

Chapter 4: Policy and Project Benefits

Policy and Project Benefit

- 4. Policy and Project Benefits.....2
- 4.1 Policy Objectives2
- 4.2 Federal Legislation and Policy3
- 4.3 State Policy5
- 4.4 Regional Policy..... 11
- 4.5 Project Benefits 12
- 4.6 Socio-Economics 13
- 4.7 Sustainable Communities Fund 15

4. Policy and Project Benefits

This Chapter provides an overview of the policy and project benefits that underpin the proposed Keyneton Wind Farm.

4.1 Policy Objectives

It is widely accepted that climate change is one of the greatest economic, social, and environmental challenges of our time.

The vast majority of informed scientific opinion continues to conclude that human activity is largely responsible for accelerating climate change effects, resulting in changing rainfall patterns, temperature effects, reducing water availability in Australia and increasing the frequency and intensity of severe weather events such as drought, bushfires, storms and floods.

The CSIRO's 2012 State of the Climate Report confirmed that:

- Climate change is continuing
- Warming has been measured around Australia and globally during recent decades
- 2010 Global temperatures were the warmest on record (slightly higher than 2005 and 1998)
- Australia experienced record rainfalls and the coolest temperatures since 2001 due to a very strong La Niña event in 2010 and 2011
- Concentrations of long-lived greenhouse gases in the atmosphere reached a new high in 2011
- Australian temperatures are projected to increase in coming decades
- Rising CO₂ emissions from the burning of fossil fuels has affected global temperature much more than natural climate variability during the past century

The potential eco-system impacts and destruction of natural icons resulting from climate change such as coral bleaching on the Great Barrier Reef¹ and multiple eco-system impacts in Kakadu leading to habitat destruction and subsequent species extinction is well documented².

However, the impacts of climate change on Australia are not just environmental; they are also social and economic. Social impacts from climate change will likely include affects on human health^{3,4} which have numerous flow-on effects on the community. Mitigating the impacts of climate change and at the same time reducing the (well documented) effects of fossil fuel use on human health will help ameliorate the real and significant threats to the health of Australians now and for many decades into the future.

Economic impacts can have real and tangible effects as noted in the Australian Bureau of Agricultural and Resource Economics^{5,6} (ABARE). Climate change effects on the severity of

¹ Great Barrier Reef Marine Park Authority (2007). Climate change and the Great Barrier Reef: vulnerability assessment

² Australian Government. (2011). Australia's biodiversity and climate change – Kakadu: a climate change hot spot

³ Climate Commission (2011). The Critical Decade: climate science, risks and responses. p. 3,4

⁴ Horton, R (2009). The climate dividend. The Lancet 374:1869 – 1870

⁵ ABARE (2007). Climate change impacts on Australian agriculture

droughts and increased incidence (and severity) of flooding will lead to significant reductions in agricultural output and adverse GDP impacts.

As demonstrated by Professor Ross Garnaut in his major reviews for the Australian Government in 2008 and (updates) in 2011, *“the growth rate for Australian national income in the second half of the 21st century would be higher at the end of the century **with** mitigation than **without**.”* Garnaut concluded that that strong mitigation is clearly in the national interest, taking market and non-market benefits into account such as the value of our natural and social heritage, health and the value of insuring against worse case impacts⁷.

The Australian Climate Commission’s 2011 report similarly concluded that *“the longer we wait to reduce emissions, the more difficult and costly those reductions become, thus the choices made this decade are critical to reduce risks to society’s prosperity, health, stability and way of life”*⁸. This is particularly apparent in relation to decarbonising our energy generation system.

Wind farm projects such as the Keyneton Wind Farm are taking place in a context of increasing scientific consensus, public awareness and policy settings designed to begin to mitigate climate change caused by the use of fossil fuels for energy needs, widespread deforestation and other human activities.

One of the main mitigation measures is to increase the proportion of renewable energy relative to fossil fuel consumption, particularly in the stationary power generation sector to accelerate the transition to low carbon energy supply.

4.2 Federal Legislation and Policy

In 2011 the Australian Government introduced the Clean Energy Future legislative package, making the goal of carbon reduction through clean energy investment the central plank in the national policy which will introduce an explicit carbon price in July 2012 for Australia’s largest emitters.

The Clean Energy Future legislation establishes targets to cut pollution by at least five per cent compared with 2000 levels by 2020 and then by 80 per cent below 2000 levels by 2050 in line with commitments from the United Kingdom and Germany⁹

As shown in the Treasury’s core policy scenario modelling for the clean energy future legislation, a major contributor to the reduction in emissions by 2020 and 2050 is decarbonising our electricity supply with much larger shares of clean energy¹⁰.

⁶ABARE (2008). Climate change: Opportunities and challenges in Australian agriculture, Don Gunasekera, Catherine Tulloh, Melanie Ford and Edwina Heyhoe. Australian Bureau of Agricultural and Resource Economics June 2008

⁷ Garnaut Climate Change Review (2011). Summary of Garnaut Review 2011. Introduction

⁸ Climate Commission (2011). The Critical Decade: climate science, risks and responses.

⁹ Australian Government (2011). Clean Energy Bill 2011 – Explanatory Memorandum http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22legislation%2Fems%2Fr4653_ems_065eea50-9f9d-46db-93be-cf3f5440a0c4%22;rec=0

¹⁰ Australian Treasury (2011). Strong Growth, Low Pollution – modelling a carbon price. Ch 5

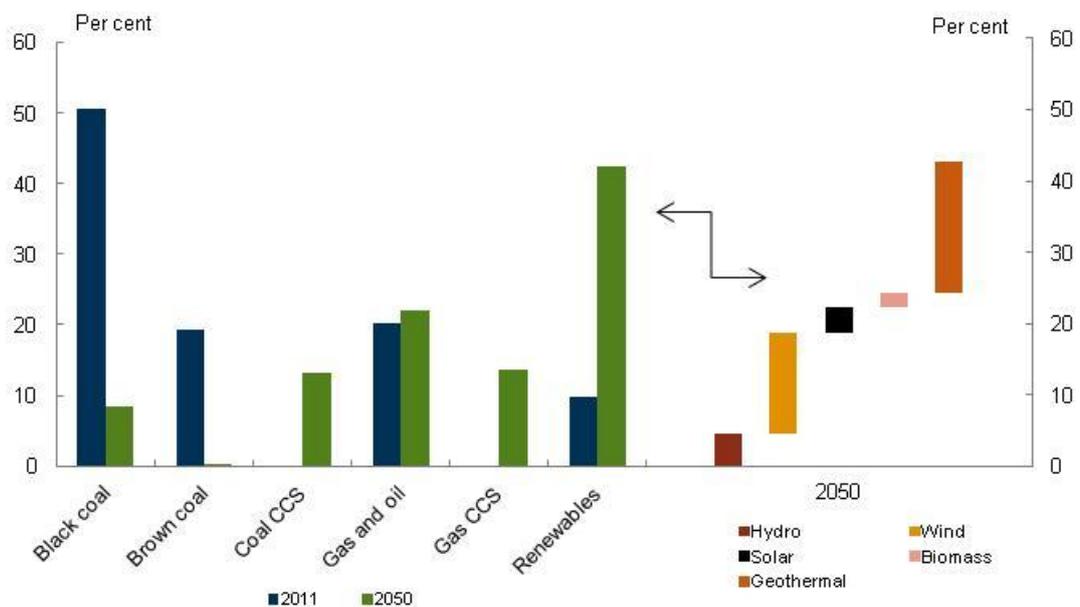


Chart 4.1: Clean energy future legislation targets¹¹

The policy establishes a clear framework to incentivise investment in energy efficiency, innovation and clean energy. However, as recognised by the Government on release of the policy, transforming the energy sector away from high polluting sources will not be achievable through carbon pricing alone.

The Minister for Climate Change, and the Prime Minister have clearly stated that the while the carbon price is a vital component in the Government’s strategy for action on climate change, it is fundamentally complemented by the national 20% Renewable Energy Target for 2020.

The 2020 20% renewable energy target builds on the Howard Government’s original Mandatory Renewable Energy Target (MRET) scheme which aimed for a 2%, and later a 10%, increase in the proportion of renewable energy in Australia’s electricity supply.

In 2007, the new Labor Government committed to ensuring that 20%, or 45,000 GWh, of Australia’s electricity supply comes from renewable energy sources by 2020. In 2010, the Government amended the RET legislation to separate the incentives for large and small scale sources and incorporate regular (biannual) reviews.

- The large scale renewable energy target (LRET) includes legislated annual targets and operates much the same as the previous RET design, but as a separate scheme to the small scale renewable energy scheme (SRES).
- From 2011 to 2030, the annual targets for the LRET are set at 4,000 gigawatt-hours (GWh) per year less than the previous RET targets, reaching 41,000 GWh by 2020. This is to take account of the separate mechanism to support small-scale renewable energy systems under the SRES.

The LRET, covers large-scale renewable energy projects like wind farms, commercial solar and geothermal, and will deliver the majority of the 2020 target.

¹¹ Op. Cit. Chart 5.21 Renewable generation – clean energy future

The LRET retains strong bipartisan support in Federal parliament¹² and arguably provides investors with a clear investment environment for deployment of projects to deliver 41,000 GWh of utility scale renewable energy generation by 2020.

4.3 State Policy

4.3.1 South Australia's Strategic Plan 2011

South Australia's Strategic Plan (SASP) was launched by the State in 2004 and updated in 2007 and 2011. The Plan provides a framework for the activities of the South Australian Government, business and the entire South Australian community.

The plan outlines medium to long-term high level direction for the whole of South Australia under six (6) interrelated objectives:

- Growing Prosperity
- Improving Wellbeing
- Attaining Sustainability
- Fostering Creativity and Innovation
- Building Communities
- Expanding Opportunity

100 targets, most with a 10-year or longer timeframe, were grouped under these six objectives. The 2011 update of the Strategic Plan tracks progress state-wide, and where appropriate updates targets.

The 2010 Audit of progress under the 2007 Strategic Plan acknowledged that "if South Australia is to reduce emissions beyond 2012...will require a combination of improvements in energy efficiency, renewable and low emission technologies, transport efficiency, and agriculture and land use"¹³. In this context, the Audit also identified the vital role played by national policies such as the Renewable Energy Target and the national clean energy future legislation.

The State's commitment to the development of renewable energy is clear and has been a feature of the SASP since 2004. Indeed the 2011 Strategic Plan, notes the State's leading role in terms of renewable energy investment:

South Australia is well positioned to take positive action to ensure environmental sustainability. South Australia was one of the first places to enact legislation to reduce carbon emissions. In 2011 South Australia has over half of Australia's wind-generation capacity, providing 20% of the state's electricity production.

¹² <http://www.smh.com.au/opinion/political-news/lets-keep-our-power-pants-on-20120420-1xbgo.html>

¹³ SA Government (2010). South Australia's Strategic Plan Progress Report 2010. p.63

The updated 2011 Strategic Plan emphasises South Australia's commitment to renewable energy development through the following targets¹⁴:

- Target 59: Greenhouse gas emissions reduction:
 - Achieve the Kyoto target by limiting the state's greenhouse gas emissions to 108% of 1990 levels during 2008-12, as a first step toward reducing emissions by 60% (to 40% of 1990 levels) by 2050.

- Target 64 – Renewable Energy:
 - Support the development of renewable energy so that it comprises 33% of the state's electricity production by 2020 (baseline: 2004-05) Milestone of 20% by 2014 (as shown in Chart 4.2 below).

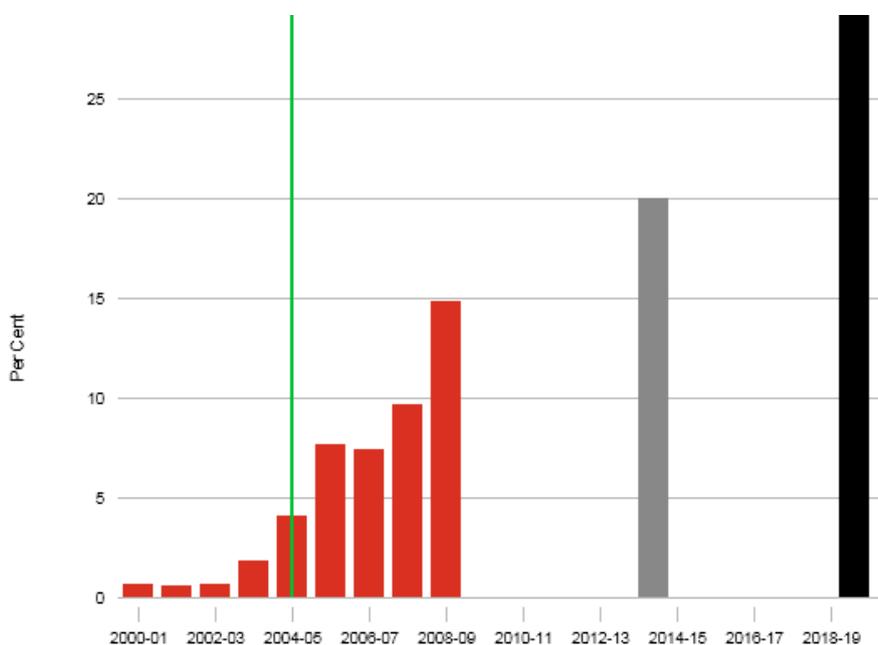


Chart 4.2: Renewable energy development, consumption, and emission targets¹⁴

- Target 65: GreenPower
 - Purchase renewable energy for 50% of the government's own electricity needs by 2014 (baseline: 2010)

- Target 66: Emissions intensity
 - Limit the carbon intensity of total South Australian electricity generation to 0.5 tonnes of CO₂/MWh by 2020 (baseline: 2011)

¹⁴ SA Plan (2011), South Australia's Strategic Plan.p32 <http://saplan.org.au/priorities/our-environment>

4.3.2 Strategic Infrastructure Plan for South Australia 2004/5-2014/5

The Strategic Infrastructure Plan for South Australia 2004/5-2014/15 outlines the State's infrastructure priorities and challenges for the next 10 to 15 years and complements the SASP. It provides an overarching state framework for the planning and delivery of infrastructure by all government and private sector infrastructure providers.

The following excerpts from the Infrastructure Plan outlines the State's growing energy demands and the broad options available to meet this demand:

As a participant in the national electricity market (NEM), South Australia is supplied by a combination of local generation and energy imported from other states via the Murraylink and Heywood interconnectors. Forecast growth in demand for electricity shows that the state will need additional supply capacity toward the end of this decade. There are a number of options ranging from investment in new base-load generation or interconnector capacity through to increased use of renewable energy sources.¹⁵

Specifically with respect wind energy, the Infrastructure Plan states the following:

Successful use of additional wind energy will depend on connection and performance standards for wind farms; the ability to export wind energy to and balance imports from the eastern states via interconnectors; the use of demand-side measures or additional flexible generation, as well as the development of improved forecasting and data systems. ESIPC has undertaken preliminary work on these issues, which will guide subsequent activities to be considered in detail in the Energy Plan.¹⁶

4.3.3 Planning Strategy for South Australia's Key Government Regions

The South Australian Government has incorporated regional planning into broader state strategic planning approaches including broad, long term policy directions, regular monitoring, reporting and reviews.

The *South Australian Planning Strategy* is integrated with other government policy documents such as the *Strategic Infrastructure Plan for South Australia*, *Water for Good*, the *State Natural Resource Management Plan* and the *Housing Strategy for South Australia*. The Planning Strategy is prepared pursuant to Section 22 of the *Development Act 1993*.

Since 2007, the South Australian Government has been undertaking planning reform to enable South Australia to prepare for and maximise the benefits of predicted growth. Built on a strong evidence-base, the new Planning Strategy for South Australia establishes a long-term vision for the state as a liveable, competitive, sustainable and climate change resilient community.

The Planning Strategy has three overlapping objectives, grouped under the three themes of increasing competitiveness, maintaining and improving liveability, and driving sustainability and resilience to climate change.

This Government has established a periodic review process to track progress towards meeting the objectives of the Planning Strategy in each of the key government regions. Those key regions of

¹⁵ SA Government (2005). Strategic Infrastructure Plan for South Australia 2004/5 – 2014/5. p.21

¹⁶ Ibid, p130

the state are Greater Adelaide, Eyre and Western, Far North, Kangaroo Island, Limestone Coast, Murray and Mallee, Yorke and Mid North. Keyneton is within the Murray and Mallee Region.

Murray and Mallee Regional Plan

The *Murray and Mallee Regional Plan*, a volume of the South Australian Planning Strategy was released in January 2011. It provides a link between statewide planning goals and local council specific planning needs and seeks to ensure a consistent approach to land use and development across the State.

The *Murray and Mallee Regional Plan* address key issues grouped under four (4) themes:

- Environment and Culture
- Economic Development
- Population and Settlements
- Infrastructure and Services Provision

The vision for the region includes the following aims¹⁷:

- assist primary production industries to adapt to variations in climate and water availability and become more sustainable
- facilitate long-term sustainability, taking into account variations in climate and water availability
- promote the generation and use of renewable energy supplies such as solar, wind and thermal rock technologies

Following an outline of the vision for the region, principles and policies are set out under the key themes identified above. Those relevant to the proposed Keyneton Wind Farm are included below.

Environment and Culture

Under Principle 2 – Create conditions for the region to become resilient to the impacts of climate change, the following policies are included:

- Policy 2.1 Promote carbon sequestration and greenhouse gas mitigation activities through sustainable land-use management practices, taking into account climate, land and soil suitability and species characteristics.
- Policy 2.7 Provide for the development of alternative and innovative energy generation and water supply, including guidance on environmental assessment requirements.

Economic Development

Principle 5 – Protect and build on the region's strategic infrastructure, includes the following policies:

- Policy 5.4 Promote the development of renewable energy in appropriate locations and facilitate the establishment of supply chains in association with renewable energy developments.
- Policy 5.5 Manage interfaces between infrastructure and residential areas and other sensitive land uses to ensure adequate protection against noise and air pollution.

¹⁷ SA Government (2011) Murray and Mallee Region Plan, p16

Principle 6 – Retain and strengthen the economic potential of primary production land, includes the following policies:

- Policy 6.1 Prevent loss of productive agricultural land and potential conflict with incompatible uses by:
 - focusing housing (including rural living allotments) and industrial development in and adjacent to towns and industrial estates, unless directly related to primary industry
 - preventing fragmentation of viable and productive agricultural land
 - limiting and carefully locating rural living areas
 - managing interfaces with residential areas and other sensitive activities through the use of buffers
 - ensuring tourism-based developments are sited away from agricultural land where practicable
 - designating areas of primary production significance (in particular high-value agricultural and horticultural land) in Development Plans and introducing planning controls to protect their use.

- Policy 6.6 Encourage the development of small- and large-scale value-adding activity that complements primary production in the local area, provided it does not adversely impact on areas of primary production significance

Infrastructure and Service Provision

With respect Infrastructure and Service Provision, the Region Plan references and confirms the priorities outlined in the *Strategic Infrastructure Plan for South Australia 2004/5-2014/5* (see above). The Plan clarifies priorities for the Region including:

- *allow for future electricity transmission upgrades by provision and protection of corridors parallel to existing infrastructure or where identified by ElectraNet*¹⁸

4.3.4 South Australian Renewable Energy Target

The South Australian Government introduced a 20 per cent renewable energy target by 2014 for the state as part of the *Climate Change and Greenhouse Reduction Act 2007*¹⁹ to take advantage of opportunities spurred under the national renewable energy target.

The 2007 South Australian renewable energy target was delivered three years ahead of schedule, with 21 per cent of electricity produced by renewable energy generators in 2010/11 (as shown in Chart 4.3 from the Australian Energy Market Operator).

¹⁸ SA Government (2011) Murray and Mallee Region Plan, p61

¹⁹ Part 2 of the Act states: “(1) The principal target under this Act is to reduce by 31 December 2050 greenhouse gas emissions within this State by at least 60% to an amount that is equal to or less than 40% of 1990 levels. (2) Two related targets under this Act are – (a) to increase the proportion of renewable electricity generated so that it comprises at least 20% of electricity generated in the State by 31 December 2014; (b) to increase the proportion of renewable electricity consumed so that it comprises at least 20% of electricity consumed in the State by 31 December 2014.”

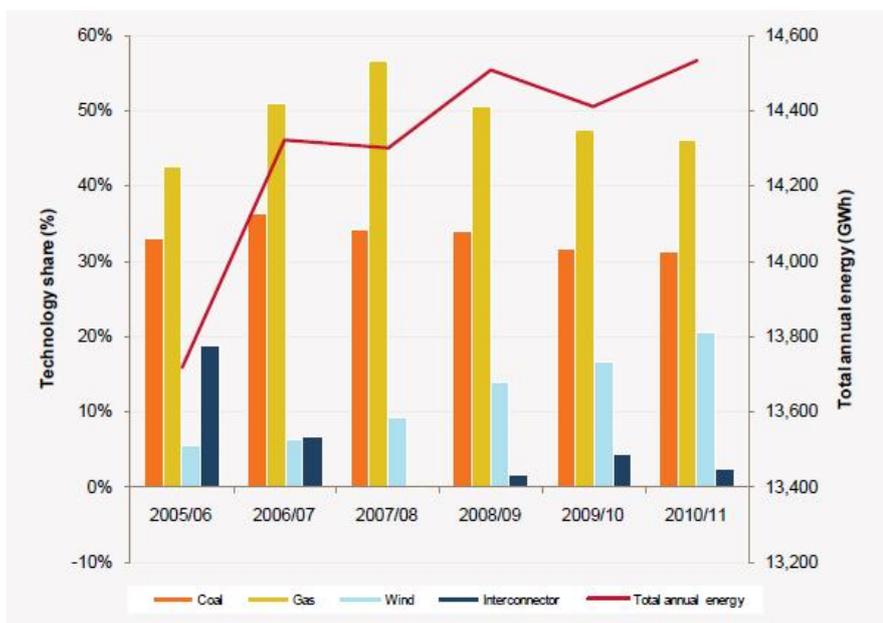


Chart 4.3: Annual energy consumption by fuel type²⁰

The State identified that the earlier target would be met significantly ahead of schedule and has now implemented a further ambition, committing to achieving 33% of electricity generation to from renewable sources by 2020²¹.

South Australia shows that wind generation works and demonstrates that policies that bring forward deployment of clean energy provide multiple benefits. In 2003 South Australia had 0.15MW of wind. Today, less than ten years later, the state has 1,150MW installed (534 turbines) and over 21% of the state’s electricity was supplied by wind generation in 2010/11. Over \$2.5 billion of private capital investment has been injected through these projects, and more than 3,200 jobs created (25% direct, 75% indirect).

Utility scale wind is also sufficiently predictable and can be integrated into system and market operation by the Australian Energy Market Operator to around 98% accuracy, using their wind energy forecasting system (AWEFS).

In terms of emissions, South Australia’s energy related emissions are trending down. Over the same period, wind generation has dampened the effect and instance of extreme price events in the wholesale energy market. The Australian Energy Market Operator noted in 2011 that “overall, South Australia has substantially lower wholesale prices than other states because of wind”²².

²⁰ AEMO (2011). South Australian Demand and Supply Outlook 2011

²¹ Government of South Australia (2011). A Renewable Energy Plan for South Australia – strategy paper. p. 4

²² AEMO (2011). South Australian Demand and Supply Outlook 2011

4.4 Regional Policy

4.4.1 Regional Development - Regional Road Map 2011 – 2013

*Regional Development Australia (RDA) is an Australian Government initiative that brings together all levels of government to enhance the growth and development of Australia's regions. A national network of RDA committees has been established to achieve this objective.*²³

RDA Murraylands & Riverland Inc. formed in February 2010, combining the previous Murraylands Regional Development Board (MRDB) and the Riverland Development Corporation (RDC). The Murraylands and Riverland Regional Road Map 2011 – 2013 outline the RDA's vision, mission and strategic plan.

One of the RDA's three core strategies is Regional Diversification and Restructuring and renewable energies are highlighted as a key component and opportunity of this core strategy (Strategy 1.3). The proposed Keyneton Wind Farm will complement the RDA's vision and strategies by provide regional employment and income generation opportunities and contributing to a diversification of the traditional economic base.

4.4.2 Murray-Darling Basin - Natural Resource Management Plan

*The Natural Resources Management Act 2004 creates a regulatory framework for the management of the water, soil and biological assets of each region. It requires the South Australian Murray-Darling Basin Natural Resources Management Board to prepare a Regional NRM Plan, setting out the policies it will use to protect the environment and the interests of the community. The preparation of the Regional NRM Plan created an opportunity for the community and stakeholders to develop an integrated vision for the future of natural resources for the South Australian Murray-Darling Basin region.*²⁴

The Regional NRM Plan includes five program or asset areas, namely people, water, biodiversity, land and atmosphere. The vision for the long term outcome for the atmosphere is to reduce net greenhouse gas emissions. Intermediate outcomes (targeted within a 5 year investment timeframe) are identified as a means of achieving the long term vision and the Board states that it will focus on promoting renewable energy and its uptake within the Region.

The NRM Plan identifies a long-term resource condition targets (RCTs) to *reduce greenhouse gas emissions in the SA Murray-Darling Basin by 60% by 2050* (RCT A1). The Plan subsequently identifies intermediate management action targets (MATs) to be achieved to realise the atmosphere asset vision. MAT A1.1 aims for *voluntary renewable energy use at 20% and support for renewable energy generation in the Region by 2014*.

4.4.3 Pacific Hydro's Principles of Development

Guided by its Vision and Mission statements, Pacific Hydro is actively looking to develop projects that will help achieve these goals. Wind farms use proven technology and are the most commercially viable large scale renewable energy ready to be deployed at the State, National and Global level.

²³ <http://www.rdamr.org.au/home.html>

²⁴ <http://www.samdbnrm.sa.gov.au/>

Pacific Hydro applies the principles of sustainable development to all stages of the project development cycle as outlined within the Company's Health, Safety and Sustainability Policy which is provided as Attachment 1.1.

With respect to the principles of sustainable development, renewable energy is by its very nature a sustainable model for electricity production. With respect to future generations, world electricity consumption is projected to be 85% higher by 2030. Increasing the use of energy from renewable sources is therefore a vital component for reducing greenhouse emissions and associated climate change.

In addition to providing sustainable sources of electricity, Pacific Hydro also employs the following hierarchical, environmental principles during the design and construction phases of development. Firstly, impacts will be avoided where possible; secondly, impacts will be minimised, for example with use of appropriate management techniques; and finally, negative impacts will be mitigated or compensated wherever possible.

Pacific Hydro is also highly aware that we have a responsibility to develop and maintain good relations in the region in which we operate.

As a project developer, our communications objective is to provide informative, accessible, and respectful information and responses to community members and stakeholders.

We proactively engage with community and other stakeholders throughout the phases of wind farm development, providing the best independent and scientifically robust information available on many issues. We value and respect the need for consistent, evidence-based regulatory controls and a robust development framework that enables balanced decisions to be made on the basis of fact.

4.5 Project Benefits

Based on an approximate 105MW capacity project, the wind farm will generate significant environmental, economic and social benefits, a summary of which are listed below:

- Over 240,000 tonnes of carbon pollution avoided each year^{25 & 26}.
- Enough electricity to power approximately 68,000 homes each year²⁷.
- A similar amount of electricity produced by a brown coal-fired power station would use over 500,000 megalitres of clean water each year²⁸.

²⁵ Calculations based on expected annual generation (340,326 MWh) x state emissions factor (0.72). Emissions factors are as per the 2010 Factors and Methods update from the Federal Department of Climate Change and Energy Efficiency <http://www.climatechange.gov.au/~media/publications/greenhouse-acctg/national-greenhouse-factors-july-2010-pdf>.

²⁶ The estimated greenhouse gas mitigation, electricity generation and water savings are based on a capacity factor of 37%

²⁷ Calculations based on expected generation x average household consumption. Average household consumption based on AEMC assumptions for South Australia outlined in Future Possible Retail Electricity Prices: 1 July 2011 to 30 June 2014, Appendix B.

- The permanent works take up less than 1% of the landholder's property, ensuring current farming practices can continue and ensuring a minimal environmental footprint of the project.
- Diversify the income base of the agricultural sector in the region.
- Pacific Hydro aims to maximise local contracts and jobs in construction and operation - typically 30% by capital value, from the approximate \$242 million project cost
 - Pacific Hydro estimates that the construction stage will involve around 500 individuals over a 24 month period with over 380 of those likely to be sought from the local region²⁹ or within South Australia³⁰
 - Local firms will also be invited to bid for a significant portion of works on roads, foundations, electrical components, concrete batching, etc.
 - Once operational, around six to eight full-time jobs (equivalent) are likely to be generated
- Indirect economic benefits will be realised by local business (e.g. – retail, hospitality, accommodation businesses, vehicle and fuel service businesses, concrete businesses, transport operators, quarries, general labour and electrician services etc) throughout construction and operation.
- For example, Pacific Hydro estimates around \$4 million will be spent locally on accommodation, food services and fuel during the construction phase³¹.
- Pacific Hydro supports local activities at all our wind farm sites and once a project is operational, we dedicate a portion of its revenue to sponsor local community organisations through our Sustainable Communities Fund.
- Once operational, Pacific Hydro will call for local volunteers to assist in the allocation of the Keyneton SCF and to ensure the community has direct input to the delivery of sustainable outcomes from the estimated annual amount of \$100,000 over the life of the project.
- Mid-Murray Council has inquired about Pacific Hydro's intentions (if any) to provide a lookout or viewing platform with interpretative signage so that visitors and tourists in the area may view and learn about the wind farm. Pacific Hydro will discuss further with Mid-Murray (and Barossa) Council(s) and other relevant parties to determine whether a suitable and safe location which will not cause a traffic hazard exists.

4.6 Socio-Economics

This section provides information on employment and economic opportunities created by the proposed wind farm and the Sustainable Communities Fund.

²⁸ Calculation based on sent out generation x water consumption factor (brown coal). Water consumption figures derived from 2009, National Water Commission Report: Water and Electricity Generation Industry, Implications of Use.

²⁹ In relation to employment opportunities, the local region is assumed to be within a 20km radius of the project

³⁰ Note: quantities and periods of employment are highly dependent on proximity to regional centres, presence of suitable labour and accommodation in the area and contracting methodologies.

³¹ Estimated spend based on actual expenditure during construction of Clements Gap

4.6.1 Employment and Economic Development

Pacific Hydro aims to maximise local content at all of its wind farm sites from construction to operation and aims to use a minimum of 30% local (regional) content by capital value and endeavour to use local and regional contractors and suppliers in all aspects of wind farm development.

Many employment opportunities are created during the construction phase of the project when local firms are invited to bid for a significant portion of the construction work on roads, foundations and electrical requirements.

A recent review of the economic impact from AGL's Hallett Wind Farm found that a range of businesses with relevant capabilities and services benefited from the developer and its suppliers actively pursuing local contractors to provide services, especially for domestic scale electricians, transport operators, machine operators, general labourers, quarries, concrete businesses, accommodation (hotels, motels, rental premises), and food service businesses³².

Based on historical data, Pacific Hydro estimates that the construction stage for Keyneton would involve around 500 individuals with around 160 full time equivalent jobs each year of construction. Pacific Hydro estimates that the majority of these jobs are likely to be filled by South Australians; however quantities and periods of employment are highly dependent on proximity to regional centres, the presence of suitable labour and accommodation in the area and contracting methodologies.

Once operational, around six to eight full-time jobs are likely to be created through direct employment by Pacific Hydro or by our Operations and Maintenance contractor.

In addition to direct employment, it is estimated that indirect employment effects are in the order of just under 3 jobs for every 1 created by a wind energy project³³. The SKM study for AGL found that for the Hallett 1 project, 1.85 jobs were created from construction and manufacturing for every 1 direct position³⁴. It is likely that the multiplier for the Keyneton project would be similar to Hallett 1.

Pacific Hydro includes a clause in all tender documents encouraging contractors to use the services of the Industry Capability Network to identify ways of determining local industry capabilities and local industry participation opportunities. Contractors are required to detail the ways in which they intend to maximise local participation and sustainability.

In addition Pacific Hydro will work with the Mid-Murray Council to ensure that all local contractors are provided with information relating to the development and information about tenders for such work.

Figures collected during construction of Pacific Hydro's Clements Gap Wind Farm in South Australia (27 generators) are provided as an example:

- Number of local region companies or businesses - 49

³² SKM (2010). Economic Impact Assessment of the Hallett Wind Farms. Pp. 3-4.

³³ Ibid. p. 40.

³⁴ Ibid. Pp. 40-41

- Work categories (fencing; plumbing; electrical etc) - 25
- Number of employees involved (inducted) - 403 (approx 280 South Australians employed)
- Estimated full-time equivalents over a year - 113

These estimates exclude the manufacture of tower sections, blades, imported generators and dockside employment.

Further economic benefits include:

- Agricultural diversification – Diversifies the agricultural income base whilst allowing existing farming practices to continue
- Indirect employment and economic benefits will occur in the local area and region, particularly during the construction period.

Based on employment figures generated during the construction stage of Clements Gap Wind Farm (consisting of 27 turbines), it is anticipated, that the Keyneton Wind Farm will generate approximately 500 job opportunities during its 24 months construction phase.

The local business community is also expected to benefit from indirect economic stimulus. For example, an estimated \$4 million will be spent on local accommodation, food services and fuel alone during construction.

During the wind farms operational life, And based on historical data it is estimated that the six to eight full time Operations and Maintenance staff would indirectly inject \$260,000 per year into the local economy for accommodation, food and petrol expenditure alone.

4.7 Sustainable Communities Fund

Pacific Hydro values the support of the communities in which we operate. We consult with our host communities throughout our project lifecycles, from planning to development, construction and operation and support local initiatives through our Sustainable Communities Fund.

Pacific Hydro's is proud that its Sustainable Communities Fund was an industry first when it was launched in 2005 and it is now replicated by most other renewable energy companies in Australia.

The program provides a portion of revenue from each of our operating wind farms back into our host communities through community groups and organisations for the operating life of the wind farm (typically 20-25 years).

The Fund is committed to supporting projects that will provide lasting benefits to the local community across five areas; health and welfare, education and training, environment, sporting or recreation and culture and the arts.

Since the Fund was launched in November 2005, over \$1.2 million has been injected into 362 local socially and environmentally sustainable projects.

Funds are distributed following an application process. Consultation with and involvement of community members (as outlined above) ensures that funding allocations are based on identified community priorities and to organisations that are able to deliver the programs to the community.