18.1 Introduction

This chapter describes the existing socio-economic conditions of the project area and provides a qualitative assessment of the possible impacts of the proposed Project.

The proposed Facilities are located in the Southern Tablelands region of NSW.

The following regions are relevant to the project:

1) Goulburn-Mulwaree Statistical Local Area (SLA) – Goulburn is the largest town in the region and a potential source of some of the Project workforce;

2) Upper Lachlan SLA – the proposed location of the Facilities (Marulan Site);

3) Southern Tablelands Statistical Sub Division (SSD) – encompasses all nearby zones to the Marulan Site;

4) New South Wales; and

5) Australia.

Community benefits of the Project are delivered by adding peaking generating capacity to the national electricity market. This will achieve the following:

- improved supply reliability (additional capacity will be available to meet periods of high electricity demand); and
- increased competition amongst generation participants in the electricity market. A competitive market helps promote lower electricity prices for consumers.

18.2 Existing Socio-Economic Environment

18.2.1 Demography

Population

The current and projection of local, state and national populations are shown in **Table 18-1**. The population projections indicate that the Compound Annual Growth Rate (CAGR) of Goulburn-Mulwaree is -0.2 % between 2006 and 2031. The CAGR of Upper Lachlan and the Southern Tablelands is 0.2 % between 2006 and 2031. The CAGR projected over the same period for NSW and Australia is 0.9 % and 1.3 % respectively.

Chapter 18 Socio Economic

Table 18-1 Population (Census & Projections)

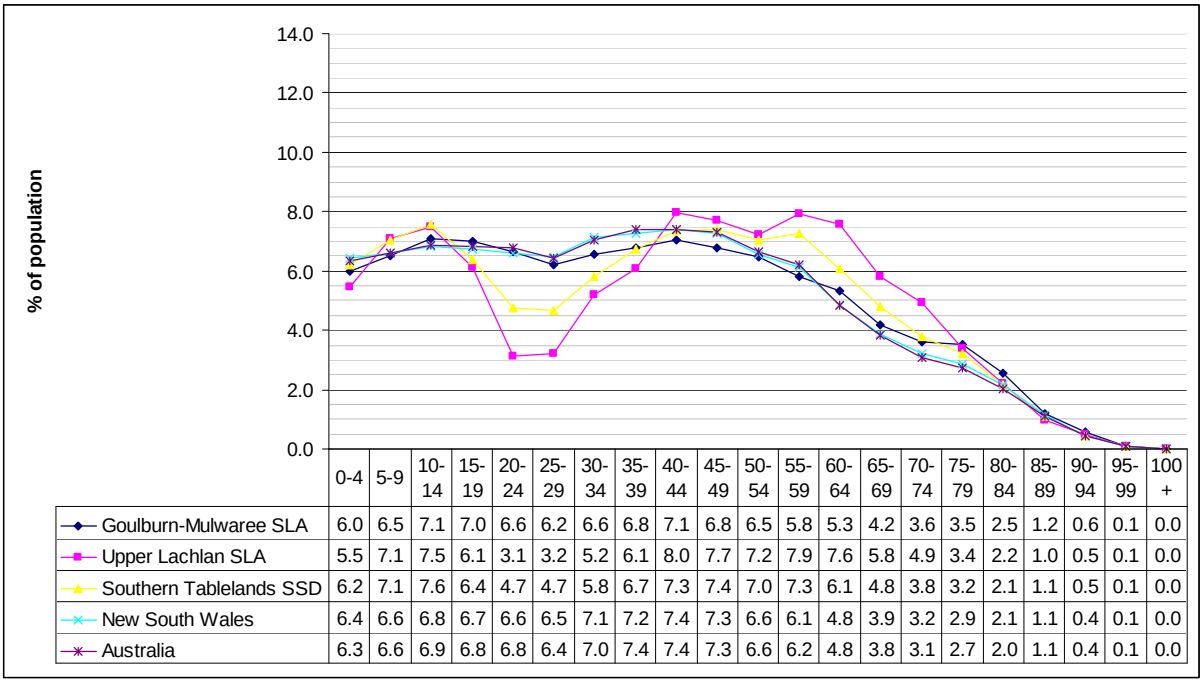
Area	2006 Actual	2011 Forecast	2016 Forecast	2021 Forecast	2026 Forecast	2031 Forecast
Goulburn-Mulwaree	20,126	21,020	20,620	20,200	19,730	19,180
Upper Lachlan	7,053	7,420	7,420	7,420	7,410	7,370
Southern Tablelands	67,352	68,800	69,410	69,970	70,390	70,540
New South Wales	6,549,177	7,145,200	7,437,300	7,725,200	8,002,500	8,259,200
Australia	19,855,288	21,710,086	23,118,693	24,581,902	26,068,251	27,543,066

Source: DIPNR NSW SLA Population Projections 2004; ABS Population Projections Australia 2004-2051

Age Structure

Age structure based on the 2006 ABS Census is shown in **Figure 18-1**. For all of the project regions, the proportion of working age (i.e. 15-64 years) to total population ranges from 62.1% to 66.9%. Of the regional areas, Goulburn-Mulwaree SLA has the lowest proportion of working age residents consisting of 64.7% of the population in comparison to 66.3% for NSW and 66.9% for Australia.

Figure 18-1 Age Structure (2006 Census)



	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-99	100+
Goulburn-Mulwaree SLA	6.0	6.5	7.1	7.0	6.6	6.2	6.6	6.8	7.1	6.8	6.5	5.8	5.3	4.2	3.6	3.5	2.5	1.2	0.6	0.1	0.0
Upper Lachlan SLA	5.5	7.1	7.5	6.1	3.1	3.2	5.2	6.1	8.0	7.7	7.2	7.9	7.6	5.8	4.9	3.4	2.2	1.0	0.5	0.1	0.0
Southern Tablelands SSD	6.2	7.1	7.6	6.4	4.7	4.7	5.8	6.7	7.3	7.4	7.0	7.3	6.1	4.8	3.8	3.2	2.1	1.1	0.5	0.1	0.0
New South Wales	6.4	6.6	6.8	6.7	6.6	6.5	7.1	7.2	7.4	7.3	6.6	6.1	4.8	3.9	3.2	2.9	2.1	1.1	0.4	0.1	0.0
Australia	6.3	6.6	6.9	6.8	6.8	6.4	7.0	7.4	7.4	7.3	6.6	6.2	4.8	3.8	3.1	2.7	2.0	1.1	0.4	0.1	0.0

Source: ABS Basic Community Profile 2006

18.2.2 Workforce

Workforce Status

The Marulan Site is located within the Southern Tablelands SSD, which has a workforce population of 31,600, approximately 1% of the total NSW workforce. The Southern Tablelands unemployment level was 4.9% in 2006, which is lower than the state and national levels of 5.9% and 5.2% respectively (**Table 18-2)**.

Table 18-2 Workforce Status (2006 Census)

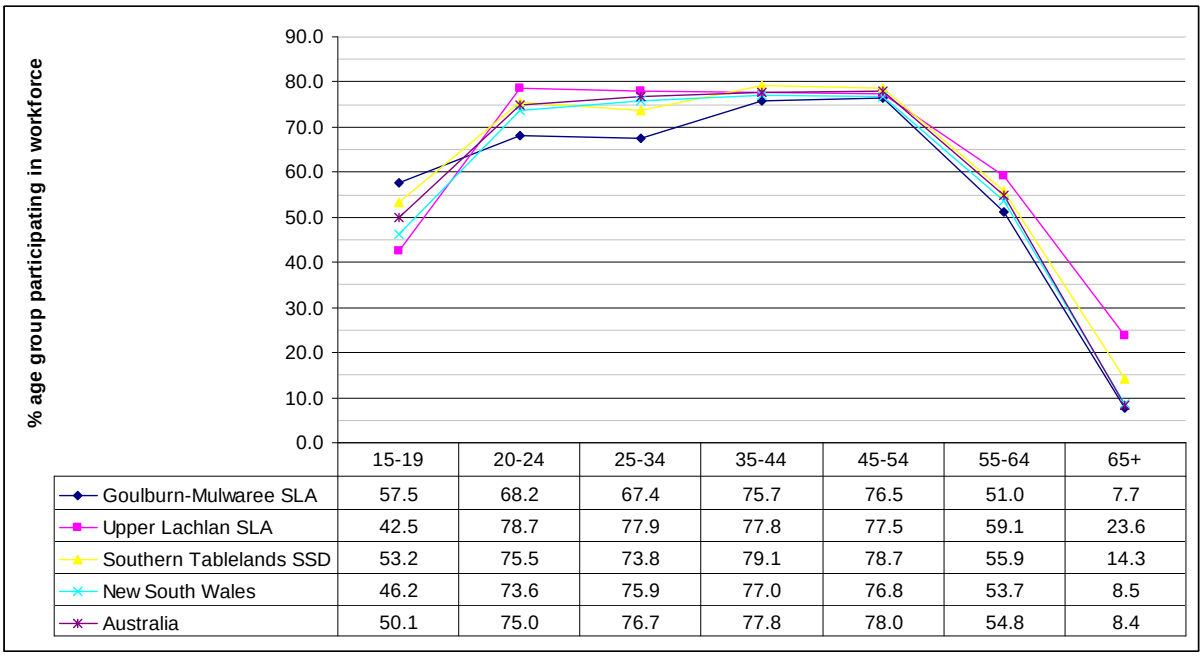
Area	Employed	Unemployed	Total Workforce
Goulburn-Mulwaree	8,380 (93.1%)	618 (6.9%)	8,998
Upper Lachlan	3,218 (96.3%)	125 (3.7%)	3,343
Southern Tablelands	30,054 (95.1%)	1,549 (4.9%)	31,600
NSW	2,909,444 (94.1%)	183,159 (5.9%)	3,092,603
Australia	9,104,185 (94.8%)	503,802 (5.2%)	9,607,987

Source: ABS Basic Community Profile 2006, URS Analysis

Figure 18-2 shows the age distribution of the workforce population in all regions with similar trends being shown at local, state and national levels.

The Goulburn-Mulwaree SLA has a lower proportion of the workforce in the 20 – 44 year age bracket, which may either indicate a higher unemployment level in this age group or a movement away from the region for education or other purposes. The regions relevant to the Project generally have a high proportion of working population over 65 years, which may be indicative of an agricultural workforce.

Figure 18-2 Proportion of Workforce Participation by Age (2006 Census)

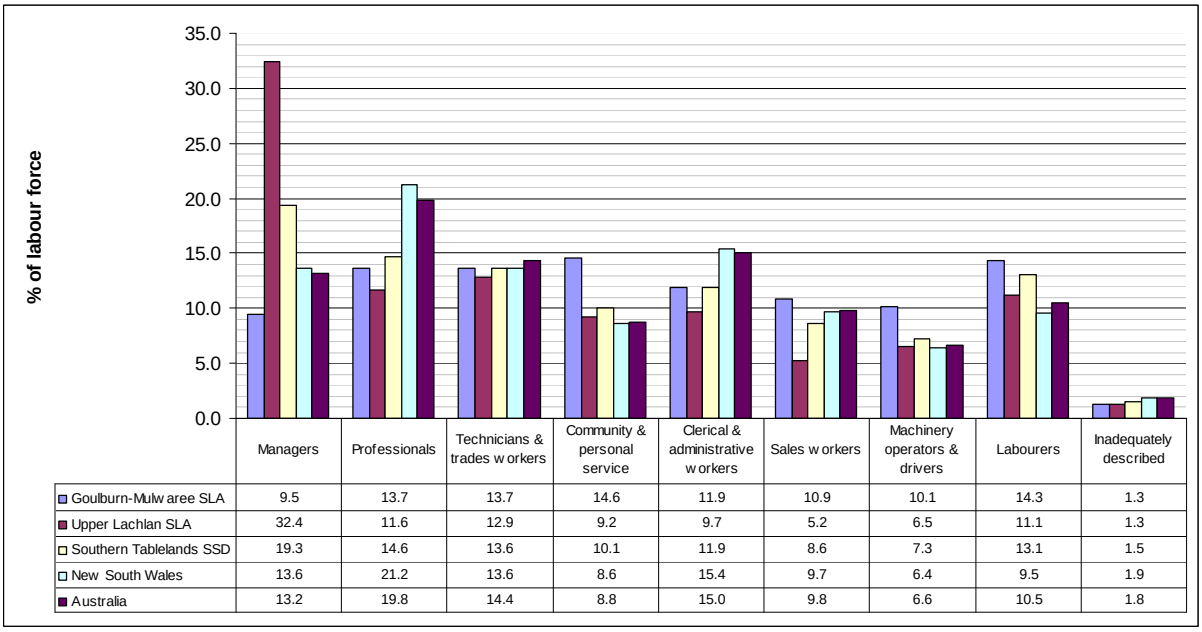


	15-19	20-24	25-34	35-44	45-54	55-64	65+
Goulburn-Mulwaree SLA	57.5	68.2	67.4	75.7	76.5	51.0	7.7
Upper Lachlan SLA	42.5	78.7	77.9	77.8	77.5	59.1	23.6
Southern Tablelands SSD	53.2	75.5	73.8	79.1	78.7	55.9	14.3
New South Wales	46.2	73.6	75.9	77.0	76.8	53.7	8.5
Australia	50.1	75.0	76.7	77.8	78.0	54.8	8.4

Source: ABS Basic Community Profile 2006

Figure 18-3 presents occupation by workforce participants. In the Southern Tablelands SSD, the two major occupation categories are Managers and Professionals. They are followed by Technicians and Trade Workers, and Labourers, which is potentially relevant to the Project. The percentage of Labourers and Machinery Operators and Drivers in the local area is higher than the NSW and Australia averages, indicating that the local region has a comparative advantage in terms of availability of these occupations.

Figure 18-3 Occupation of Workforce Participants (2006 Census)



	Managers	Professionals	Technicians & trades workers	Community & personal service	Clerical & administrative workers	Sales workers	Machinery operators & drivers	Labourers	Inadequately described
Goulburn-Mulwaree SLA	9.5	13.7	13.7	14.6	11.9	10.9	10.1	14.3	1.3
Upper Lachlan SLA	32.4	11.6	12.9	9.2	9.7	5.2	6.5	11.1	1.3
Southern Tablelands SSD	19.3	14.6	13.6	10.1	11.9	8.6	7.3	13.1	1.5
New South Wales	13.6	21.2	13.6	8.6	15.4	9.7	6.4	9.5	1.9
Australia	13.2	19.8	14.4	8.8	15.0	9.8	6.6	10.5	1.8

Source: ABS Basic Community Profile 2006

18.3 Assessment of Economic Impact

A project such as the proposed Facilities will influence economic activity, employment and trade in the region. The economic impact of an activity or project is usually measured by its contribution to four key economic indicators being:

- output (i.e. sales);
- value added (i.e. Gross Domestic Product);
- household incomes (i.e. wages), and
- employment.

Project benefits are delivered by adding peaking generating capacity to the national electricity market. This will achieve the following:

- improved supply reliability (additional capacity will be available to meet periods of high electricity demand); and
- increased competition amongst generation participants in the electricity market. A competitive market helps promote lower electricity prices for consumers.

Economic Impact – Direct Impacts

Direct impacts of a project include output, expenditure, economic value added, jobs and household income. Direct economic impacts are typically a combination of construction activity and activity that is expected to occur during the operation of the plant.

Economic Impact – Flow on/Indirect Impacts

Indirect economic impacts on the economy are those that are not directly associated with construction and operations but are a result of flow on activities. Examples of industries that could experience increased economic activity as a result of the proposed project include transport, retail, business administration and education.

18.4 Project Cost Estimate

The total estimated capital cost for the Marulan Gas Turbine Facilities Project is $809 million. The breakdown between the two Proponents' Facilities and Common Shared Works is:

- Delta Electricity estimates that the total estimated capital cost (Stage 1 and 2) of its project is $515 million;
- EnergyAustralia estimates that the total estimated capital cost of its project is $266 million; and
- the joint common works for the Facilities were estimated to be $28 million.

The cost breakdown is presented in **Table 18-3**.

Table 18-3 Estimated Capital Cost Breakdown

Component	EnergyAustralia	Delta Electricity (Stage 1 and Stage 2)
	$ million	
Common Shared Works		
Gas pipeline	12	
Bulk earthworks	4	
Access road	6	
Transmission Line	6	
SUB TOTAL	28	
Cost split	14	14
Facilities	266	515
TOTAL - Each Proponent	**280**	**529**
TOTAL - Whole Project	**809**	

18.4.1 Construction

Employment

Construction of the Facilities would have a positive impact in terms of

- output over the construction period;
- contribution to Gross Domestic Product;
- contribution to household income; and
- employment of up to approximately 500 people (equivalent full-time positions) over the construction period for the two Facilities.

Delta Electricity Facility: A maximum of 150 people will be employed during the construction phase for Stage 1 and a maximum of 200 people for Stage 2. These figures are based on full-time equivalent employment status. The average annual full time equivalent is likely to be in the order of 50-60 people at any one time for Stage 1 and in the order of 100 people at any one time for Stage 2.

EnergyAustralia Facility: A maximum of 150 people will be employed during the construction phase. The average annual full time equivalent is likely to be in the order of 50-60 people at any one time.

The Projects will have a positive effect on the regional economy during construction and operation through contribution to GDP, income and employment. The direct and potential indirect economy employment impacts are shown in **Table 18-4.**

Table 18-4 –Construction Project Employment Impacts

Project Component	Estimated Employment		Total
	Direct Employment [1] (maximum)	Indirect Employment[2]	
Delta Construction (Stage 1)	200	320	520
Delta Construction (Stage 2)	150	240	390
EnergyAustralia Construction	150	240	390
TOTAL	**500**	**800**	**1300**

[1]Annual full time equivalent (maximum)

[2] Source: ABS Input – Output Multipliers

Most of the construction workforce for the Facilities will be provided by contractors engaged by Delta Electricity and EnergyAustralia. A large proportion of this workforce will be specifically skilled. There will be the opportunity to source some labour locally and this would be at the discretion of the Contractors.

Section 18.2.2 identifies the opportunity to recruit some of the workforce locally due to local unemployment levels. **Section 18.2.2** also shows that the Goulburn Mulwaree SLA has a marginally higher proportion of technicians and trades workers and labourers and drivers than the state average which may be relevant to the construction phases of this Project.

Chapter 18 Socio Economic

Accommodation

Construction personnel sourced from outside the region will be accommodated locally. Accommodation is likely to be sourced in the surrounding region from:

- Marulan township;
- Goulburn and surrounding areas; and
- Moss Vale and surrounding areas.

The region has a range of accommodation options ranging from short term accommodation such as bed and breakfasts, hotels and motels as well as rental properties that may be available for construction staff. The number of beds required would depend on the ability to source some of the workforce locally, staging of construction etc. This would be addressed by the successful Contractor. The Contractor for each Facility may also investigate the option of providing dedicated transport to the Site from main areas of accommodation to coordinate workforce traffic during the construction phase.

Services

The Goulburn Mulwaree Council's *Social Plan 2006 - 2010* (adopted 21 November 2006) states that Goulburn acts as a regional provider of a diverse range of health services. It further states that a significant number of services are provided through the acute and non-acute services range at the Base Hospital, diverse primary and community health services through the community health team, in-patient and community health mental health services, and patient transport co-ordination.

Given the relatively small construction workforce and the focus of organisation on workforce health and safety it is not anticipated that the construction phase of the project will have a significant impact on the health services of the region.

18.4.2 Operation

It is likely that operation of both Facilities would have a positive impact in terms of:

- output effect;
- contribution to Gross Domestic Product; and
- contribution to household income.

The Project will have a positive effect on the regional economy through contribution to GDP, income and employment. The operational staff for the Facilities will be specifically skilled and may or may not be able to be drawn from the local area.

Delta Electricity Facility Stage 1: employment of approximately 12 people (two full-time staff on-site, up to eight full-time staff off-site and up to two full-time equivalent contract staff for various support services) plus 20 to 50 scheduled maintenance contractors for a period of approximately two months every two to three years.

Delta Electricity Facility Stage 2: employment of approximately 20 people (18 full-time staff on-site and up to two full-time equivalent contract staff for various support services) plus 20 to 50 scheduled maintenance contractors for a period of approximately two months every two to three years.

EnergyAustralia Facility: employment generation, as a proportion of annual full time equivalent, is estimated to be two full time staff employed onsite, two full time staff employed offsite and two full time contract staff employed for various support services. Some four to five contractors may be employed for a period of four to five days every six to seven years for scheduled maintenance and a further 40 personnel for a period of approximately 35 to 40 days for major scheduled maintenance.

The direct and potential indirect employment impacts are shown in **Table 18-5**.

Table 18-5 –Operational Project Employment Impacts

Project Component	Estimated Employment		Total
	Direct Employment [1] (maximum)	Indirect Employment[2]	
Delta Operations (Stages 1 and 2)	32	92	125
EnergyAustralia Operation	6	17	23
TOTAL	38	109	148

.[1]Annual full time equivalent (maximum)

[2] Source: ABS Input – Output Multipliers

The operational staff for the Facilities would be specifically skilled and there may be employment opportunities for the local area.

Due to the comparatively low numbers of employment during the operations phase it is not considered that the projects will have a significant impact on the region in terms of accommodation and services.

18.5 Mitigation Measures

Table 18-6 presents the mitigation measures to address the socio-economic impact of the Project. The phase of implementation is indicated in the table by *Cons* – Construction *Ops* – Operation and *Design.*

Table 18-6 Summary of Mitigation Measures

Mitigation Measures	Implementation of mitigation measure		
	Common Shared works	Facilities	Gas Pipeline
Where possible, suitable personnel would be sourced from the region.	✓ (Cons & Ops)	✓ (Cons & Ops)	
Delta Electricity and EnergyAustralia recognise their part in their long term presence within the community for this Project and would explore means for contribution to the community on a case by case basis.	✓ (Cons & Ops)	✓ (Cons & Ops)	
As a way of further enhancing public infrastructure, and if deemed viable, upgrade works would be undertaken to local sewage treatment facilities to meet the Facilities' operational water requirements.	✓ (Cons & Ops)	✓ (Cons & Ops)	