

Appendix 22 - Economic Impact Assessment

Bullawah Wind Farm Project

Economic Impact Assessment (EIA)

Prepared For Bullawah Wind Farm Pty Ltd (BWF)





'Gura Bulga'

Liz Belanjee Cameron

'Gura Bulga' – translates to Warm Green Country. Representing New South Wales.



'Dagura Buumarri'

Liz Belanjee Cameron

'Dagura Buumarri' – translates to Cold Brown Country. Representing Victoria.



'Gadalung Djarri'

Liz Belanjee Cameron

'Gadalung Djarri' – translates to Hot Red Country. Representing Queensland.

Ethos Urban acknowledges the Traditional Custodians of Country throughout Australia and recognises their continuing connection to land, waters and culture.

We pay our respects to their Elders past, present and emerging.

In supporting the Uluru Statement from the Heart, we walk with Aboriginal and Torres Strait Islander people in a movement of the Australian people for a better future.

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Executive Summary

Bullawah Wind Farm Pty Ltd (BWF) proposes to develop the Bullawah Wind Farm (the Project), located approximately 36 km south east of Hay, within the South West Renewable Energy Zone (South West REZ). The Project Area is located within the Hay Shire, Murrumbidgee and Edward River Local Government Areas (LGAs). The Project will include the installation, operation, maintenance and decommissioning of up to 143 wind turbine generators (WTGs), battery storage, ancillary infrastructure and temporary facilities associated with the construction of the Project. The Project design incorporates up to 143 wind turbines, with a maximum blade-tip height of 300 meters above ground level, and an installed capacity of up to 815.1 megawatts (MW).

Ethos Urban has been engaged by the Proponent to prepare this Economic Impact Assessment (EIA) for inclusion within the Environmental Impact Statement (EIS) for the Project.

Regional Economic Context

1. The population of the Economic Impact Assessment (EIA) Study Area (LGAs of Hay, Edward River and Murrumbidgee) is estimated at approximately 14,820 persons in 2023. Over the period 2023-2036, annual population growth in the EIA Study Area is expected to remain stagnant (0.0% growth) compared to the NSW growth rate of +1.0% p.a. Local investment in renewable energy projects (such as the Project) can generate new employment opportunities for residents and provide new income streams for local farmers. These factors may contribute to increased population levels within the EIA Study Area.
2. The EIA Study Area had an unemployment rate of approximately 3.3% in March 2023, with 290 jobseekers unemployed. New short-term employment opportunities for the region's labour force participants (including unemployed job seekers, subject to suitable skills match) will be supported by the Project, with a small amount of ongoing employment also supported once the facility is operational.
3. The EIA Study Area's occupational and business structures indicate an appropriate, but small, base exists to service some of the needs of the Project, with approximately 2,260 workers and 230 businesses involved in construction-related occupations and industries.
4. The EIA Study Area townships of Hay and Deniliquin have the capacity and labour force to service some aspects of the Project, while smaller settlements such as Darlington Point, Coleambally and Jerilderie have the potential to provide more limited provision of labour and other general services to the Project. Located outside the EIA Study Area, Griffith, will play an important role in supporting the Project, given the wide range of higher order services in this major regional centre.

Economic Impact Assessment

5. The Project will require approximately \$2.5 billion in investment (excluding GST) during the construction phase (of which approximately \$380 million will be retained in the EIA Study Area) and will support 210 direct and 335 indirect FTE positions in the national economy (on average) over the 44 month construction period; with 350 direct FTE and 560 indirect FTE jobs required at the Project's peak, which may last for a number of months. Once operational, an estimated 40 direct and 115 indirect FTE jobs will be supported nationally by the Project. Of these national totals, the EIA Study Area is expected to benefit from 85 FTE construction jobs and 65 FTE ongoing operational jobs (includes direct and indirect jobs).
6. The EIA Study Area has capacity to contribute to the Project and concurrent regional infrastructure projects based on its economic structure and moderate share of construction-related workers (2,260 workers) and businesses (230 businesses). However, the regional labour market is somewhat restrained, highlighted by the EIA Study Area's comparatively low unemployment rate. Accordingly, only an estimated 10% of the required Project workforce could realistically be sourced from the EIA Study Area. The Project will provide new participation opportunities for businesses and workers located in the EIA Study Area, having regard for the good match of skills and resources available. The Proponent has developed a number of procurement, training and skills initiatives that will assist in maximising opportunities for local communities.
7. The 'external' (or non-local) Project labour requirement would be expected to generate an accommodation need for 315 direct FTE workers at the peak of the Project. In terms of potential accommodation demand, this represents 50% of the total commercial accommodation supply (rooms/cabins) within a 60-minute drive of the Project Site.

This data indicates a constrained capacity currently exists in the EIA Study Area to accommodate the number of non-local workers expected at the peak of the Project, noting further demand from concurrent regional infrastructure projects (refer to **Section 4.3**) and seasonal accommodation demands (tourism, and agricultural etc) also need to be factored in. In view of these factors, the Proponent is proposing to develop a

Temporary Worker Camp (TWC) with sufficient capacity to house construction workers at the peak of the construction phase of the Project.

8. Construction workers relocating to the region would be expected to inject approximately \$26.1 million in new spending into the economy over the construction phase, supporting approximately 36 FTE jobs in the service sector in the EIA Study Area over this time.
9. The Project Site will be leased from the existing landowners, the land is mainly used for sheep and cattle grazing. The development footprint (642 ha) will account for a relatively small area of the Project Site and the Project will be compatible with ongoing agricultural land uses on the balance of the Project Site. No loss of agriculture employment associated with the Project is anticipated, either directly (on-site) or through the supply chain, as agricultural activities will continue largely unhampered during the operational phase (including within the development footprint).
10. Ongoing economic stimulus associated with the operation of the Project is estimated at approximately \$400 million (over 30 years, CPI adjusted) relating to landholder leasing payments, operational wage stimulus, and community payments.
11. Prior to commencing construction, it is recommended the Proponent prepare an AES for the Project in consultation with relevant stakeholders, which will include details of the proposed TWC to service construction workers and measures to ensure maximum employment and business participation opportunities for the local community. It is understood that an AES will be prepared for inclusion in the Project's EIS.
12. Decommissioning of the Project is likely to support significant employment generation, new business contracts and provide a spending stimulus to the EIA Study Area over the decommissioning period. However, given decommissioning will not occur for at least 30 years after the operation of the Project commences, it is not possible to accurately estimate potential impacts and benefits at this stage noting economic, technological and environmental factors may change considerably over this period.

Net Economic Benefits Assessment

A summary of net economic outcomes is included in Table A.

Table A: Bullawah Wind Farm – Net Economic Benefit Assessment

Factor	Value
Negative Economic Outcomes	
Temporary loss of agricultural land (30 years) (Development Footprint)	642 ha
Loss of employment (includes direct and indirect jobs)	0 jobs
Positive Economic Outcomes	
Construction Phase (44 Months)	
Estimated Development Costs	+\$2.5 billion
EIA Study Area investment (including wage stimulus)	+\$380 million (assumes 15% of total investment)
Construction employment (<u>average</u> no. of FTE jobs for 44 months)	210 FTE Direct + 335 FTE Indirect Total: 545 FTE
EIA Study Area employment (<u>average</u> no. of FTE jobs for 44 months)	<i>EIA Study Area jobs</i> 20 FTE direct on-site 65 FTE indirect off-site Total: 85 FTE
Operational Phase (30 Years)	
Operational employment (<u>average</u> no. of ongoing FTE jobs)	40 FTE Direct + 115 FTE Indirect Total: 155 FTE
EIA Study Area operational employment (<u>average</u> no. of FTE ongoing jobs)	40 FTE direct on-site 23 FTE indirect off-site Total: 63 FTE
Operational Economic Stimulus	
Total net local economic stimulus (operational wage stimulus, community payments, landowner lease payments. <u>Excludes</u> increased Council rates returns).	\$400 million
Total Economic Benefits (Construction and Operational Phases)	\$780 million
Decommissioning Phase	
Likely to generate employment, business contract and spending stimulus benefits for the EIA Study Area	Not quantified

1.0 Introduction

1.1 Project Background

Bullawah Wind Farm Pty Ltd (BWF) proposes to develop the Bullawah Wind Farm (the Project), located approximately 36 km south east of Hay, within the South West Renewable Energy Zone (South West REZ). The Project Area is located within the Hay Shire, Murrumbidgee and Edward River Local Government Areas (LGAs). The Project will include the installation, operation, maintenance and decommissioning of up to 143 wind turbine generators (WTGs), battery storage, ancillary infrastructure and temporary facilities associated with the construction of the Project. The Project design incorporates up to 143 wind turbines, with a maximum blade-tip height of 300 meters above ground level, and an installed capacity of up to 815.1 megawatts (MW).

Ethos Urban has been engaged by Umwelt (Australia) Pty Ltd (Umwelt) to prepare this Economic Impact Assessment (EIA) for inclusion within the Environmental Impact Statement (EIS) for the Project.

The Project is located on the Hay Plains of south western NSW, within the South West Renewable Energy Zone (South West REZ). The Project is located approximately 36 km south east of Hay, 66 km north east of Deniliquin and 100 km south west of Griffith. Smaller townships of Darlington Point, Coleambally and Jerilderie are located to the north east and south east of the Project.

The Project Area encompasses approximately 20,628 hectares (ha) of predominantly grazing land and adjoins the Oolambeyan National Park, which is located directly north. The Project Area is zoned as RU1 Primary Production within the Hay Local Environment Plan (LEP) 2011, the Murrumbidgee LEP 2013 and Conargo LEP 2013. Within the Project Area, BWF has identified:

- a Development Corridor of approximately 4,311 ha, in which all proposed Project infrastructure will be placed and all Project related ground disturbance will occur
- an indicative Disturbance Footprint of approximately 642 ha, which equates to approximately three (3) percent of the total Project Area.

1.2 EIA Requirement

The Project is a State Significant Development (SSD) under the *State Environmental Planning Policy (Planning Systems) 2021* (SRD SEPP) as the capital value of the Project is over \$30 million (estimated capital value for the Project is \$2.5 billion). A development application (DA) for the Project is required to be submitted under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The Proponent has commissioned Ethos Urban to prepare an Economic Impact Assessment (EIA) for the Project. This EIA report supports the Project's Environmental Impact Statement (EIS) and responds to the Secretary's Environmental Assessment Requirements (SEARs) for economic impacts, which are:

- **Economic** – *including any benefits of the economic impacts or benefits of the project for the region and the State as a whole, including consideration of any increase in demand for community infrastructure services, and details of how the construction workforce will be managed to minimise local impacts, including a consideration of the construction workforce accommodation.*

This EIA addresses the economic impacts and benefits for the region and State as a whole, including construction workforce accommodation considerations, SEARs relating to social factors are addressed in a separate Social Impact Assessment which has been prepared for the Project by Umwelt.

1.3 Methodology and Data Sources

Methodology

The following methodology has been applied to this EIA:

- Identification of a relevant Study Area for the assessment which reflects likely labour force, accommodation, and supply chain linkages available to support the Project. The Study Area is defined in terms of host and surrounding LGA boundaries.
- Review of federal and state policies relevant to investment in the renewable energy sector, including the Paris Climate Accord, NSW DPE (now DPHI) Large Scale Wind Energy Guideline, 2016, and published resources by EnergyCo relevant to the SW REZ.

- Baseline analysis of population, labour markets, occupational structure and business structure for the Study Area and NSW, with reference to latest available data (at the time of writing) relating to ABS Estimated Resident Population, Department of Environment and Planning State and Local Government Population Projections, ABS Census, ABS Business Counts and Department of Jobs and Skills - Small Area Labour Markets.
- Assessment of the capacity and opportunities of townships in the Study Area to participate and service the Project. This information has been compiled through a site visit, a desktop review of townships and accommodation data (accommodation provider websites, SQM, Airbnb and Vrbo databases, website searches) and discussions with local real estate agents and the Proponent.
- Estimated Project investment, with an estimated development cost (EDC) figure provided by the Proponent, and the estimated share of investment retained in the Study Area informed by benchmarking analysis of similar sized completed renewable energy facilities located in regional areas.
- Assessment of Project employment (direct and indirect) for construction and operational phases. Direct employment is jobs created to support the on-site construction and operation of the Project. Indirect employment is jobs supported through the industrial and consumption/induced impacts of each Project stage. Relevant ABS multipliers are applied to construction and operational phases. Employment numbers have been provided by the Proponent based on estimated Project labour requirements. Ratios of direct Study Area (local) and non-Study Area (imported) employment are based on the Proponent anticipated labour force requirements and the Study Area's existing workforce capacity.
- Identification of business and industry participation opportunities, with reference to baseline analysis outcomes regarding workforce size and skills composition and procurement activities proposed by the Proponent.
- Assessment of agricultural impacts which includes employment and production impacts through land consumption and disruption to activities, and benefits to host landowners from new incomes and improved on-site infrastructure.
- Assessment of accommodation and housing impacts with reference to the baseline analysis and the estimated number of construction workers that may require accommodation at the Project's peak.
- Assessment of cumulative impacts relating to the potential concurrent construction of major infrastructure projects in the EIA Study Area/within 100 km of the Project Area. Importantly the introduction of the SW REZ is likely to generate significant demand for new projects over the coming years. This includes assessing potential impacts on accommodation and labour and providing measures to manage identified cumulative impacts.
- Estimates of economic stimulus impacts (construction and operation phases) including Project wages and spending, landowner leasing incomes, non-host neighbouring property owners payments, and Proponent's Community Benefit Sharing Program. Construction stimulus is expressed in 2023 dollars (and calculated over the project's combined 44 months), while operational stimulus is calculated over 30 years using 2023 dollars but indexed to 3.0% CPI annually.
- Description of proposed mitigation measures relating to accommodation, workforce and procurement and community benefit sharing.

Note, detailed assumptions and calculations are provided throughout the report.

Data Sources

The following specific data sources have been used in compiling this EIA:

- ABS Average Weekly Earnings, November 2023
- ABS, Counts of Australian Businesses, including Entries and Exits, June 2018 to June 2022
- ABS Census of Population and Housing, 2021
- ABS Estimated Resident Population, 2022 (April 2023 release)
- ABS Household Expenditure Survey, 2015-16
- NSW Tourist Accommodation Snapshot March Qtr. 2022, STR.com
- Australian National Accounts: Input-Output Tables, 1998-99
- Air DNA, July 2023
- Department of Jobs and Skills - Small Area Labour Markets, March Quarter 2023
- NSW Department of Planning, State and Local Government Population Projections 2022, 2022 NSW Common Planning Assumption Projections

- Tourism Research Australia 2017
- BayWa r.e Umwelt, Bullawah Wind Farm Scoping Report, October 2022
- www.energy.nsw.gov.au/renewables/renewable-energy-zones
- www.tripadvisor.com

1.4 This Report

This report contains the following chapters:

- Chapter 1:** Introduction
- Chapter 2:** Project Context
- Chapter 3:** Baseline Regional Economic Profile
- Chapter 4:** Economic Impact Assessment

2.0 Project Context

2.1 Project Location

The Project will be developed on a 20,628 ha site in the Hay Plains of south western NSW, in proximity to a number of small, medium and major regional centres and towns located within approximately a 60–90-minute drive from the Project Site's main access point along Jerilderie Road (-34.69901, 145.12506) and secondary access point along North Boundary Road (-34.8530, 145.3212). These settlements are listed below, in order of 2022 population size and include:

- **Deniliquin**, significant regional service centre located approximately a 90-minute drive to the south west of the Project Site.
- **Hay**, an important regional service centre located approximately a 30-minute drive to the north-west of the Project Site.
- **Coleambally**, small township located approximately a 45-minute drive to the south-east of the Project Site.
- **Jerilderie**, small tourist and agricultural focused township located approximately a 70-minute drive from the Project Site to the south.
- **Darlington Point**, small sized agricultural suburb located approximately a 60-minute drive to the south of the Project Site, and represents the suburb the Project is located in.

These regional centres and townships, to differing extents, are likely to play important roles in supporting the requirements of the Project.

The Project Site, which held by three landowners, is currently used for sheep and cattle grazing under the Rural Use 1 Zone (Primary Production).

The Project will require planning approval by the NSW State Government as a State Significant Development (SSD).

2.2 Project Description

The key components of the Project include:

- up to 143 (three (3) blade) wind turbine generators (WTGs), with a maximum blade-tip height of 300 metres (m) above ground level.
- a 359 MW / 718 MWh battery energy storage facility
- permanent ancillary infrastructure including internal roads, hardstands, main and collector substations, switchyards, operations and maintenance facilities, underground and overhead electricity transmission lines and poles, telecommunications facilities and utility services, permanent meteorological masts and water storage tanks
- temporary facilities including temporary workforce accommodation (if required), site offices, amenities, construction compounds and laydown areas, on-site borrow pits, rock crushing facilities, concrete or asphalt batching plants, minor 'work front' construction access roads, temporary meteorological masts, environmental management and monitoring and signage
- off-site road works, involving upgrades to the proposed local transport route and establishment of site access points to facilitate delivery of wind turbine components to the Project Area as required.
- Project construction and grid connection will occur in two (2) stages. The conceptual staging plan for the Project involves:
 - Stage 1 (South), located mostly south of North Boundary Road, connecting to the existing 220 kV transmission line which runs through the Project Area
 - Stage 2 (North) located north of North Boundary Road, connecting to the approved (but not yet constructed) 330 kV Eastern Section of Project EnergyConnect, which will also run through the Project Area.

Construction of the project is expected to start in H2 2025 with the total construction phase expected last 44 months (combined stage 1 and stage 2) with an anticipated operational start date of H2 2027 and last for 30 years.

The preliminary site layout is shown in **Figure 2.1**

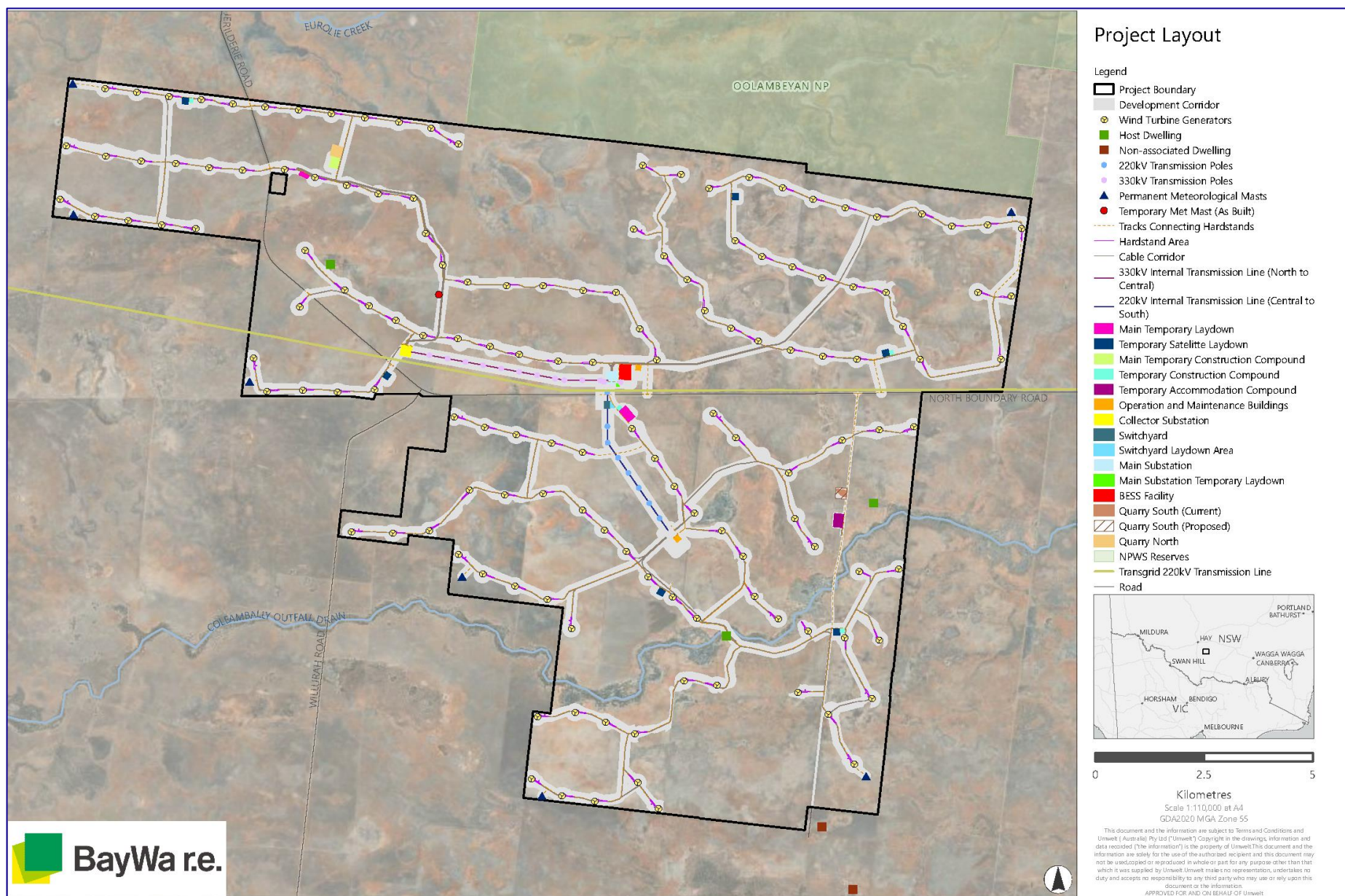


Figure 2.1 Bullawah Wind Farm Project Layout

Source: BayWa r.e.

2.3 Policy Context

International agreements and domestic government policy settings are important factors in influencing demand and investment in the renewable energy sector, an overview of the key policies relevant to the project include.

2.3.1 Paris Climate Accord and Updated Federal Government Target

The Paris Accord is a comprehensive international climate agreement to which Australia is a party. The Accord provides a framework for participating nations to set themselves nationally determined contributions (NDCs) beginning in 2020, with review at five-year intervals. It sets out a global consensus to limit temperature increases to below two degrees Celsius when compared to pre-industrial levels. An additional goal is to maintain this increase at less than one and a half degrees Celsius. NDCs do not have any set lower limit but are required to progress over time (beginning with the intended NDC pledged during the Paris conference), and to be 'ambitious.' Australia's previous target was to achieve a reduction of emissions by 5% from 2000 levels by 2020 and the previous Liberal Federal Government committed to a reduction of 26-28% below 2005 levels by 2030 and net zero emissions by 2050.

In July 2022, an updated Nationally Determined Contribution (NDC) was submitted by the Federal Government and reflected a pre-election promised by the incoming Labor Party to fulfill Australia's obligations under the Paris Agreement. The updated NDC includes a commitment to a reduce greenhouse gas emissions by 43% by 2030 and reaffirms the previous commitment to net zero emissions by 2050.

2.3.2 NSW Wind Energy Guidelines

NSW Wind Energy Guideline 2016

The NSW DPE (now DPHI) Wind Energy Guideline, 2016 provides the community, industry and regulators with guidance on the planning framework for the assessment of large-scale wind energy development proposals that are SSD. The objectives of this Guideline are to:

- provide clear and consistent guidance to the community, industry and regulators about how to measure and assess key environmental impacts of SSD wind energy development in NSW
- facilitate better outcomes by requiring early identification of impacts to drive better siting and design
- facilitate meaningful, respectful and effective community and stakeholder engagement across the development assessment process, from pre-lodgement to post-approval
- encourage benefit-sharing between wind energy operators and the communities in which they operate, where appropriate
- provide greater accountability for the management of impacts over the life of a project by linking commitments to conditions and / or appropriate monitoring and adaptive management strategies.

Draft Wind Energy Guideline, November 2023

The existing wind energy guideline document dates back to 2016, with the significant change occurring in the industry since then. NSW DPHI is now in the process of reviewing and updating the Guideline. In this regard, the draft Guideline:

- Identifies desirable areas for wind energy development based on a range of considerations including wind resource potential, proximity to transmission, and land use constraints.
- provides advice to assist the industry in selecting sites and designing projects.
- includes new guidance on landscape and visual impact assessment in a technical supplement.
- includes minor updates to align the noise impact assessment methodology with updates to the South Australian wind farm noise guidelines (2021) (these updates do not change the noise criteria and would not materially change modelling results).
- adopts a new noise criterion of 50dB(A) for passive recreation areas within National Parks to minimise land use conflicts.
- includes a calculator for estimating the potential costs of decommissioning to ensure host landowners are well informed about the likely costs, and
- addresses commonly raised concerns including traffic and transport management, aviation risk and night lighting.

2.3.3 Project EnergyConnect

South Australia, New South Wales and Victoria are being connected via an interconnector (Project EnergyConnect) that will allow power to flow between the regions in the National Energy Market, with transmission infrastructure a key factor supplying renewable energy to the national grid. Project EnergyConnect will deliver a 330 kilovolt (kV) above ground transmission line, with approximately 800MW transfer capacity from Robertstown in South Australia to Wagga Wagga in NSW with a connection to Red Cliffs in Victoria. The total length of the transmission line will be approximately 900km with the approved corridor illustrated in **Figure 2.2**.

Project EnergyConnect is now under construction with the South Australian component completed with 206km of transmission lines installed as of December 2023.

NSW Department of Planning Housing and Infrastructure granted approval for the NSW – Western Section (SA / NSW border to Buronga) on 28 September 2021. This section of the project involves the construction of 130km of 330Kv transmission line between the NSW / SA border near the township of Chowilla connecting to the existing Buronga substation (with the substation being upgraded).

On 2 September 2022, the eastern section of Project EnergyConnect was granted approval by the NSW Department of Planning and Environment. This section of the project contains two key components including a 375km of 330Kv transmission line constructed between the soon to be upgraded Buronga substation, a new Dinawan substation, near Coleambally; and 162 km long 500 kV transmission line between the new Dinawan substation and the existing Wagga Wagga substation. Work has begun on the eastern section in mid-2023 with the first transmission tower expected to be constructed in mid-2024.

2.3.4 South West Renewable Energy Zone

The state's South West has been chosen as a REZ location due to a host of approved and planned projects, relatively low build costs and a strong mix of solar and wind resources. It is part of the NSW government's long-term plan to deliver five REZs across the state.

The SW REZ aims to produce enough energy to power up to 1.3 million homes each year. The Energy Corporation of NSW (EnergyCo) is the network planner and will bring together investors and undertake early planning for the SW REZ so benefits for local communities are maximised. Where appropriate, the NSW Government will change the regulatory settings to incentivise generators to cover part of the cost of building new transmission for REZs (NSW Electricity Strategy (Overview), pg. 11). The SW REZ is expected to support over 2,000 construction jobs during peak construction periods.

The SW REZ is outlined in **Figure 2.3**

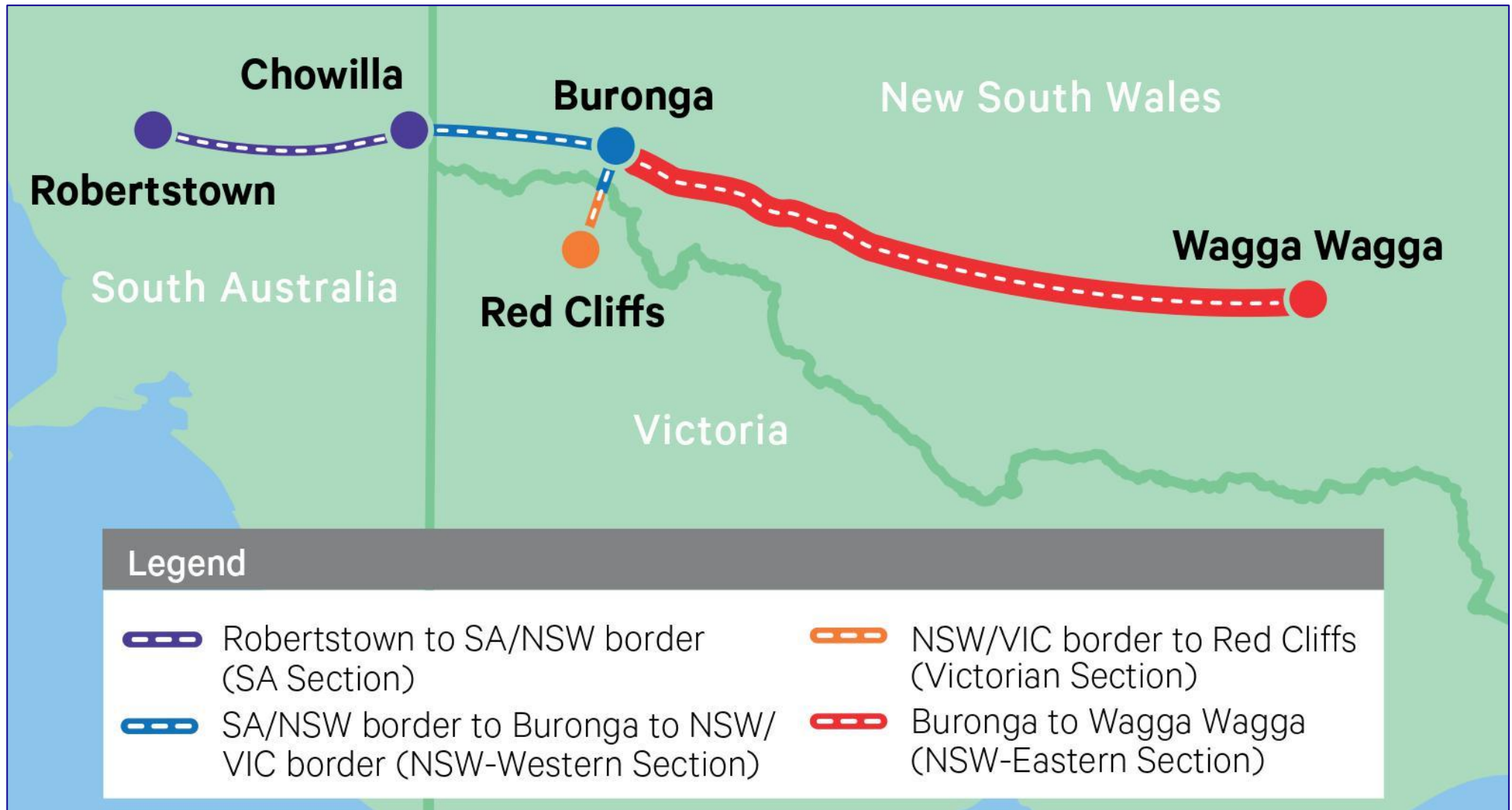


Figure 2.2 *Project EnergyConnect – Approved Corridor*

Source: Transgrid



Figure 2.3 South West Renewable Energy Zone (SW REZ)

Source: www.energyco.nsw.gov.au/renewable-energy-zones/south-west-renewable-energy-zone

2.4 EIA Study Area Definition

The Economic Impact Assessment Study Area (the EIA Study Area) for the Project has been defined in terms of the following Local Government Areas (LGAs):

- Hay Shire Council
- Edward River Council
- Murrumbidgee Council

The main regional cities/townships/settlements in the EIA Study Area are all located within a 60–90-minute drive from the Project Area.

The EIA Study Area's local and regional communities, to differing extents, have the potential to contribute to the Project and derive economic benefits from both the construction and operational phases of the Project.

The EIA Study Area and Project location are shown in **Figure 2.4**.

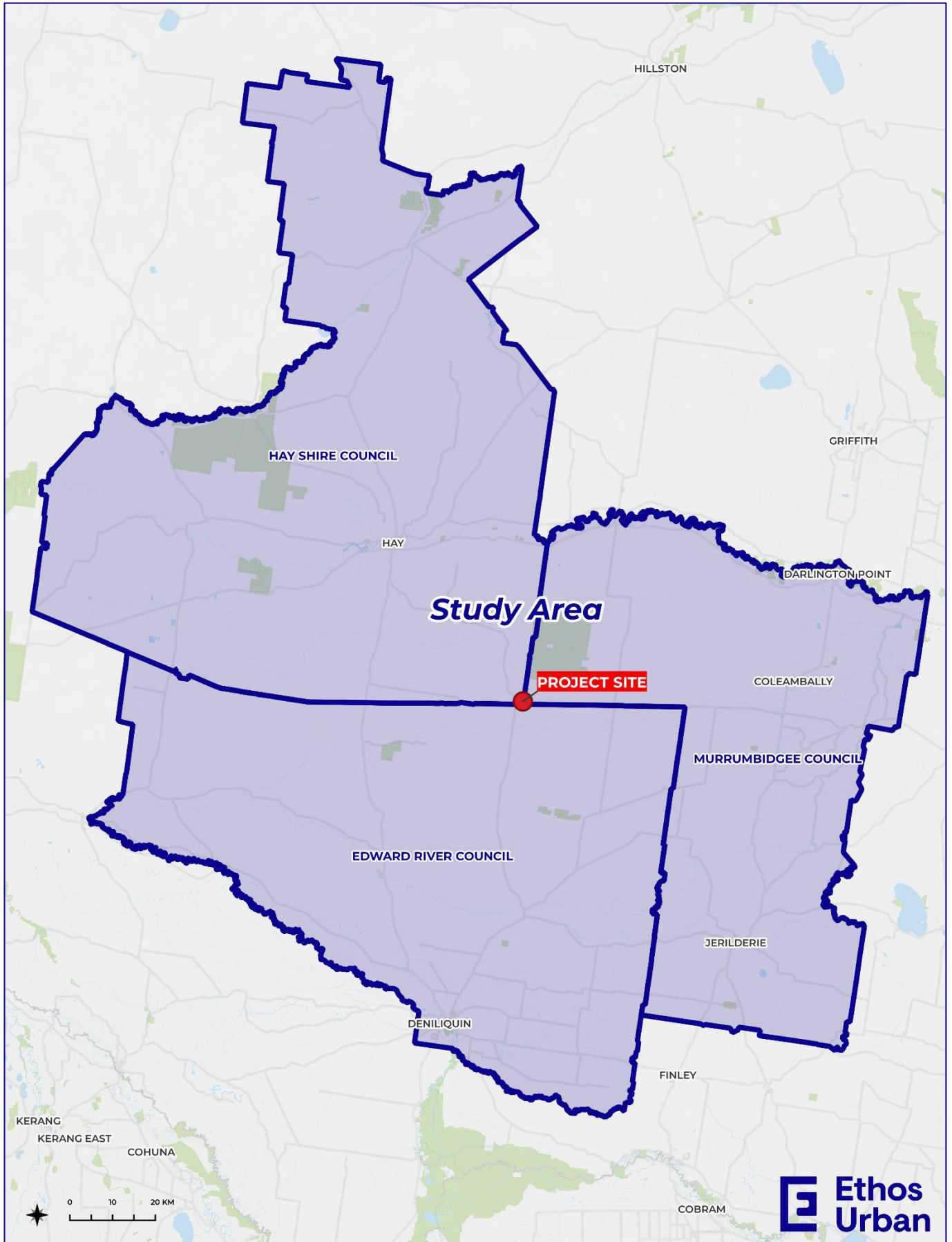


Figure 2.4 EIA Study Area

Source: Ethos Urban using QGIS

2.5 Summary

1. The Proponent is proposing the construction of the 815.1 MW Bullawah Wind Farm. The Project Site is located approximately 36 kilometres (km) southeast of Hay and approximately 90 km north of Deniliquin. The Project is positioned in the municipalities of Hay Shire, Edward River Council and Murrumbidgee Council.
2. The Project Site covers 20,628 ha and is well connected to the regional centre of Deniliquin and to smaller townships including Hay, Jerilderie, Coleambally and Darlington Point.
3. Subject to planning approval, grid connection approval and financing; it is anticipated construction of the Project could start in H2 2025 with a staged construction rollout with the Project split into two construction stages, and the facility operational in 2027 and the total project operational in 2029, with an anticipated 44-month construction phase.
4. Federal (Paris Climate Accord) and State (NSW Wind Energy Guideline) policies provide guidance for the renewable energy sector in the short-to medium-term. Additionally, the NSW Government has declared the SW REZ which covers the area in which the Project is to be located. The SW REZ will provide more certainty for the sector, especially with regard to the transmission network, and in doing so stimulate major investment in the sector. The SW REZ will be connected to the National Grid via Project EnergyConnect that will allow renewable energy to be supplied to the national grid. Project EnergyConnect will deliver a 900km 330 kilovolt (Kv) and/or 500 Kv above ground transmission line, with approximately 800MW transfer capacity.
5. This EIA, guided by the Project SEARS, will provide an understanding of potential economic benefits arising for the local, regional, and State economies and communities through the construction and operational stages of the Project, as well as any potential negative impacts associated with the Project.

3.0 Baseline Regional Economic Profile

3.1 Population Trends and Forecasts

The population of the EIA Study Area is estimated to total 14,820 persons as of June 2023 including 8,450 persons located in Edward River Council Area, 3,550 persons located in Murrumbidgee Council Area and 2,810 persons located in Hay Shire Council.

Over the period 2023-2036, annual population growth in the EIA Study Area is expected to be +0.0% p.a. (or -50 persons p.a. over 13 years) and this compares to the NSW growth rate of +1.1% p.a. over this period. While the EIA Study Area's projected population growth is passive, it is noted that the Murrumbidgee and Edward River Council Areas are projected to experience an average population growth of +0.2% and +0.0% (+0.02%) p.a. respectively for the period 2023-2036.

However, Hay Shire Council area is projected to experience a decline in population of -150 persons over the period. This decline in population highlights the need for local investment projects that provide new employment opportunities for residents and potentially attract new residents to the area. Further, large scale renewable energy projects provide an alternative income stream for local farmers and workers. These factors may contribute to retaining, and potentially expanding the population within Hay and surrounding areas.

The Project will provide new income to the host landowners (farm operators), while the construction and operational phases of the Project will provide an economic stimulus (additional jobs, project contracts, new spending etc) to the local economy, as well as support the emergence of the region's renewable energy sector.

Population estimates, which are reflected in **Table 3.1**, are based on official population projections prepared by the NSW State Government and ABS estimated resident population figures for 2022 (June).

Table 3.1 EIA Study Area Population Trends and Projections, 2016 to 2036

	2016	2021	2023	2026	2031	2036	2023 to 2036
<u>Population (no.)</u>							
Edward River	8,990	8,440	8,450	8,460	8,490	8,470	+20
Hay	2,980	2,880	2,810	2,790	2,730	2,660	-150
Murrumbidgee	3,930	3,560	3,550	3,570	3,610	3,640	+90
EIA Study Area	15,900	14,880	14,820	14,820	14,820	14,770	-50
<u>Annual Growth (%)</u>							
Edward River		-1.3%	+0.1%	+0.0%	+0.1%	-0.0%	+0.0%
Hay		-0.7%	-1.2%	-0.2%	-0.4%	-0.5%	-0.4%
Murrumbidgee		-2.0%	-0.1%	+0.2%	+0.2%	+0.2%	+0.2%
EIA Study Area		-1.3%	-0.2%	+0.0%	+0.0%	-0.1%	-0.0%
<i>New South Wales</i>		<i>+0.9%</i>	<i>+0.6%</i>	<i>+1.0%</i>	<i>+1.1%</i>	<i>+1.0%</i>	<i>+1.1%</i>

Source: ABS ERP (cat. 3218.0); NSW DPE Population Projections (LGA); Ethos Urban

Note: Figures rounded

3.2 Labour Force

The EIA Study Area had a labour force of 8,770 persons and an unemployment rate of 3.3% at March 2023 (source: Australian Government – *Small Area Labour Markets* data). This is in line with the unemployment rate for NSW (3.3%). The EIA Study Area has approximately 290 persons who are unemployed.

The Project is likely to require 350 workers at peak construction. It is anticipated that approximately 10% (refer section to **Section 4.2**) of these workers will be sourced from within the EIA Study Area, providing new opportunities for unemployed job seekers (subject to appropriate skills match) or 'back filling' employment opportunities associated with jobs vacated by workers taking up project employment.

The Project also has potential to provide new opportunities for workers who are beginning a career in the renewable energy sector. This transition is predominately driven by Global, Federal and State reduced emissions targets associated with electricity generation.

Labour supply factors are further explored in **Chapter 4.0**.

Table 3.2 Resident Labour Force Statistics – EIA Study Area, March Quarter 2023 (no. Persons)

LGA/Area	Labour Force	Unemployed	Employed	Unemployment Rate
Edward River	4,780	180	4,600	3.8%
Hay	1,760	60	1,700	3.4%
Murrumbidgee	2,230	50	2,180	2.2%
Total EIA Study Area	8,770	290	8,480	3.3%
New South Wales	4,423,000	147,500	4,275,500	3.3%

Source: Australian Government Department of Jobs and Skills, *Small Area Labour Markets*, March Quarter 2023

Note: Figures rounded.

3.3 Occupational Structure

The skills base of the EIA Study Area is reflected in its occupational structure. ABS Census data for 2021 highlights that approximately 33.7% of employed residents in the EIA Study Area occupied in construction-related activities (e.g., technicians and trades workers, machinery operators and drivers, and labourers).

The representation of these occupations in the EIA Study Area is significantly above the State average (26.1%), indicating a generally suitable occupational base for the Project in the region. In total numbers, 2,260 workers in the EIA Study Area are occupied in construction-related activities, highlighting the strong worker base available to support larger infrastructure projects.

Table 3.3 Economic EIA Study Area – Occupational Structure, 2021

Occupation	EIA Study Area (no.)	EIA Study Area (%)	New South Wales (%)
Managers	1,470	21.9%	14.6%
Professionals	840	12.5%	25.8%
Technicians and Trades Workers	840	12.5%	11.9%
Community and Personal Service Workers	750	11.2%	10.6%
Clerical and Administrative Workers	750	11.2%	13.0%
Sales Workers	480	7.2%	8.0%
Machinery Operators and Drivers	520	7.7%	6.0%
Labourers	900	13.4%	8.2%
Inadequately described/ Not Stated	160	2.4%	1.9%
Total	6,710	100.0%	100.0%

Source: ABS Census of Population and Housing, 2021

Note: Figures rounded

3.4 Business Structure

A tangible benefit of a major investment project is the extent to which local businesses can participate through project contracts and other service provisions.

ABS Business Count data for June 2022 (latest available) shows the EIA Study Area includes some 230 construction businesses (rounded), representing 11.0% of all businesses located in the EIA Study Area (refer **Table 3.4**). This data indicates a reasonable presence in the EIA Study Area of the types of firms that have the potential to service aspects of the Project. This opportunity is discussed in more detail in the following chapter (**Chapter 4.0**).

Although construction-related businesses will likely be the main beneficiaries of the Project, businesses in other sectors supporting the Project (directly and indirectly) are also likely to benefit, including:

- Retail trade
- Accommodation and food services
- Financial and Insurance Services
- Rental, hiring and real estate services.
- Health care and social assistance.

These sectors make up approximately 24.2% of all businesses located in the EIA Study Area and their services will likely play a role in supporting the needs of project workers, especially those relocating to the EIA Study Area to work on the construction phase of the Project.

Table 3.4 EIA Study Area – Business Structure, 2022

Industry	Non employing	1-4 Employees	5-19 Employees	20-199 Employees	200+ Employees	Total
Agriculture, Forestry and Fishing	598	212	71	22	0	903
Mining	0	0	0	0	0	0
Manufacturing	27	23	12	3	0	63
Electricity, Gas, Water and Waste Services	6	0	0	3	0	8
Construction	123	84	21	6	0	231
Wholesale Trade	21	15	7	0	0	45
Retail Trade	44	32	23	7	0	105
Accommodation and Food Services	28	34	25	6	0	92
Transport, Postal and Warehousing	63	49	13	3	0	125
Information Media and Telecommunications	3	0	0	0	0	6
Financial and Insurance Services	29	16	3	0	0	45
Rental, Hiring and Real Estate Services	143	6	0	0	0	153
Professional, Scientific and Technical Services	51	38	8	3	0	98
Administrative and Support Services	28	13	9	0	0	47
Public Administration and Safety	3	0	0	3	0	4
Education and Training	7	0	3	0	0	13
Health Care and Social Assistance	26	19	3	6	0	51
Arts and Recreation Services	9	3	0	0	0	14
Other Services	56	39	5	0	0	102
Currently Unknown	0	0	0	0	0	0
Total	1,263	583	209	50	0	2,105

Source: ABS: 8165.0 Counts of Australian Businesses, including Entries and Exits, Jun 2018 to Jun 2022

3.5 Township Services and Capacity

Based on discussions with the Proponent, approximately 90% of the construction workforce are likely to be non-local (i.e., sourced from beyond the EIA Study Area). This means that on average, around 190 workers would require accommodation per month across the 44 month construction phase, with this figure increasing to approximately 315 persons at peak construction.

3.5.1 Commercial Accommodation

A review has been undertaken of commercial and private accommodation located within the EIA Study Area's major townships. These townships generally represent a maximum drivetime of 60-90 minutes from the Project Site. The EIA Study Area's commercial accommodation capacity is currently approximately 630 rooms/cabins, as shown in **Table 3.5**.

Most accommodation options in the EIA Study Area are located in Hay and Deniliquin, reflecting the town's role as a regional service centre. A more limited provision of visitor accommodation is located in the smaller towns, Jerilderie and Coleambally. Existing accommodation in Deniliquin, in particular, plays a key role in supporting the tourist sector. Tourism visitation to Deniliquin is associated with a number of key regional events (including the Deni Ute Muster).

The range of short-term commercial accommodation options available in the EIA Study Area are reasonably diverse and includes motels, hotels, guest houses, caravan/holiday parks. However, the depth of supply may not be sufficient to service accommodation demands associated with multiple concurrent infrastructure projects in the EIA Study Area as well as existing markets. The cumulative impact assessment at **Section 4.3** of the report highlights the construction phase of potentially 23 individual state significant projects located in the SW REZ that may overlap with the Project. Note, that several of these projects will be developed in conjunction with an associated project (i.e. the Pottinger Solar Farm and the Pottinger Wind Farm).

From an economic perspective, the key concern is that the commercial accommodation demands of the Project in addition to other large infrastructure projects in the EIA Study Area result in a shortage of rooms for other sectors, including general business visitation and tourism visitation, resulting in negative impacts to these sectors.

Table 3.5 Commercial Accommodation

Township	Establishments	Rooms	Cabins	Total Supply (Rooms/Cabins)
Deniliquin	19	166	55	221
Hay	15	228	12	240
Jerilderie	7	144	0	144
Coleambally	2	7	0	7
Darlington Point	3	17	0	17
EIA Study Area	46	562	67	629 (630)

Source: TripAdvisor; Ethos Urban

3.5.2 Room Occupancy Rate

While official room occupancy rates are unavailable at a local level, the NSW Government publish quarterly snapshot data sourced from the STR database (an official Australian Government database). The STR Tourist Accommodation Snapshot for March Quarter 2023 shows the Riverina and Murray River Region (in which parts of the EIA Study Area are located) averaged annual room occupancy rates of 71.3% and 71.4% respectively, which is marginally below the NSW occupancy rate of 72.7% for this period, but higher than most NSW regions.

The March Quarter data includes notable holiday times, therefore, the Riverina and Murray River Region recorded commercial accommodation sector recorded a vacancy rate of approximately 29.7% and 29.6% respectively over this period, indicating a reasonable supply of room availability, although noting the Murray River Regions includes townships beyond the EIA Study Area with comparatively high levels of accommodation including Albury, Moama, Corowa, Balranald and Wentworth. This unoccupied supply is likely to be higher during non-peak seasons.

NSW Tourist Accommodation Snapshot for March 2023 is summarised in **Table 6**, with the Riverine and Murray Tourism Region shown in **Figure 3.1**.

Table 3.6 NSW Commercial Room Accommodation Occupancy Rates by Tourism Region, March 2023

Tourism Region	Occupancy March Qtr 2023
NSW	72.7%
Sydney	75.0%
Blue Mountains	59.2%
Capital Country	59.7%
Central Coast	65.2%
Central NSW	63.8%
Hunter	69.8%
New England North West	64.8%
North Coast NSW	64.1%
Riverina	71.3%
Snowy Mountains	54.2%
South Coast	71.8%
Murray River Regions	71.4%

Source: NSW Tourist Accommodation Snapshot March Qtr 2023

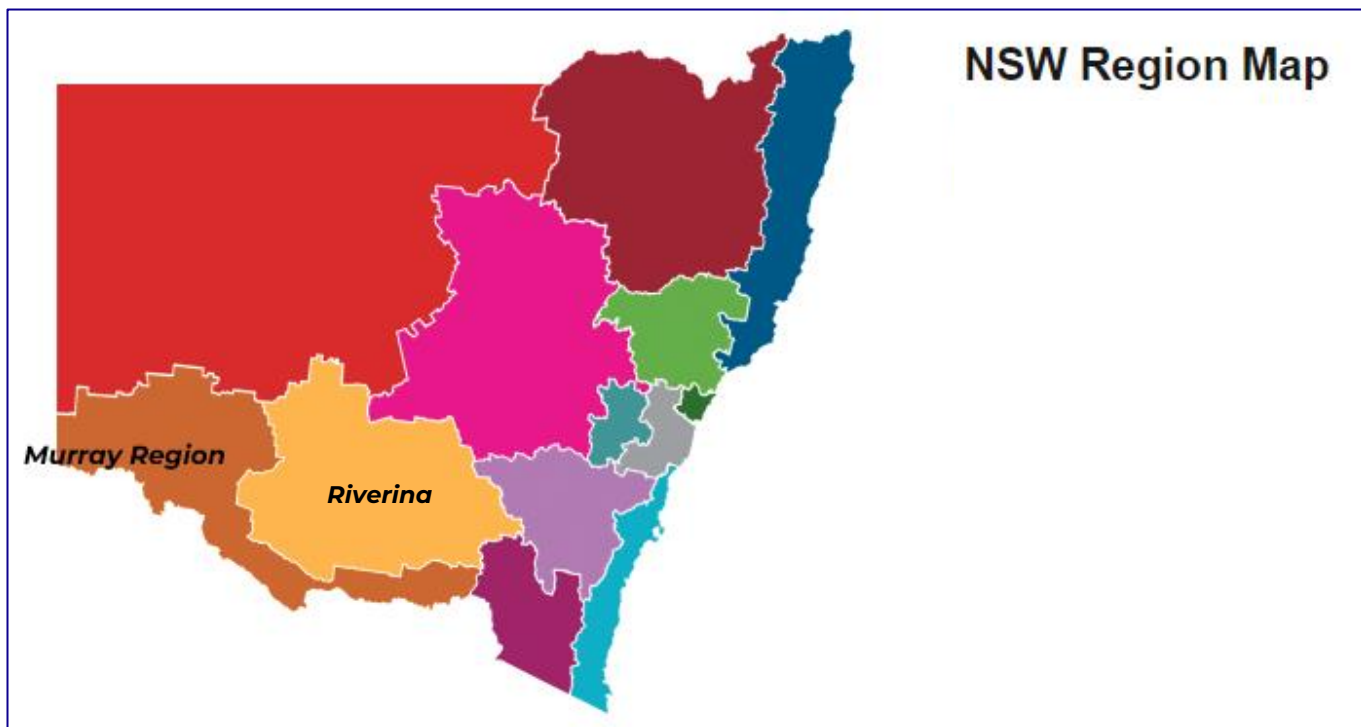


Figure 3.1 The Murray Tourism Region, NSW

Source: destinationnsw.com.au

3.5.3 Private Accommodation

Private accommodation is often used to support construction worker needs for major renewable energy projects. This could be through leasing of holiday homes and investment properties, either privately (including Airbnb), or through real estate agents.

The EIA Study Area has a higher share of unoccupied dwellings (14.2%) when compared to the NSW average (9.4%). Hay Shire has a significant share of unoccupied dwellings (17.5%) as shown in **Table 3.7**. It is possible that some of these unoccupied dwellings (subject to tenant suitability and dwelling condition) may enter the market to support the project and other major infrastructure projects in the region. It is noted Hay Shire Council are currently undertaking a review of vacant dwellings in the LGA.

Table 3.7 Private Dwellings – EIA Study Area, 2021

LGA	Occupied Dwellings		Unoccupied Dwellings	
	no.	%	no.	%
Edward River	3,330	86.4%	520	13.6%
Hay	1,130	82.5%	240	17.5%
Murrumbidgee	1,290	87.2%	190	12.8%
Total EIA Study Area	5,750	85.8%	950	14.2%
New South Wales	2,900,470	90.6%	299,520	9.4%

Source: ABS, Census of Population and Housing, 2021

Note: Figures rounded

As with many large projects relying on local accommodation, local rental markets can reach full utilisation and at times require further supply to be brought to the market during construction. The potential exists that the private accommodation demands of the multiple concurrent renewable energy projects in the EIA Study Area (including the Project) could result in a shortage of established (long-term) rental supply putting upward pressure on prices and the potential for local renters to be priced out of the market.

The vacancy rate for long-term rental properties in the EIA Study Area was 0.9% in June 2023 or approximately 10 properties (Data sourced from SQM Research for May 2023). This indicates a very constrained rental market in the EIA Study Area and as such the local rental market is unlikely to play a role in accommodating non-local workers in the Project's construction phase.

Short-term accommodation provides another option for construction workers. Some eight (8) active short-term rentals are currently advertised in the EIA Study Area (based on data sourced from www.airdna.co in June 2023).

This represents an estimated 19 rooms, based on an average of 2.4 rooms per rental. However, it is likely that many of these rooms already play a role in servicing a range of visitor sectors including business travellers, tourists, seasonal agriculture workers and the visiting friends and family cohort.

3.5.4 Township Services

In addition to accommodation, workers located temporarily in the EIA Study Area will require a wide range of other convenience services, and the Project will also need to source trade, equipment hire, fuel, vehicle mechanical services, and other services from businesses located in the immediate region.

The following sections provide an overview of the services located within regional/townships in the EIA Study Area that may service some needs of the project.

Hay

Hay, a township of approximately 2,170 persons (June 2022) is located in Hay Shire and is situated 30-minutes (drive-time) northwest of the Project Site. A historically rich farming settlement, the township today predominantly functions as a service hub for local agricultural activities. Hay offers a mix of facilities and services, including:

- Commercial accommodation – good provision of commercial accommodation (refer to **Table 3.5**)
- Automotive Mechanics
- Hay Multipurpose Service (Hay Hospital)
- Industry – Home Timber and Hardware, Radeski Earthmoving and Bulk Earthworks,
- Supermarket – Harrison and Sons IGA
- A range of cafes and bakeries
- Bendigo and Commonwealth Bank branches
- Fuel supplies (two Ampol service stations and a Shell service station)
- Postal Services - AusPost
- Pharmacy (Japp's Pharmacy)
- Entertainment (parks, hotels, clubs, sports and recreational activities – swimming pool, bowls club etc)
- Education – two primary schools (both public) and an independent secondary school.

Coleambally

A small township of 620 persons (June 2022), Coleambally is located in Murrumbidgee Regional LGA approximately 50 km east of the Project Site. The township contains limited retail and commercial offerings, but a reasonably sized industrial area for a small township. Coleambally provides the following services:

- A limited range of commercial accommodation options (refer to **Table 3.5**)
- Mechanic and trade supplies including Coleambally automotive, Michelin Service Centre, Pumps Pipes and Power, Coly Hardware and others.
- Construction and transport services including Millbrae Concrete Plant, Elders, Jacko's Excavations, Coleambally Earthmoving, Hi-Trac Equipment
- Fuel supplies – BP service station, BP Truckstop (Commercial/Industrial Fuel)
- Supermarket – Kelly's Friendly Grocer
- Small range of Cafes, bakeries, restaurants and take-away.
- Bendigo Bank
- Entertainment (parks, hotels, clubs, sports and recreational activities)
- Education including one combined government (p-12) school and one independent primary school.
- Medical and emergency services (Coleambally Medical Centre, ambulance station and police station)

Darlington Point

A township of 900 persons, Darlington Point is located in Murrumbidgee Regional LGA approximately 60 km northeast of the Project Site. The township contains very limited retail and commercial offerings, with the following services available:

- Limited number of commercial accommodation options (refer to **Table 3.5**)
- Punt Hotel

- Pharmacy (Massa Pharmacy)
- Small number of cafes, bakeries, restaurants and take-away.
- Small range of entertainment and recreational activities – Swimming Pool, Sports Club, Football Club and a boat ramp.

Jerilderie

Jerilderie, with a population of approximately 780 persons (June 2022), is located 70km to the southeast of the Project Site or a 60-minute drive-time. Jerilderie is a small township located along the Billabong Creek and traditionally known for its history of agriculture. Key services in Jerilderie include:

- A limited range of commercial accommodation options (refer to **Table 3.5**)
- District Hospital and Medical Centre – Jerilderie District Hospital and Jerilderie Medical Centre for general visits.
- Supermarket/ grocers – IGA plus liquor
- Entertainment & Dining – various small cafes, pubs and takeaway options, Jerilderie Sports Club
- Fuel Supplies – Ampol (24 hr Fuel), Shell, BP Truck Stop and Riordan Fuels (Express Diesel)
- Postal Services
- Education – two primary schools (one government and one independent)
- Emergency Services – Ambulance dept, Fire and Rescue and Police
- Service industry in Jerilderie is limited, as the township is principally residential in nature and mainly supports agricultural activities for the wider agricultural region. Key businesses include Elders, East End Welding.

Deniliquin

Deniliquin, with a population of 6,425 persons (June 2022), is the largest town in the EIA Study Area and is the regional service centre for the Riverina, inland parts of the Murray region, and Edward River Council. Deniliquin is located approximately 95-minutes (drive-time) south of the Project Site. While the Deniliquin district is historically noted for farming, the township continues to operate as a regional services hub for local agriculture including sheep and cattle grazing, cropping (cotton) etc, as well as tourism with significant events during the year with the Deni Ute Muster the headline event. The level of services/facilities available in Deniliquin is generally consistent with the township's regional service role and includes:

- A wide range of commercial accommodations options (hotels, motels, caravan parks etc) as outlined in Table 5.
- Mechanic and trade supplies (including Mitre-10)
- Construction and transport services (including Deniliquin Hire Service, Fellows Bulk Transport. Lumbars Transport, South Deni Concrete, Mawsons Deniliquin (Concrete Plant))
- Fuel supplies & automotive mechanics
- Supermarkets – full-line Coles and Ritchies IGA
- Cafes, bakeries, restaurants and take-away.
- Range of commercial and financial institutions – banks, solicitors, conveyancing etc
- Entertainment (parks, hotels, clubs, sports and recreational activities)
- Education – including TAFE NSW, the Australian Rural Education Centre, five primary schools, one secondary school and one combined (P-12) school.
- Medical and emergency services (Deniliquin Hospital and Health Services, police station etc)

Griffith (beyond EIA Study Area)

Griffith, an 80-minute drive northeast of the Project Site, is the major regional centre for NSW's Riverina region and has a population of approximately 20,760 persons. Griffith supports a range of major civic, education, health and commercial services for the surrounding expansive rural area.

Key services in Griffith include:

- Higher order retailing including Griffith Central Shopping Centre
- Large range of professional/commercial services – solicitors, accounting, conveyancing etc.
- Major banks and financial institutions
- Entertainment – parks, hotels, clubs, sports and recreational activities.

- Griffith Airport – the main regional airport for the NSW Riverina region has daily flights to destinations including Sydney as well regional centres with flights operated by REX Airlines and Qantas.
- Griffith Base Hospital – which operates as the major regional hospital with an emergency department for the Riverina region.
- Education – Griffith’s network of education institutions comprises two tertiary institutions (TAFE NSW and Western Riverina Community College); five private secondary and combined schools and one public secondary school; and a range of primary and early education facilities.

Griffith has an expansive range of service industries geared to civil construction works. Key businesses include:

- Milbrae Griffith Concrete Plant
- Colla Concrete Constructions
- JJ Stevenson Plant Hire and Earthworks
- Rowan Transport
- LINX Logistics
- L&M Pittari Transport
- Town and Country Tyers
- WesTrac CAT
- MIA Crane Service Griffith
- CK Crane Hire
- Fluid Engineering
- A&G Engineering
- Topweld General Engineering
- TMS Welding and Fabrications
- Halls Mobile Fabrications & Welding

3.6 Baseline Regional Economic Profile Summary

1. The population of the EIA Study Area (LGAs of Hay, Edward River and Murrumbidgee) is estimated at approximately 14,880 persons in 2023. Over the period 2023-2036, annual population growth in the EIA Study Area is expected to remain stagnant compared to the NSW growth rate of +1.0% p.a. Local investment in renewable energy projects (such as the Project) can generate new employment opportunities for residents, help workers transition from the mining sector, and provide new income streams for local farmers. These factors may contribute to increased population levels within the EIA Study Area.
2. The EIA Study Area had an unemployment rate of approximately 3.3% in March 2023 (latest available), with 290 jobseekers unemployed. New short-term employment opportunities for the region’s labour force participants (including unemployed job seekers, subject to suitable skills match) will be supported by the Project, with a small amount of ongoing employment also supported once the facility is operational.
3. The EIA Study Area’s occupational and business structures indicate an appropriate, but small, base exists to service some of the needs of the Project, with approximately 2,260 workers and 230 businesses involved in construction related industries.
4. The EIA Study Area townships of Hay and Deniliquin have the capacity and labour force to service some aspects of the Project, while smaller settlements such as Darlington Point, Coleambally and Jerilderie have the potential to provide more limited provision of labour, accommodation, and other general services to the Project. Located outside the EIA Study Area, Griffith will play an important role in supporting the Project, given the wide range of higher order services in this major regional centre.

4.0 Economic Impact Assessment

4.1 Project Investment

The Estimated Development Cost (EDC) for the Project is approximately \$2.5 billion (excluding GST), according to information provided by the Proponent. Major investment costs are associated with the purchase of turbine components including the blades, rotors, towers and nacelles, associated equipment, battery storage components etc. Additionally, significant investment is required for civil, electrical and grid connection works.

A review of confidential information sourced from constructed renewable energy projects in Australia (based on unpublished Engineering, Procurement and Construction (EPC) data) shows approximately 15% to construction investment is generally retained within the host Study Area for these types of projects. Applying this ratio of 15% and noting the proximity of the Project to the major regional centre of Deniliquin, the construction phase is likely to generate \$380 million in wages, contracts and other service provisions for the EIA Study Area's economy over the construction period.

4.2 Project Employment

4.2.1 Construction Phase

Project employment is assessed in terms of direct jobs (i.e., on site-related) and indirect (or flow-on) jobs in the local and wider economies (i.e., jobs that are supported through the industrial and consumption impacts of the initial investment).

Direct Construction Employment

Data provided by the Proponent indicates an average of 210 Full Time Equivalent (FTE) jobs will be supported over the construction phase, which is expected to be a combined 44 months (allowing for a two-stage construction phase). Actual workforce numbers will vary from month to month depending on the intensity of construction at the time. At the Project's peak, which is estimated to last several months, the Proponent estimates 350 FTE positions will be supported by on-site construction activities.

Based on Ethos Urban's experience of wind farm construction projects in similar rural locations and REZs in NSW and anticipated demands of multiple concurrent projects likely to be constructed within the SW REZ, the following construction employment split is considered realistic:

- 10% of total jobs or an average of 20 FTE jobs are expected to be sourced from within the EIA Study Area (local employment), increasing to 35 FTE local jobs at the Project's peak.
- 90% of total jobs or an average of 190 FTE jobs are expected to be sourced from outside the EIA Study Area (non-local employment), increasing to 315 FTE non-local jobs at the Project's peak.

Construction-related jobs are expected to be associated with a wide-range of on and off-site activities, including:

- Labour recruitment
- Training
- Installation and assembly of turbine components
- Vehicle and equipment hire.
- Civil works including earthworks, foundations, external roads and internal access tracks.
- Engineering services
- Operation of specialised equipment including cranes
- Transport and logistics
- Electrical works including cabling, connections, and BESS setup.
- Installation of monitoring equipment
- Fencing
- Security
- Waste disposal
- Business and financial services
- Administrative services.

As indicated in **Chapter 3.0**, the business structure of the EIA Study Area indicates that while a reasonable mix of these types of services are present, capacity is somewhat constrained in the EIA Study Area due to its small economic base. Deniliquin will be the main township with business capacity to service some aspects of the Project. Smaller townships may be able to provide limited project support services. Outside the EIA Study Area, Griffith is likely to provide higher-order services to the Project.

Indirect Construction Employment

In addition to direct employment, significant employment will be supported indirectly through the employment multiplier effect. By applying an industry-standard multiplier for the construction industry of 1.6 (based on ABS Type B multipliers), the Project is estimated to generate an additional 335 FTE jobs indirectly (on average) over the 44 month construction period, with a further 560 FTE jobs supported through the national economic during the peak construction period which could last for several months.

Indirect or flow-on jobs (which captures industry and consumption effects) include those supported locally and in the wider economy (including within other parts of NSW, and nationally), as the economic effects of the capital investment flow through the economy. Indirect employment creation in local and regional economies includes jobs supported through financial and property services, accommodation, food and beverage, trade supplies, fuel supplies, mechanical support, transportation, etc.

For the purposes of this assessment, it is assumed 20% of indirect jobs or 65 FTE jobs (rounded) are supported in the EIA Study Area (on average) during the construction phase. This assumption is made recognising the EIA Study Area’s comparatively small economic base, with reference to findings from completed renewable energy projects in rural areas and with regard to the high proportion of workers (90%) relocating to the EIA Study Area during the construction phase providing a spending stimulus to the regional economy.

Total Construction Employment

In summary, 545 FTE jobs (210 FTE direct jobs and 335 FTE indirect jobs) are expected to be supported (on average per month) by the Project during the combined 44 month construction phase.

The amount of direct EIA Study Area employment (i.e., related to on-site construction activities) required for the Project is estimated to be approximately 20 FTE jobs per month, with a further 65 FTE jobs per month supported indirectly in the EIA Study Area (i.e., off-site through supply chains and consumption activities).

Table 4.1 Construction Employment Summary

Direct (Average Monthly) Employment FTE	Direct (Average Monthly) EIA Study Area Employment FTE (10% Share)	Total Indirect (Average Monthly) Employment FTE	Indirect (Average Monthly) EIA Study Area Employment FTE (20% Share)	Total Average Monthly Employment FTE	Total Average Monthly EIA Study Area Employment FTE
210	20	335	65	545	85

Source: The Proponent; Ethos Urban, ABS Input-Output Tables.
Note: Figures rounded

4.2.2 Operational Phase

The Proponent indicates that 40 FTE direct jobs will be supported locally (on-site) on an ongoing basis through the operation and maintenance of the Project.

Indirect Operational Employment

A number of additional jobs will also be supported indirectly through the employment multiplier effect. By applying an industry-standard multiplier for the electricity industry of 2.9 (based on ABS Type B multipliers) to the direct operational and maintenance jobs, a further 115 FTE permanent jobs (rounded) would be supported in the wider State and national economies, with some of these jobs supported locally through operational supply chains and consumption impacts.

For the purposes of this assessment, it is assumed that 20% of indirect operational jobs are created in the EIA Study Area (refer to previous assumption). This equates to approximately 25 ongoing FTE (rounded) EIA Study Area positions.

Operational-related employment is for the lifetime of the Project (i.e., 30 years); therefore, while ongoing job creation is relatively small, it represents new long-term employment opportunities at a local, regional, State and national level.

Total Operational Employment

In summary, approximately 155 FTE jobs (40 FTE direct and 115 FTE indirect) are expected to be supported by the Project, with 23 FTE of these positions supported in the EIA Study Area.

4.3 Cumulative Effects Assessment

The Project will likely compete for labour, accommodation, and other resources with major infrastructure projects being constructed concurrently in the EIA Study Area (principally renewable energy projects being driven by investment in the SW REZ). Identified projects located within a 100 km radius (straight line distance) of the Project Area and an assessment of their risk to the Project are outlined in **Table 4.2**.

In relation to proposed renewable energy projects, the following is noted:

- The development status of projects varies, some projects are approved but construction has yet to start, and other projects are currently going through the planning process; therefore, construction timing is uncertain and not all projects may end up proceeding, particularly given the limited grid capacity in SW REZ.
- New developments, currently not in the planning system, may emerge in the period prior to the construction of the Project especially as the SW REZ matures.

When assessing the potential cumulative impacts, the anticipated timing of the Project is an important factor. If the Project is staged, construction of Stage 1 is expected to commence in H2 2025 with a staged construction rollout with project split into two construction stages, and the facility operational in 2027 and the total project operational in 2029, with an anticipated 44 month construction phase. In this regard, there are a number of major renewable energy and energy storage projects which are almost certain to overlap with the Project which may result in labour, accommodation and supplier shortages.

Referring to the NSW DPI (now DPHI) Cumulative Impact Assessment Guidelines for State Significant Projects, a Standard Assessment as been determined for the EIA, based on the following definition:

- **Standard Assessment** - The Project is unlikely to result in significant impacts on the matter, including cumulative impacts. Standard assessments are characterised by:
 - Impacts are well understood
 - Impacts are relatively easy to predict using standard methods
 - Impacts are capable of being mitigated to comply with relevant standards or performance measures
 - the assessment is unlikely to involve any significant uncertainties or require any detailed cumulative impact assessment.

The Economic Impact Ratings, included in **Table 4.2**, are based on the following parameters:

Low: Impacts possible but unlikely. No mitigation required.

Medium: Impacts likely. Targeted mitigation required.

High: Impacts certain. Significant mitigation measures required.

Table 4.2 Surrounding Projects, Cumulative Impacts Assessment

Project	Detail	Assessed Construction Impact Rating
Solar		
Pottinger Solar Farm (SSD-59254709)	Currently in planning and assessment phase. If approved, construction would be over 18-24 months commencing in 2024-2025 with a peak construction workforce of 400 employees.	High Construction phase likely to overlap with the Bullawah Wind Farm
Dinawan Solar Farm (SSD-50725959)	Currently responding to submissions Project construction is expected to commence in 2025, subject to receiving the required approvals. Construction of the project is expected to be completed over approximately 18-36 months	Medium Construction likely to commence once Bullawah Wind Farm is under construction, potential overlap construction phases. Although different specialist labour required
The Plains Solar Farm (SSD-51219280)	Currently in planning and assessment phase. Construction of Solar Farm is expected for 2026 lasting 18 - 24 months).	High Construction phase likely to overlap with the Bullawah Wind Farm
Romani Solar Farm (SSD-67105475)	Currently in planning and assessment phase. Construction of Solar Farm is expected for late 2025 lasting 12-18 months). The construction phase is expected to require 150-200 employees	Medium Construction likely to commence once Bullawah Wind Farm is under construction, potential overlap construction phases. Although different specialist labour required
Currawarra Solar Farm (SSD-8437)	Currently in planning phase. Construction of Solar Farm is expected for late 2025. The construction phase is expected to require 200 employees	Medium Construction likely to commence once Bullawah Wind Farm is under construction, potential overlap construction phases. Although different specialist labour required
Hay Solar Farm (SSD-8113)	Development application has been approved.	Medium Uncertainty around when or if the project will commence, noting approval was granted some time ago. If development were to begin in the short term, overlap may occur.
Wind		
Pottinger Wind Farm (SSD-59235464)	Currently in planning and assessment phase. Construction activities are anticipated to commence between 2025 and 2026 (12-18 months) with a construction workforce of 450 FTE	High Construction phase likely to overlap with the Bullawah Wind Farm
Dinawan Wind Farm (SSD-50725708)	Currently in planning and assessment phase. Project construction is expected to commence in 2025, subject to relevant approvals, and will take approximately 36 months. A workforce of approximately 800 personnel will be required on-site during peak construction	High Construction phase likely to overlap with the Bullawah Wind Farm
Argoon Wind Farm (SSD-64935522)	Currently in planning and assessment phase. It is anticipated that works will commence within one year of project approval. The construction phase of the Project is anticipated to be 24 to 36 months	Medium Uncertainty around when or if the project will commence, noting approval was granted almost 7 years ago. If development were to begin in the short term, overlap may occur.

Project	Detail	Assessed Construction Impact Rating
Yanco Delta Wind Farm (SSD-41743746)	December 2023, the minister for planning granted consent to the development application for the Yanco Delta Wind Farm The project is expected to support up to 150 direct jobs on average with a peak of 300 direct jobs. The construction of the Project is targeted to begin in late-2024 subject to planning approval, with an expected duration of 36 months.	High Construction phase likely to overlap with the Bullawah Wind Farm
The Plains Wind Farm (SSD-50629707)	Currently in planning and assessment phase. Construction of the Wind Farm is expected to begin in 2025 and last 24 months	High Construction phase likely to overlap with the Bullawah Wind Farm
Tchelery Wind Farm (SSD-59701722).	Currently in the planning and assessment phase If approved, construction would be over 30-months commencing in early 2026 with a workforce of 500 employees.	High Construction phase likely to overlap with the Bullawah Wind Farm
Wilan Wind Farm (SSD-51306206)	Currently in the planning phase If approved, construction would be over a 24-30 month period commencing in early 2025 with a construction workforce of 400 employees.	High Construction phase likely to overlap with the Bullawah Wind Farm
Baldon Wind Farm (SSD-40138508)	Currently in planning and assessment phase. If approved, construction would be undertaken over a 24 to 36-month period commencing in 2024 (although 2025 is more likely as the EIS is still being prepared) with a peak construction workforce of 350 employees.	High Construction phase likely to overlap with the Bullawah Wind Farm
Keri Keri Wind Farm (SSD-38358962)	Project is currently on exhibition. The is expected to support 400 jobs on average and approximately 650 construction jobs during peak construction. Construction is expected to begin in late 2027 for approximately 24-months	High Construction phase likely to overlap with the Bullawah Wind Farm
Conargo Wind Farm (SSD-70611708)	Currently in the planning phase If approved, construction would be over a 24-month period commencing in 2027.	High Construction phase likely to overlap with the Bullawah Wind Farm
Booororban (Saltbush) Wind Farm (SSD-70636459)	Currently in the planning phase If approved, construction would be over a 30-month period commencing in early 2028 with a construction workforce of 280 employees.	High Construction phase likely to overlap with the Bullawah Wind Farm
Other Projects		
Project EnergyConnect (NSW - Eastern Section) (SSI-9172452)	Currently in the planning and assessment phase. If approved, construction would be over a 18-month period commencing in late 2026 with a peak construction workforce of 500 employees.	Medium Construction likely to commence before Bullawah Wind Farm is under construction, potential overlap construction phases
Agriwaste Energy from Waste Facility	Currently in planning and assessment phase. If approved, construction would be over a 24-month period commencing in 2025 with a peak construction workforce of 350 employees.	Low Potential overlap of construction phases, although for a short period and different specialist labour required

Project	Detail	Assessed Construction Impact Rating
Deniliquin East Battery Energy Storage System (SSD-61612229)	Currently in the planning and assessment phase. If approved, construction would be over a 10–12-month period commencing in 2025 with a peak construction workforce of 40 employees.	Low Potential overlap of construction phases, although for a short period and different specialist labour required
Riverina Bioenergy Facility (SSD-60108772)	Currently in the planning and assessment phase. Timing is unknown	Low Potential overlap of construction phases, although for a short period and different specialist labour required
Woodland Battery Energy Storage System (SSD-30526266)	The project was approved on 7 June 2024. Construction is expected to start in the short term.	Low Construction will commence before the Bullawah Wind Farm's construction phase.
Coleambally Battery Energy Storage System (SSD-23368211)	The project was approved on 13 September 2023. Construction is expected to start in the short term	Low Construction will commence before Bullawah Wind Farm's construction phase.

Source: NSW Major Projects Portal; Ethos Urban

4.4 Labour Force and Business Participation Assessment

Demand, Capacity and Recommendations

Construction is a specialisation of the regional economy as indicated by the EIA Study Area's workforce structure (by occupation and industry).

The anticipated number of direct and indirect EIA Study Area jobs (85 FTE workers) represents only 3.8% of the EIA Study Area's labour force in construction-related activities (2,260 workers), noting that many of the indirect jobs will be supported in non-construction sectors (e.g., services sector).

The EIA Study Area also has approximately 290 unemployed labour force participants, some of whom could work on the project and/or other major infrastructure projects (subject to suitable skills mix). Alternatively, unemployed jobseekers may play a 'backfill' role in the labour market, engaging in jobs vacated by other workers transferring to employment on the project or other major infrastructure projects.

In isolation, the workforce requirement of 85 FTE workers should not present a constraint to labour supply for the Project, in view of regional labour market. However, potential does exist for labour market constraints due to the cumulative impacts of multiple concurrent renewable and other large infrastructure projects in the region, as discussed in **Section 4.3** of this report.

Given a level of uncertainty exists regarding labour force and supplier availability in the EIA Study Area due to identified cumulative impacts together with the desire to maximise local inputs, the Proponent may consider preparing an employment strategy to guide the sourcing of local employment and suppliers based on market conditions in the lead up to the construction phase of the project commencing.

Proponent Led Initiatives

The Proponent is committed to supporting local employment opportunities during the construction and operational phases. Generally, the jobs supported by the project include a mix of skills and education requirements ranging from general labouring, through to administration support, and highly specialised scientific knowledge.

The Proponent will seek to Implement an employment strategy and an Aboriginal Participation Plan which will prioritise the employment of local workers where possible. An Aboriginal Participation Plan is being developed in consultation with local Indigenous stakeholders.

The Proponent will implement the following training and skill building initiatives throughout the construction stages of the Project.

To prioritise the employment of local workers and encourage Aboriginal participation the following strategies will be utilised:

Connect, Sope and Plan Regarding Employment and Training Opportunities.

- Continue engagement with Murrumbidgee, Edward River and Hay Local Councils to identify employment and training opportunities to maximise local employment.
- Consultation with Griffith Local Aboriginal Land Council, Hay Local Aboriginal Land Council, and other local Indigenous bodies to identify employment and training opportunities and needs to maximise Aboriginal participation.
- Create employment expression of interest register on the website and corresponding database. The database will be provided to the Contractors prior to commencement of construction.
- Continue engagement with local employment groups and work with them to develop a strategy to maximise local employment.
- Continue engagement with local training organisations and conduct an analysis of local training opportunities that align with skills needed for the Bullawah Wind Farm project. Identify any gaps.

Prior to Construction

The Proponent will continue to collaborate with EnergyCo to promote training initiatives announced and funded via the Community and Employment Benefit Fund. For example, TAFE NSW course "Prepare to work in the Renewable Energy Sector" opening in early 2024.

The Proponent will work with local high schools to improve connectivity between education and employment on the Project. The Proponent may, for example, support plans to develop a school-based education to employment pathway. This may include:

- Increasing participation in work experience
- School based traineeship programs
- School based apprenticeship programs
- Ongoing sponsorship of education and training opportunities in the local community to support upskilling. This may include internships, TAFE scholarships or a sponsored apprenticeship program, as well as targeted programs for First Nations people.
- Work with contractors to seek to provide apprenticeship and/or traineeship opportunities across the construction and operations phase of the project. Some of these may be Aboriginal identified roles.
- Focus on preparatory activities with local groups. For example, evaluate the need for assistance for local people to prepare and submitting applications and resumes. This may help maximise local employment and Aboriginal participation.

During the Construction and Operational Phases

- Upskill new and existing Aboriginal and Torres Strait Islander staff to create pathways towards meaningful employment. This may result in ongoing work or transferable skills to maximise meaningful Aboriginal participation.
- Recognise differing learning styles and implement appropriate training methods for Aboriginal and Torres Strait Islander people. Work with contractor/s and training providers to ensure traineeships, apprenticeships and other training are delivered in an appropriate manner.
- Support initiatives to promote retention of local and Indigenous employees, including by providing a culturally safe work environment.
- Explore identified roles, and opportunities for training, connected to the project's cultural heritage management including ongoing monitoring and management of incidental finds.

The Proponent will continue to engage with the local community regarding employment opportunities and will work with First Nations groups to further develop the Aboriginal Participation plan.

4.5 Housing and Commercial Accommodation Sector Impacts

Data provided by the Proponent indicates 315 non-local FTE workers may need to be accommodated in the region at the Project's peak.

This calculation is based on 90% of the 350 peak on-site FTE workers coming from outside the EIA Study Area and requiring accommodation. This level of accommodation relates to the Project's peak only, which might last for several months. The average number of non-local staff requiring accommodation across the 44 months is estimated at 190 FTE workers (noting this number will be much lower during periods of low site activity).

These temporarily relocating staff are likely to include general managers, project managers, supervising engineers and wind specialists. Contract lengths will vary. This highlights the need for a range of accommodation types including higher-end options for staff on longer contracts, to convenient low-cost options for those on short-term contracts.

As outlined in **Chapter 3.0**, the EIA Study Area currently has a capacity of approximately 630 rooms and cabins in commercial accommodation in locations within a 60-minute drive of the Project Area. Assuming each non-local worker requires individual accommodation (315 rooms), 50% of this accommodation stock would be required at peak times to service the Project if all workers chose this type of accommodation.

This data indicates a constrained capacity currently exists in the EIA Study Area to accommodate the number of non-local workers expected at the peak of the Project, and increased demand from concurrent regional infrastructure projects (refer to **Section 4.3**) and seasonal accommodation demands (tourism, agricultural and mining activities etc) also need to be factored in.

With regard to the above factors, the Proponent has committed to the development of an onsite temporary worker camp (TWC) with a capacity of 350 beds. The specific details of the camp will be confirmed closer to the time of construction, although will have capacity to accommodate all non-local workers at the Projects peak.

It is recommended the Proponent consider developing an Accommodation and Employment Strategy (AES) prior to the construction phase of the Project commencing which would reflect local market conditions at the time (including demands from concurrent infrastructure projects, visitor markets etc). Such an approach would aim to minimise impacts on the community, especially for those reliant on low-cost housing as well as ensuring sufficient accommodation is available to service other key industry sectors (e.g., tourism and agriculture).

It is understood that an AES has been prepared for inclusion within the EIS for the Project.

4.6 Local Wage Spending Stimulus

Construction employment estimates outlined earlier in this report indicate that 90% of the 210 direct average FTE construction jobs (190 FTE workers) may need to be sourced from outside the EIA Study Area, particularly specialist and management positions. If a project specific accommodation camp were to be developed it would be expected that minimal spending by non-local worker would occur in the EIA Study Area.

Expenditure by non-local workers in the EIA Study Area will vary depending on whether an on-site worker camp is developed or if non-local workers will be housed in private accommodation.

With a TWC is expected to be developed on the Project Site, the level of worker spending captured in EIA Study Area is anticipated to be significantly lower compared to if non-local workers were housed in private housing or commercial accommodation in the EIA Study Area. If a high quality and high amenity camp was developed it would be expected that worker movements to the local communities for personal reasons would be infrequent and spending by these non-local workers would be limited.

The 190 non-local jobs will equate to an estimated \$52.1 million in wages (2023 dollars) on the basis that each non-local worker is employed for 44 months and earns the average construction wage of \$100,000 pa (source: ABS, *Average Weekly Earnings 6302.0 – Full Time Adult Ordinary Time Earnings*, November 2023).

A share of these wages will be spent in the EIA Study Area, where these workers will be based. An estimated \$26.1 million in wages (2023 dollars) will likely be directed to local and regional businesses and service providers during the construction period. This estimate is based on the ABS *Household Expenditure Survey*, which indicates that approximately 50% of post-tax wages are likely to be spent by workers in the regional economy. The spending by non-local workers in the regional economy will likely include:

- Retail expenditure, including spending on supermarket items, clothing, books, homewares etc.
- Recreation spending associated with day trips and excursions, gaming (lottery, sports betting, etc), purchases in pubs and clubs (although noting that expenditures at restaurants is included in the retail category)
- Personal, medical, and other services, such as GP fees and local prescriptions, fuel, vehicle maintenance and so on.

This level of personal spending will generate the equivalent of approximately 36 FTE jobs in the services sector and associated supply chains (based on 1 FTE job allocated for every \$200,000 of induced spending per year), supporting jobs in the EIA Study Area and beyond, such as in retail, accommodation, trade supplies, health services, fuel supplies, cafes, and restaurants etc. These jobs are included in the 'indirect employment' estimates outlined in **Section 4.2** above.

4.7 Agricultural Impacts

In the Soil, Land and Agricultural Assessment, the Projects impact on agriculture is likely to be minor and temporary. The assessment indicates that approximately 20,628 ha of existing agricultural land will be required to accommodate the Project, with around 642 ha (which equates to approximately three (3) percent of the total Project Area) being directly affected for the duration of the Project.

No loss of employment associated with the Project is anticipated, either directly (on-site) or through the supply chain, as sheep will be grazed in and around the Wind farm structure. Current employees and contracting services, such as stock mustering, will not experience any negative impacts.

A site verification assessment of land and soil capability (LSC) was conducted for the Project Area, revealing two LSC classes:

- LSC class 6: low capability land – covering 15,596 ha.
- LSC class 7: very low capability land – covering 5,032 ha

The Project will temporarily remove potential agricultural primary productivity valued at up to \$93,732 per year for the duration of the Project. The impacts on regional agricultural output are considered negligible in comparison to the gross commodity values and land use coverage of the agricultural industries operating within the Murrumbidgee, Hay Shire, and Edwards River LGAs.

4.8 Ongoing Economic Stimulus

4.8.1 Landowners

The Proponent will be leasing the land to host the Project. While these annual lease payments are confidential, they may provide a local stimulus through investment in farming (or other) activities and through business and individual consumption impacts associated with the host landowners. This figure is included in the total operational stimulus figure in **Section 4.8.4**.

4.8.2 Community

The Proponent has committed and, in some cases, already delivered community payments and employment purpose contributions. These community payments and initiatives include:

- Community Grants Program 2023 & 2024
- Plains Wanderer environmental education program
- First Nations group funding
- Local education scholarships
- Other community contributions

It is understood payments will also be made to the three Councils that the project is located in through a Planning Agreement. The value of the payments are estimated at \$1,050 per MW per year spread across the three Councils. In aggregate, these payments will equate to a total benefit of \$41 million over the Project's operational lifespan (2023 dollars, CPI adjusted). Note, these estimates are based on the installed operating capacity of the Project estimated at up to 815.1 MW.

4.8.3 Local Wage Stimulus

The Project will support 63 FTE jobs in the EIA Study Area (direct and indirect). These jobs will provide an estimated stimulus within the EIA Study Area of approximately \$3.1 million (2023 dollars) in Year 1 of operations. This figure assumes there will be no loss in direct or indirect agricultural jobs associated with the use of part of the land to host the Project (i.e., existing agricultural activities will continue on the remainder of the land and around project infrastructure). Over the 30-year lifespan of the project, the 65 local jobs supported by the Project will generate an economic stimulus of \$147.3 million (2023 dollars, CPI adjusted).

4.8.4 Total Operational Stimulus

The total economic stimulus associated with the operation of the Project is estimated at approximately \$400 million over 30 years, (2023 dollars, CPI adjusted) relating to the landowner leasing payments, operational wage stimulus, and community payments.

4.9 Proposed Mitigation Measures

Prior to commencing construction, it is recommended the Proponent prepare an AES for the Project in consultation with relevant stakeholders, which will include details of the proposed TWC to service construction workers and measures to ensure maximum employment and business participation opportunities for the local community.

It is understood an AES will be prepared as a supporting document for the EIS. The potential mitigation measures recommended by this assessment are summarised below in **Table 4.3**.

Table 4.3 Proposed Mitigation Measures

Mitigation ID	Mitigation measure
EIA01	Prior to commencing construction, it is recommended the Proponent prepare an AES for the Project in consultation with relevant stakeholders, which will include details of the proposed TWC to service construction workers and measures to ensure maximum employment and business participation opportunities for the local community. It is understood an AES will be prepared as a supporting document for the EIS. Measures detailed in the AES may include: • Continue engagement with Murrumbidgee, Edward River and Hay Local Councils to identify employment and training opportunities to maximise local employment. • Consultation with Griffith Local Aboriginal Land Council, Hay Local Aboriginal Land Council, and other local Indigenous bodies to identify employment and training opportunities and needs to maximise Aboriginal participation. • Create employment expression of interest register on the website and corresponding database. The database will be provided to the Contractors prior to commencement of construction. • Continue engagement with local employment groups and work with them to develop a strategy to maximise local employment. • Continue engagement with local training organisations and conduct an analysis of local training opportunities that align with skills needed for the Bullawah Wind Farm project. Identify any gaps.
EIA02	An Aboriginal Participation Plan is being developed in consultation with local Indigenous stakeholders During the Construction and Operational Phases • Upskill new and existing Aboriginal and Torres Strait Islander staff to create pathways towards meaningful employment. This may result in ongoing work or transferable skills to maximise meaningful Aboriginal participation. • Recognise differing learning styles and implement appropriate training methods for Aboriginal and Torres Strait Islander people. Work with contractor/s and training providers to ensure traineeships, apprenticeships and other training are delivered in an appropriate manner. • Support initiatives to promote retention of local and Indigenous employees, including by providing a culturally safe work environment. • Explore identified roles, and opportunities for training, connected to the project's cultural heritage management including ongoing monitoring and management of incidental finds. The Proponent will continue to engage with the local community regarding employment opportunities and will work with First Nations groups to further develop the Aboriginal Participation plan.
EIA03	The Proponent has committed to the development of an onsite temporary worker camp (TWC) with a capacity of 350 beds. The specific details of the camp will be confirmed closer to the time of construction, although with have capacity to accommodate all non-local workers at the Projects peak.

4.10 Project Decommissioning

The WTGs have an expected operating life of approximately 30 years and the agreements with the host landholders provide for the operations to continue for 30 years. At the end of that 30 year period, three (3) options will be considered:

- continued use of the Project Area as a wind farm and battery storage utilising the existing WTGs and other facilities (subject to contractual agreement with the host landholders and condition of equipment)
- replace the WTGs and battery storage with technology current at that time and continue the wind farm and battery storage operation for a further term (subject to contractual agreement with the host landholders and further development consent)
- decommission the wind farm and battery storage and remove the WTGs and other infrastructure.

Should decommissioning be required, all costs associated with decommissioning will be borne by the Proponent or their representative.

- Key stakeholders including relevant landholders would be consulted regarding the decommissioning and rehabilitation plan.
- All above ground structures not required for the ongoing agricultural use of the land, including the WTGs and substations will be removed and the land rehabilitated so that it can return to agricultural use.
- Internal roads, if not required for ongoing farming purposes or fire access, would be removed. Access gates, if not required for farming purposes, would also be removed. Host landholders will be involved in any discussion regarding the removal or hand-over of infrastructure on their properties.
- Below ground infrastructure, including WTG foundations, hardstands and some cabling may be left in situ and covered in clean fill material, with the land returned to near prior condition and use as far as practicable.
- The decommissioning phase would require similar equipment and activities to the construction phase including mobile and heavy equipment (e.g. cranes, earthworks machinery, compressor and rock crusher). Prior to the commencement of decommissioning activities, BWF would prepare a detailed decommissioning plan in consultation with NSW Department of Planning, Housing and Infrastructure (DPHI) and the relevant Councils to guide the implementation of the decommissioning works.

If decommissioning were to occur, these activities pose similar potential impacts and benefits as construction activities, albeit over a shorter timescale. Decommissioning activities would involve a significant on-site workforce to dismantle the infrastructure and other workers to transport of project components from the site for disposal or recycling. The site then would require a range of resources to undertake rehabilitation activities.

Decommissioning would therefore support significant employment, business contracts and provide a spending stimulus to the EIA Study Area over the decommissioning period.

Given decommissioning will not occur for at least 30 years after the operation of the Project commences, it is not possible to estimate potential impacts and benefits at this stage noting economic, technological and environmental factors may change considerably over this period. Note however, the Proponent is committed to ensure as much infrastructure as possible is recycled on decommissioning.

4.11 Estimated State Benefits

In addition to supporting NSW State policy directions (refer to **Section 2.3**), the Project is estimated to deliver the following key Statewide economic benefits:

- Capital investment: \$1 billion or 40% of total project capital investment (recognising the large import component associated with Wind farms and some investment coming from Victoria)
- Construction employment: 490 FTE jobs or 90% of total average construction employment (direct and indirect)
- Ongoing employment: 140 FTE jobs, or 90% of total operating employment (direct and indirect)
- Future decommissioning investment and employment opportunities, to be determined (refer to **Section 4.10**).

4.12 EIA Conclusions

1. The Project will require approximately \$2.5 billion in investment during the construction phase (of which approximately \$380 million will be retained in the EIA Study Area) and will support 210 direct and 335 indirect FTE positions in the national economy on average over the 44 month construction period, with a peak of 350 direct FTE and 560 indirect FTE which may last for a number of months. Once operational, 40 direct and 115 indirect FTE jobs will be supported nationally by the Project. Of these national totals, the EIA Study Area is expected to benefit from 85 FTE construction jobs and 65 FTE ongoing jobs (includes direct and indirect jobs) associated with the Project.
2. The EIA Study Area has capacity to contribute to the Project and concurrent regional infrastructure projects based on its economic structure and relatively large share of construction-related workers (2,260 workers) and businesses (230 businesses). However, the labour regional labour market is tight, highlighted by the EIA Study Area's low unemployment rate of 3.3%. Accordingly, based on Ethos Urban's experience of wind farm construction projects in similar rural locations and REZs in NSW, and anticipated demands of multiple concurrent projects within the SW REZ, approximately 10% of the workforce could realistically be sourced from the EIA Study Area. The Project will provide new participation opportunities for businesses and workers located in the EIA Study Area, having regard for the good match of skills and resources available. The Proponent has developed a number of procurement, training and skills initiatives that will assist in maximising opportunities for local communities.
3. The Project will provide new participation opportunities for businesses and workers located in the EIA Study Area, having regard for the good match of skills and resources available.
4. The 'external' Project labour requirement would be expected to generate an accommodation need for 315 direct FTE workers at the peak of the Project. This represents 50% of total commercial accommodation rooms/cabins within a 60-minute drive of the Project Site.
5. Potential exists for cumulative impacts associated with significant development of major renewable energy projects in the SW REZ in the coming years, including insufficient accommodation and workers to service the Project and concurrent demands.
6. In view of this strong demand for accommodation, the Proponent is proposing to develop a Temporary Workers Camp (TWC) with sufficient capacity to house construction workers at the peak of the construction phase of the Project.
7. Construction workers relocating to the region would be expected to inject approximately \$26.1 million in new spending into the economy over the construction phase, supporting approximately 36 FTE jobs in the service sector in the EIA Study Area over this time.
8. This land, which will be leased from the existing landowners, is mainly used for sheep and cattle grazing. The development footprint will account for a relatively small area of each land holding and is compatible with ongoing agricultural land uses on the balance of the Project Site. No loss of agriculture employment associated with the Project Site is anticipated, either directly (on-site) or through the supply chain, as agricultural activities will continue largely unhampered during the operational phase (including within the development footprint).
9. Ongoing economic stimulus associated with the operation of the Project is estimated at approximately \$400 million (over 30 years, CPI adjusted) relating to landholder leasing payments, operational wage stimulus, and community payments.
10. In addition to supporting NSW State policy directions and national grid supply benefits the Project will deliver the following key Statewide economic benefits:
 - Capital investment: \$1.0 billion or 40% of total project capital investment.
 - Construction employment: 490 FTE jobs or 90% of total average construction employment (direct and indirect)
 - Ongoing employment: 140 FTE jobs, or 90% of total operating employment (direct and indirect)
 - Future decommissioning investment and employment opportunities, to be determined (refer to **Section 4.10**).
11. Prior to commencing construction, it is recommended the Proponent prepare an AES for the Project in consultation with relevant stakeholders, which will include details of the proposed TWC to service

construction workers and measures to ensure maximum employment and business participation opportunities for the local community.

- 12.** Decommissioning of the Project is likely to support significant employment generation, new business contracts and provide a spending stimulus to the EIA Study Area over the decommissioning period. However, given decommissioning will not occur for at least 30 years after the operation of the Project commences, it is not possible to estimate potential impacts and benefits at this stage noting economic, technological and environmental factors may change considerably over this period.