland Government has set a goal to be at the forefront of renewable hydrogen production in Australia by 2030.

The strategy focuses on:

- Supporting innovation;
- Facilitating private sector investment;
- Ensuring an effective policy framework;
- Building community awareness and confidence; and
- Facilitating skills development for new technology.

As part of the Strategy, the State has established a \$15 million industry development fund to support hydrogen projects.²⁸ It has also developed a Queensland [Hydrogen Investor Toolkit](#) to assist investors with project planning for hydrogen developments in Queensland.²⁹

In February 2020, the Queensland Government announced that an Australian-first \$4.2 million gas injection facility will be built in Gladstone to deliver renewable hydrogen into the city's gas network.³⁰

Carbon sequestration

The Queensland Government recognises that carbon farming is an integral part of its response to climate change, and could help the State to meet its interim and long-term emissions reduction goals under the Queensland Climate Transition Strategy.³¹ In December 2019, Queensland announced that applications for the first round of funding from its \$500 million Land Restoration Fund would open in late January 2020.³²

The Fund dovetails with the Federal Government's existing climate change policy, known as the Carbon Farming Initiative (CFI) or Emissions Reduction Fund (ERF). This means that participants of the Fund may receive revenue for their carbon farming projects under both schemes. Any proposed carbon farming project will need to deliver environmental, social and/or economic "co-benefits" which are unlikely to have occurred without the Fund's investment.

South Australia continues to be a leader among the States in terms of setting and legislating emissions and renewable energy targets. Since the enactment of the [Climate Change and Greenhouse Emission Reduction Act 2007 \(Climate Change Act\)](#), South Australia has made significant progress in reducing greenhouse gas emissions and increasing renewable energy usage.

²⁷ <https://www.dnrme.qld.gov.au/energy/initiatives/review-energy-legislation>

²⁸ <https://www.dsdmip.qld.gov.au/industry/priority-industries/advanced-manufacturing/hydrogen-industry-development.html>

²⁹ <https://www.dsdmip.qld.gov.au/industry/priority-industries/advanced-manufacturing/hydrogen-industry-development.html>

³⁰ <http://statements.qld.gov.au/Statement/2020/2/27/renewable-hydrogen-bonanza-for-gladstone>

³¹ <https://www.qld.gov.au/environment/climate/climate-change/land-restoration-fund/carbon-farming>

³² <https://www.qld.gov.au/environment/climate/climate-change/land-restoration-fund/2020-investment-round>

South Australia



of 1990. [Australian Government data](#) showed that in 2018, South Australia's emissions had risen to 24.2 million tonnes of CO2 equivalent;

- Emissions on a per capita basis in 2016/17 were 13 tonnes of CO2 equivalent, significantly lower than the national average of 22 tonnes of CO2 equivalent per capita.³⁵ Even with an increasing population, South Australia has managed to reduce its per capita emissions by 6% from 2007-2017;³⁶
- As of 2016/17, South Australia's net emissions have decreased by 39% meaning a further 21% reduction is needed to meet the 40% reduction target by the end of 2050.³⁷

Drivers of reduced emissions have included:

- An increase of sinks in the land use, land use change and forestry sector which has contributed 41% of total emissions reduction. This was mainly due to natural regeneration of forest land and regrowth on deforested land;
- A reduction in fuel combustion in the energy sector which contributed 24% of total emissions reduction. This was mainly due to an increase in renewable energy sources and the reduced emissions intensity of non-renewable energy sources; and
- A reduction in fugitive emissions from fuels which has contributed 12% of total emissions reduction. This was likely due to changes in technology and the overall reduction in coal mining and crude oil extraction in South Australia.³⁸

Under section 16 of the Climate Change Act, the South Australia Government has the ability to enter into voluntary sector agreements with business, industries, or regions to help reduce emissions and tackle climate change. The South Australian Government has entered into such an arrangement with the City of Adelaide which adopted a [Carbon Neutral](#)

Emissions reduction

South Australia has a legislated target which aims to reduce greenhouse gas emissions to at least 40% of 1990 levels [by the end of 2050](#). Under section 7(1) of the Climate Change Act, the Minister for Climate Change and Water must prepare a report on the operation of the Climate Change Act on a two-yearly basis. Since the release of the last update, the Minister has released both the 2018 and 2019 progress reports, which contain the following information:

- In 2015/6, South Australia emitted 26.3 million tonnes of CO2 equivalent.³³ Its CO2 equivalent emissions fell in the following year (2016/7) to 22.1 million tonnes.³⁴ Total net emissions were at their lowest point since the base year

³³ Report on the operation of the *Climate Change and Greenhouse Emissions Reduction Act 2007* (South Australia), Government of South Australia, through Department for Environment and Water, Adelaide, November 2018, page 7 (2018 Report). Reports can be found on <https://www.environment.sa.gov.au/about-us/our-reports/climate-change-greenhouse-emissions-reduction-reports>

³⁴ Report on the operation of the *Climate Change and Greenhouse Emissions Reduction Act 2007* (South Australia), Government of South Australia, through Department for Environment and Water, Adelaide, December 2019, page 7 (2019 Report).

³⁵ 2019 Report, page 9.

³⁶ 2019 Report, page 9.

³⁷ 2019 Report, page 10.

³⁸ 2019 Report, pages 11-12.

[Strategy 2015-2025](#). The City of Adelaide aims to achieve carbon neutrality by 2025 to become the world's first carbon neutral city.

Renewable energy

South Australia is on track to exceed its target of 33% renewable energy generated by 2020 evidenced by the proportion of South Australia's electricity generated using renewables, which in 2018/19 reached 52%.³⁹ This was an increase on 40% in 2015/16 and 48.9% in 2016/17.

South Australia no longer uses coal as an energy source and generates more than half of its energy from wind and solar. Significantly, South Australia has become a net exporter rather than importer of electricity. It is estimated that renewables could contribute approximately 87% of electricity generation by 2024. This puts the state in a strong position to achieve its goal of net 100% renewable energy generation by 2030.

The push towards renewable energy has meant that South Australia has enjoyed some of the lowest electricity prices in the country since 2019.

On 19 June 2020, the South Australian Government announced a new energy plan 'A secure transition to affordable renewable energy' which reiterates South Australia's target of net 100% renewables by 2030. Given the growing uptake of rooftop solar in the state, the new energy plan accepts that the grid could experience "zero operational demand". Therefore, the plan allows the market operator to effectively switch off or "shed" rooftop solar to protect the power grid, and to consider the latest technological developments to ensure better support for the grid and less blackouts.

The plan also accelerates Project EnergyConnect. [Project EnergyConnect](#) is a partnership with TransGrid and ElectraNet to deliver a 900 kilometre energy interconnector between the power grids of South Australia and New South Wales, with an added connection to Victoria. The project focuses on low-emission renewable energy sources and the sharing of energy between states may see a decrease in wholesale energy costs and growth in renewable energy generation. The project will commence in 2020/21.

Hydrogen

The strength of the renewable energy sector has seen South Australia begin to embrace hydrogen as a renewable energy source. South Australia was the first state to publish a hydrogen strategy which became the basis for the current [Hydrogen Action Plan \(Hydrogen Action Plan\)](#). Given that South Australia harnesses more than 50% of its energy from renewable resources, it is believed that hydrogen technologies will assist the state in becoming a net 100% renewable energy generator during the 2030s.

The vision of the Hydrogen Action Plan is that South Australia leverages its wind, sun, land, infrastructure and skills to be a world-class renewable hydrogen supplier. The objective of the Action Plan is to scale-up renewable hydrogen production for export and domestic consumption.

The Hydrogen Action Plan is centred on five key themes:

1. Facilitating investments in hydrogen infrastructure;
2. Establishing a world class regulatory framework;
3. Deepening trade relationships and supply capabilities;
4. Fostering innovation and workforce skills development; and
5. Integrating hydrogen into the energy system.

There are also potential export opportunities for renewable hydrogen with many other countries also having a similar action plan including China, Japan and Singapore. Many of these countries are Australia's key trading partners and the South Australia Government is actively exploring methods to deliver renewable hydrogen to these countries in line with their action plans.

In February 2018, the South Australia Government awarded more than \$17 million in grants and gave out over \$25 million in loans committed to renewable hydrogen projects. The South Australian Government awarded a grant of \$4.9 million towards an \$11.4 million demonstration project with Gas Networks Australia. The proposed facility comprises a 1.25MW electrolyser which is the largest of its kind installed in Australia.

Energy efficiency

The [Retailer Energy Efficiency Scheme \(REES\)](#), which requires that energy retailers assist households and businesses to reduce their energy use and costs and lower greenhouse gas emissions, has been in place since 1 January 2015 (after it replaced the Residential Energy Efficiency Scheme). Targets have been set by the South Australian Government for 2018-2020. The scheme works by establishing efficiency and audit targets to be met by electricity and gas retailers. The energy efficiency target is an annual amount of energy savings that must be achieved by retailers through the carrying out of energy efficiency activities which comply with the [Electricity \(General\) Regulations 2012](#) and the [Gas Regulations 2012](#). Similarly, an audit target is the number of energy audits which must be undertaken by retailers annually.

The [Energy Partners Program \(EPP\)](#) works with approximately 100 organisations across South Australia in an effort to manage energy use and costs for residents. The EPP tailors assistance to each organisation so that they may best assist their clients. Support can include:

- Providing energy advice and expertise;
- Education and training; and
- Supplying resources and publications.

The program complements the [Energy Advisory Service](#) which provides free information on a range of topics relating to energy efficiency.

Other emissions reduction and energy efficiency initiatives

During 2018/19, the [Renewable Technology Fund](#) provided \$150 million in grants and loans to assist companies to deliver large scale renewable energy projects. The projects must in three key areas of renewable energy technologies:

1. Projects to firm renewable generation;
2. Storing energy in bulk; and
3. Bioenergy.

One such project was the Hornsdale Power Reserve which is a 100MW lithium-ion battery, which is currently the world's

largest, that delivers power to the National Electricity Market.

The [Zero Energy Future Project](#) is a scheme created by South Australia Water to help reduce emissions and electricity costs. South Australia Water has invested more than \$300 million to install new solar arrays and energy storage devices on sites across the state. The organisation is aiming for zero net electricity costs from 2020/21.

The \$50 million [Grid Scale Storage Fund](#) aims to promote and fast-track the roll-out of grid-scale energy storage infrastructure. The fund is technology neutral and eligible projects must benefit South Australia by addressing the causes of electricity price rises. Projects deemed eligible could also receive joint funding from the Federal Government agency, the Australian Renewable Energy Agency.

The Home Battery Scheme provides \$100 million in subsidies and low interest loans to install battery systems on up to 40,000 households. This builds on the [Electricity \(Feed-in Scheme – Solar Systems\) Amendment Act 2008](#) which was enacted to promote the uptake of residential roof-top photovoltaic systems.

In 2019, the South Australia Government became a signatory to the [Asia Pacific Climate Leader's Declaration](#). The Declaration seeks to protect marine life, reduce emissions from the land and forestry sector, and strengthen international cooperation on climate change in line with the goals of the Paris Agreement.

Tasmania



Emissions Reduction

The [Climate Change \(State Action\) Act 2008 \(CCSA Act\)](#) drives the Tasmanian Government's response to climate change, both in terms of emissions reduction and adaptation. The CCSA Act currently legislates a target of reducing greenhouse gas emissions to 60 per cent below 1990 levels by 2050.

An independent review of the CCSA Act is required to be carried out every four years. In its [Response](#) to the 2016 review the Tasmanian Government supported the recommendation of legislating a target of net zero emissions by 2050. The [Climate Change Action Plan 2017-2021](#) released in 2017 similarly confirmed that the Act "will be amended to establish a target of zero net emissions by 2050." While a [discussion paper](#) on proposed amendments was prepared in 2018, the Act has not been amended since 2014.

In May 2020 the Tasmanian Government released the [Draft Tasmanian Renewable Energy Action Plan 2020 \(2020 Draft Action Plan\)](#) which reinforced that a target of net zero emissions by 2050 will be incorporated into the CCSA Act. In addition, the Plan recognised that there is the opportunity to achieve a much more ambitious target. This is unsurprising since Tasmania first achieved net zero emissions in the 2015/16 year. While emissions increased in 2016/17, [the State and Territory Greenhouse Gas Inventories for 2018](#) published by the Commonwealth Government in May 2020 indicate that net zero emissions was again achieved in the 2017/18 year.

Tasmania's achievement of net zero emissions is driven by its close to 100% renewable energy supply and the land use, land-use change and forestry sector (**LULUCF**) which has gone from being a major source of Tasmania's emissions to operating as a carbon sink. However, in its 2018 [Response](#) to the 2016 review of the CCSA Act, the Tasmanian Government accepted that LULUCF cannot be relied upon as the sole source of emissions abatement in achieving net zero emissions.

Renewable energy

Rainfall permitting, Tasmania has sufficient renewable energy capacity to turn its fossil fuel generators off and run on 100 per cent of renewable electricity, including hydro, wind and solar power.

While Tasmania does not currently have a statutory renewable energy target, the 2020 Draft Action Plan commits the State to the Tasmanian Renewable Energy Target (**TRET**) of producing 200% of 2022 electricity generation levels with renewable energy by 2040. This target is claimed to be unmatched globally, and far exceeds the target of any other Australian State or Territory. With Tasmania on track to achieve 100% self-sufficient renewable electricity generation by 2022, the TRET aims for a doubling of renewable generation by 2040. The 2020 Draft Action Plan claims that the TRET is expected to be legislated in 2020 and is scheduled for tabling in the second half of the year.

The 200% target relies on the ability of Tasmania's renewable energy supply to meet peak demand levels interstate. The proposed second Bass Strait interconnector, known as Project Marinus, would allow Tasmania to export more renewable energy to Victoria through a 1500 megawatt capacity undersea connection. This capacity would be in addition to the existing Basslink interconnector. On 15 June 2020 Prime Minister Scott Morrison [announced](#) that Project Marinus was a national priority project as part of the federal government's JobMaker plan.

The additional capacity to meet the TRET is expected to come from a mix of Hydro Tasmania's [Battery of the Nation](#) scheme, future wind farm developments and emerging ocean and biomass resources. The Battery of the Nation scheme would see the expansion of Tasmania's hydro system through the use of pumped hydro and is currently one of 12 projects on the Commonwealth Governments shortlist for its [Underwriting New Generation Investments](#) program.

The 2020 Draft Action Plan also commits to a scoping study for the development of a Renewable Energy Centre of Excellence in Tasmania. This would be a partnership between industry, the research sector, academic institutions and government, aimed at supporting growth in the renewable energy sector.

Hydrogen Action Plan

In March 2020 the Tasmanian Government released the [Tasmanian Renewable Hydrogen Action Plan \(Hydrogen Plan\)](#) along with the announcement of \$50 million worth of renewable hydrogen support measures. Tasmania plans to both export and rely upon hydrogen for its own energy needs by 2030.

Tasmania is uniquely positioned to produce zero emission hydrogen fuel (green hydrogen) at scale due to the existence of its strong hydro power sector. The Hydrogen Plan follows the November 2019 release of Hydro Tasmania's discussion report titled [Tasmania's 'green hydrogen' opportunity](#). As the report explains, producing 'green hydrogen' using wind and solar is far less cost effective than using hydro power. This puts Tasmania at a competitive advantage to other Australian jurisdictions which often rely on coal-fired energy to produce hydrogen.

Businesses can apply for funds under the Tasmanian renewable hydrogen support measures by way of a competitive application process, with stage 1 expression of interest proposals open until 18 August 2020.

Energy Efficiency

The [Power\\$mart Homes](#) and [Power\\$mart Business](#) programs form the basis of Tasmania's state-wide energy efficiency program. This follows the expiration of the [Energy Efficiency Loan Scheme](#) on 30 April 2019.

The Power\$mart Homes program provides free energy efficiency upgrades to low income Tasmanian households so that they can save on power bills as well as reduce greenhouse gas emissions. The program also includes free expert energy efficiency advice and tailored power savings plans. Applications to the program have temporarily been suspended in response to the Covid-19 pandemic.

Power\$mart Business provides businesses with funding to carry out energy efficiency audits. The Tasmanian Government covers 70% of the cost of the audit while businesses are required to contribute the remaining 30%. New applications to the program close on 30 June 2020.

Victoria



Emissions reduction

The [Climate Change Act 2017 \(CC Act 2017\)](#) came into effect in February 2017, repealing the [Climate Change Act 2010 \(CC Act 2010\)](#) while building upon the high-level policy framework that had been established by the CC Act 2010. The CC Act 2017 enacts most of the 33 recommendations made in a 2015 Government-commissioned review of the CC Act 2010 and it provides for the preparation and publication of regular plans, reports, strategies and targets aimed at climate change mitigation and adaptation.

In late 2016, prior to the introduction of the CC Act 2017, the Victorian Government published the [Victorian Climate Change Framework](#), which explains the transition from the CC Act 2010 to the CC Act 2017 and sets out the Government's vision for climate change action up to the year 2050.

The CC Act 2017 alludes to the United Nations *Framework Convention on Climate Change* process and the Paris Agreement in its preamble, referring to the agreement to hold the global average temperature increase to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius above pre-industrial levels. The preamble states that the Victorian Parliament has recognised that Victorians expect the state to play its part in global mitigation efforts.

Under the CC Act 2017, Victoria has legislated a long-term target of net zero greenhouse gas emissions by 2050 and a duty is placed on both the Victorian Premier and the Minister administering the CC Act 2017 (currently the Minister for Energy, Environment and Climate Change) to meet this target. If the amount of sequestration in Victoria does not balance any remaining emissions, the state is to secure eligible offsets from outside of Victoria to achieve net zero.

The CC Act 2017 also goes a step beyond the CC Act 2010 in that it requires that interim greenhouse gas emissions reduction targets be set across five-year periods. The CC Act 2017 requires the Premier and the Minister to 'determine' interim greenhouse gas emissions reductions targets for 2025 and 2030 by no later than 31 March 2020. These targets must then be tabled in Parliament within ten parliamentary sitting days. The Victorian Government is yet to announce the interim greenhouse gas emissions reduction targets for 2025 and 2030. Based on the current parliamentary sitting calendar, the Government has until 6 August 2020 to table these targets.

An [Independent Expert Panel](#) report tabled in the Victorian Parliament in June 2019 has recommended the following interim emissions reduction targets for Victoria:

- 32-39% below 2005 levels in 2025; and
- 45-50% below 2005 levels in 2030.

It is yet to be seen whether the Government will announce targets in line with the Independent Expert Panel's recommendations.

In a [second reading speech](#), the Minister for Energy, Environment and Climate Change Lily D'Ambrosio stated that interim emissions targets are intended to:

1. Provide guidance on Victoria's short and medium-term ambitions to business and policymakers;
2. Set each target at a level that must be more ambitious than any preceding interim target; and
3. Require the Minister and Premier to have regard to published independent expert advice when setting targets.

The CC Act 2017 requires the Minister to prepare a report at the end of each interim emissions target period and the Minister must provide an explanation if a target is not met.

An interim target can only be amended if the Premier and the Minister consider that 'exceptional circumstances' justify the amendment and the Government must provide reasons as to why the amendment is necessary. This legislative provision may become increasingly relevant in the coming years, depending on how well Victoria's economy recovers from the Covid-19 pandemic.

The CC Act 2017 also requires 'decision makers' that are making the types of decision set out in Schedule 1 to the CC Act 2017 to have regard to climate change in their decision-making. For example, Victoria's Environment Protection Authority must have regard to climate change when considering a works approval application under section 19B of the *Environment Protection Act 1970*. The CC Act 2010 had similar provisions regarding decision makers.

The CC Act 2017 introduces new elements that were not in the CC Act 2010, including emissions reductions pledges, climate change strategy and adaptation action plans.

Emissions reductions pledges

The CC Act 2017 introduces a pledge model. The pledges, which will match the five yearly interim target periods, will specify actions that will be taken to reduce emissions and a reasonable estimate of the reduced emissions. There are two types of pledge:

1. A whole of government pledge, which sets out emissions reduction activities from all Victorian Government departments and statutory bodies; and
2. Sector pledges, which include policy and regulatory measures to be implemented to drive emissions reductions in key sectors such as agriculture, waste and energy.

The Minister is required to make a statement (or pledge) in respect of whole-of-government greenhouse gas emissions reductions on or before 1 August 2020. The Minister is then required to make further statements in respect of whole of government greenhouse gas emissions reductions on or before 1 August every fifth year up to and including 1 August 2045.

Councils are also able to opt in to the pledge system.

Climate change strategy

The Minister is required to prepare a climate change strategy on or before 31 October 2020 and then must prepare further climate change strategies on or before 31 October every fifth year up to and including 31 October 2045. A climate change strategy must include:

- (a) A statement of priorities in relation to adaptation, greenhouse gas emissions reduction and planning for Victoria's transition to meet the challenges of climate change;
- (b) An adaptation component which includes a summary of the most recent Victorian climate science report; and
- (c) An emissions reduction component, which includes information on the interim emissions reduction target, the whole of government pledge, the sector pledges, any Council pledges, an assessment of the estimated total level of greenhouse gas emissions reductions resulting from the implementation of the pledges and information about any proposals from the business sector or wider community attempting to reduce greenhouse gas emissions.

The [first climate science report](#) was published in November 2019.

Renewable energy

Victoria has traditionally relied upon brown coal from the Latrobe Valley and oil and gas from the Bass Strait. In June 2016, the Victorian Government announced renewable energy targets (RET) of 25 per cent of electricity to be generated from renewable energy sources by 2020 (replacing a target of 20 per cent) and 40 per cent by 2025. The [Renewable Energy \(Jobs and Investment\) Act 2017 \(REJI Act\)](#) enacted these renewable energy targets. On 13 August 2020, the REJI Act was amended to introduce a 50 per cent renewable energy target for 2030.

[A recent progress report](#) indicates that, factoring in the renewable energy projects that are under construction or undergoing commissioning, Victoria is on track to meet its target of 25 per cent renewable energy generation capacity in 2020. The report indicates that the major contributors to renewable generation in Victoria over the 2018-19 financial year

were wind generation (about 10.3 per cent), hydroelectricity (5.4 per cent) and solar power including both large-scale solar and rooftop photovoltaic cells (4.8 per cent).

To complement the RET, the Victorian Government announced a reverse auction scheme in 2017, known as the 2017 VRET auction scheme. In September 2018, the government announced six successful wind and solar projects in the auction, to deliver an [estimated 928 MW](#) of new renewable capacity to the state.

The Victorian Government released its [Renewable Energy Road Map](#) in August 2015, outlining a number of initiatives aimed at accelerating the development of renewable energy projects. The Victorian Government established a A\$20 million New Energy Jobs Fund (**NEJ Fund**) to provide financial support to businesses, research institutes or communities seeking to develop renewable energy projects. Applications for [Round 5](#) of the NEJ Fund closed on 18 June 2020, with up to A\$1 million in funding available.

Energy efficiency

The [Victorian Energy Efficiency Target Act 2007 \(Vic\)](#), the [Victorian Energy Target Regulations 2008 \(Vic\)](#) and the [Victorian Energy Efficiency Target \(Project-Based Activities\) Regulations 2017 \(Vic\)](#) have established yearly targets for emissions to be avoided through energy efficiency measures. The [2021 target](#) is 6.5 million tonnes of carbon dioxide equivalent, which is the same as the 2020 target. Energy retailer companies are required to meet an annual greenhouse gas emissions reduction target through acquiring Victorian Energy Efficiency Certificates (VEECs).

The Victorian Energy Efficiency Target is underpinned by the market-based Victorian Energy Upgrades (VEU) program. Under the VEU program, accredited providers that offer discounted energy-efficient products and services to homes and businesses can generate VEECs. VEECs are calculated based on the greenhouse gas savings associated with the energy efficient products or services. However, due to the coronavirus (COVID-19) pandemic, some activities under the VEU program have been temporarily suspended, for example, incandescent lighting upgrades.

Western Australia



The Western Australia (WA) State Government has acknowledged that WA is particularly vulnerable to the impacts of climate change. Balancing the need to address those impacts and to maintain a favourable economic trajectory is not a straightforward task, given the state's strong resources sector. The government is currently developing a new, holistic climate change policy, the State Climate Policy, which will draw together, and build on, the existing initiatives operating in the state.

One notable initiative is the WA Government's commitment to achieving net zero greenhouse gas emissions by 2050 (**Net Zero 2050**). This initiative aims to support proponents of major new projects or project expansions that emit significant emissions by developing detailed greenhouse gas management plans (discussed below). Net Zero 2050 forms part of WA's broader climate change policy, which is expected to be released in late 2020.

Emissions reduction

Over the course of the past two decades, WA has developed an energy-intensive, resource-based economy which, in 2013, produced carbon emissions of approximately 77Mtpa. Notably, this figure is expected to double by 2020 as a consequence of new LNG and other industrial projects that are currently under construction. The significance of WA's emissions is

evident from the [Australian Greenhouse Gas Inventory's](#) 2018 greenhouse gas emissions report which measured WA's greenhouse gas emissions at around 91,480Gg, which amounts to approximately 17% of Australia's total greenhouse gas emissions.

The [Greenhouse Gas Emissions Policy for Major Projects \(GGE Policy\)](#) sets out the broad approach taken by the State Government when considering new projects and project expansions with significant greenhouse gas emissions. The GGE Policy operates in conjunction with the Federal Government's Climate Solutions Fund and ensures that new projects make an appropriate contribution to the State Government's goal of achieving net zero greenhouse gas emissions by 2050. As a condition of the implementation of the GGE Policy, proponents of major projects will be required to develop a Greenhouse Gas Management Plan setting out how they will contribute to achieving net zero emissions by 2050.

Renewable energy

In 2019, renewable energy accounted for just over 20% of all electricity generated in WA, which is perhaps surprising in view of the fact that WA currently is one of only two states in Australia without a renewable energy target. Nevertheless, the WA Government has introduced a number of renewable energy initiatives which are identified below.

It is well recognised that WA has some of the best renewable energy potential in the world. Not only does the south-west coastal area between Geraldton and Esperance have average wind speeds of around 27 kilometres per hour, most of the area is close to WA's largest electricity network, the South West Interconnected System. Australia also has the highest average solar radiation per square metre of any continent and several areas of Western Australia are particularly prospective for solar development.

As part of WA's move towards renewable energy, in March 2019, the State Government launched the [Energy Transformation Strategy](#) which sets out a strategy to respond to the energy transformation that is underway (see, for example, the Renewable Energy Buyback Scheme mentioned below) and to plan for the future of WA's power system. The objectives of the Energy Transformation Strategy are to maintain secure and reliable electricity supply, ensure affordable electricity for

households and businesses, reduce energy sector emissions and promote local jobs and growth. A key part of the Energy Transformation Strategy is a commitment to retire coal-fired generators in favour of alternative energy supplies such as renewable energy.

WA's Renewable Energy Buyback Scheme (**Buyback Scheme**) is an example of a small-scale renewable energy framework that is already in place. The Buyback Scheme, which was established under the *Electricity Industry (Licensing Conditions) Regulation 2005* (WA), requires Government-owned electricity retailers to offer eligible customers who own renewable energy systems a buyback of their excess energy. The retailers establish their own terms and conditions (including rates) and are responsible for running the Buyback Scheme with the terms and conditions of the buyback being approved by the Public Utilities Office to ensure they are fair and reasonable.

Hydrogen

In July 2019, the State Government released its [Renewable Hydrogen Strategy](#) which aims to support and facilitate industry efforts to develop a renewable hydrogen industry. The Renewable Hydrogen Strategy aims to transform the energy industry in WA and establish WA as a significant producer, exporter and user of renewable hydrogen.

Shortly after announcing its Renewable Hydrogen Strategy, the State Government introduced a \$10 million [Renewable Hydrogen Fund](#), which will fund the development of feasibility studies or capital works projects, promote private sector investment, and leverage third party funding in order to achieve the objectives of the Renewable Hydrogen Strategy.

Other emissions reduction and energy efficiency initiatives

WA is party to the Council of Australian Governments' National Energy Productivity Plan (**NEPP**) and Work Plan. The NEPP seeks to establish a nationally-consistent approach to improving Australia's energy productivity by, amongst other things, encouraging more productive consumer choices through measures which make consumer energy choices easier, and promoting more productive energy services through measures which support innovation, competitive modern markets and consumer protection. The NEPP contains measures seeking to advance the National Construction Code and improve compliance with building energy efficiency regulation. To this end, WA has made 6 star energy efficiency requirements (including lighting efficiency) mandatory for new residential buildings and any alterations, renovations and additions to existing residential buildings. Further, owners of

commercial office spaces of 2,000m² or above are required to disclose energy efficiency information when they sell, lease or sub-lease such spaces.

In April 2020, the State Government launched a \$9.28 million [Clean Energy Future Fund](#) to support the implementation of clean energy projects that offer high public value by contributing to the significant and cost effective reduction in greenhouse gas emissions. Innovative clean energy projects at significant facilities in regional and remote Western Australia are the current priority for funding.

Investment opportunities

The State Climate Policy is envisioned to be a roadmap that will help guide WA's transition to a low carbon future by building on existing climate-related initiatives and assisting the State Government in its commitment to work with all sectors to achieve net zero emissions for WA by 2050. In September 2019, the WA Government released its climate change issues paper, "Changing Climate in Western Australia – issues paper" (**Issues Paper**). Public submissions to help shape the State Climate Policy were invited and closed in November 2019. The State Climate Policy is expected to be released towards the end of 2020.

Given the State Government's holistic approach to climate change, we expect that there will be a number of investment opportunities across key areas raised in the Issues Paper, including:

1. Transforming energy generation

- 1.1. It is expected that transformation of the power system may lower-cost and lower-emissions energy for WA households and businesses.
- 1.2. Declining energy costs may soon put the combination of battery storage and renewable sources on par with conventional energy sources. Other opportunities in the energy generation sector includes the installation of innovative solutions for fringe-of-grid and remote off-grid locations.

2. Industry innovation

- 2.1. WA's energy, mining and manufacturing industries are key drivers of the WA's economy, with the resources sector contributing almost one third of WA's gross state product.
- 2.2. Harnessing WA's world-class renewable resources to break the link between energy and emissions may put WA's energy intensive businesses at the forefront of cleaner production trends and provide a competitive advantage in a low-carbon world.

- 2.3. Many mining and energy projects in WA are located in areas with abundant, high-quality renewable energy resources.
- 2.4. LNG has the potential to displace higher emissions fuels in shipping, reducing greenhouse gas emissions from the export of fuels and minerals.

3. Future mobility

- 3.1. Transport emissions contribute 17% of WA's total greenhouse gas emissions and have increased steadily in recent years. Most of WA's transport emissions come from passenger vehicles with emissions linked to population growth and an overall increase in the number of kilometres travelled.
- 3.2. WA may be able to lower its emissions through multiple opportunities, including integrated land use and transport planning, mode shift (encouraging people to use more public transport and replacing car trips with 'active transport' options such as walking and cycling), improving freight management and using more fuel-efficient or low-and zero-emission vehicles.
- 3.3. The electrification of transport, combined with decarbonisation of the electricity grid, will significantly reduce greenhouse gas emissions, as well as provide air quality and fuel security benefits.

4. Regional prosperity

- 4.1. WA is Australia's largest grain-producing region and a significant producer of meat, dairy, wool and horticulture products. Climate change presents WA's regional communities with both impacts to be managed and new economic opportunities to take advantage of.
- 4.2. WA's primary agricultural producers are at the forefront of technological innovation, driven by the need to adapt to drying conditions. Advances in technology, supported by investment in crop breeding, agronomy, stock breeding and husbandry will create opportunities to maintain, develop and diversify new business models and services.
- 4.3. New business opportunities and methodologies such as carbon farming and bioenergy production are emerging, unlocking new income streams in regional and remote areas, supporting regional prosperity and delivering environmental co-benefits.

5. Waste reduction

- 5.1. Waste accounts for a relatively minor proportion of WA's greenhouse gas emissions. However, waste generation and disposal has a significant impact on the environment and public health through pollution, biodiversity loss and resource depletion.
- 5.2. Several landfill sites in WA capture methane generated from waste to produce energy. Methane emissions from the decomposition of organic matter can also be reduced by composting waste instead of stockpiling it or sending it to landfill.
- 5.3. Carbon farming methods are available for avoiding methane production and composting organic waste under the Australian Government's Emissions Reduction Fund (now Climate Solutions Fund). This has the potential to provide income opportunities for land managers and alternative waste treatment providers.

6. Liveable towns and cities

- 6.1. WA's built environment, particularly homes and offices, and fixed equipment such as heating and cooling systems, are long-life assets. Decisions made today can lock in energy savings – or, conversely, lock in higher energy use and emissions – for many years to come.
- 6.2. Linking transport corridors with places of employment, housing and recreation can reduce the need for private vehicle travel. A new initiative, Design WA, outlines key considerations for energy efficiency and climate resilience and aims to ensure good design is the centre of all development in WA.

7. Resilient infrastructure and business

- 7.1. Infrastructure is generally capital-intensive and has a long life span. It is therefore important that infrastructure is designed, built and maintained to be resilient in the face of climate change.
- 7.2. Embedding consideration of climate change into agricultural practices and land sector development can enhance resilience, while integration of large-scale renewable energy projects into agricultural enterprises can minimise exposure to future carbon pricing. Targeted investment in resilience measures is estimated to reduce government expenditure on disaster relief and recovery.

Global resources

Norton Rose Fulbright is a global law firm. We provide the world's preeminent corporations and financial institutions with a full business law service. We have more than 3700 lawyers and other legal staff based in Europe, the United States, Canada, Latin America, Asia, Australia, Africa and the Middle East.



◆ Our office locations

People worldwide	7000+
Legal staff worldwide	3700+
Offices	50+
Key industry strengths	<ul style="list-style-type: none"> Financial institutions Energy Infrastructure, mining and commodities Transport Technology and innovation Life sciences and healthcare

Europe	
Amsterdam	Milan
Athens	Monaco
Brussels	Moscow
Frankfurt	Munich
Hamburg	Paris
Istanbul	Piraeus
London	Warsaw
Luxembourg	
United States	
Austin	New York
Dallas	St Louis
Denver	San Antonio
Houston	San Francisco
Los Angeles	Washington, DC
Minneapolis	
Canada	
Calgary	Québec
Montréal	Toronto
Ottawa	Vancouver

Latin America	
Mexico City	
São Paulo	
Asia Pacific	
Bangkok	
Beijing	
Brisbane	
Canberra	
Hong Kong	
Jakarta ¹	
Melbourne	
Perth	
Shanghai	
Singapore	
Sydney	
Tokyo	
Middle East	
Dubai	
Riyadh ²	
Africa	
Bujumbura ³	
Cape Town	
Casablanca	
Durban	
Harare ³	
Johannesburg	
Kampala ³	
Nairobi ³	

1 TNB & Partners in association with Norton Rose Fulbright Australia
 2 Mohammed Al-Ghamdi Law Firm in association with Norton Rose Fulbright US LLP
 3 Alliances

Contacts



Elisa de Wit
Partner, Melbourne
Tel +61 3 8686 6266
elisa.dewit@nortonrosefulbright.com



Noni Shannon
Partner, Sydney
Tel +61 2 9330 8346
noni.shannon@nortonrosefulbright.com



Rebecca Hoare
Partner, Brisbane
Tel +61 7 3414 2635
rebecca.hoare@nortonrosefulbright.com



Jacqueline Plant
Special Counsel, Melbourne
Tel +61 3 8686 6437
jacqueline.plant@nortonrosefulbright.com



Sonali Seneviratne
Senior Associate, Sydney
Tel +61 2 9330 8025
sonali.seneviratne@nortonrosefulbright.com

NORTON ROSE FULBRIGHT

Norton Rose Fulbright is a global law firm. We provide the world's preeminent corporations and financial institutions with a full business law service. We have more than 3700 lawyers and other legal staff based in Europe, the United States, Canada, Latin America, Asia, Australia, Africa and the Middle East.

Law around the world

nortonrosefulbright.com

Norton Rose Fulbright Verein, a Swiss verein, helps coordinate the activities of Norton Rose Fulbright members but does not itself provide legal services to clients. Norton Rose Fulbright has offices in more than 50 cities worldwide, including London, Houston, New York, Toronto, Mexico City, Hong Kong, Sydney and Johannesburg. For more information, see nortonrosefulbright.com/legal-notices. The purpose of this communication is to provide information as to developments in the law. It does not contain a full analysis of the law nor does it constitute an opinion of any Norton Rose Fulbright entity on the points of law discussed. You must take specific legal advice on any particular matter which concerns you. If you require any advice or further information, please speak to your usual contact at Norton Rose Fulbright.

© Norton Rose Fulbright Australia. Extracts may be copied provided their source is acknowledged.
25843_EMEA - 08/20