

ECONOMIC IMPACT ASSESSMENT

PROPOSED NAROGHID WIND FARM DEVELOPMENT

PRELIMINARY AND ESTIMATED ECONOMIC BENEFITS

Project Highlights

- ✓ \$76.7 million investment over 9 – 12 months.
- ✓ \$36.18 million contribution to Gross State Product over 9 – 12 month construction period supporting 316 FTE jobs in Victoria over 9 – 12 month construction period.
- ✓ \$0.7 million contribution to Gross State Product when operational supporting 8.3 FTE jobs per annum in Victoria.

Executive Summary

This report outlines estimated economic benefits associated with the proposed Naroghid Wind Farm Project. Costings calculated in the report are based on a number of key assumptions, including data supplied by Naroghid Wind Farm Pty. Ltd.

Based on the costings and assumptions detailed in this report, it is estimated that the construction, assembly and associated equipment for the project will directly and indirectly (i.e. including the flow-through multiplier impact) provide an estimated 316 FTE jobs in Victoria over the project's 9 – 12 month construction period. It is estimated that the average associated incomes or value added generated by this construction activity (i.e. Gross State Product - wages and salaries, returns on capital, payment of taxes) will be \$36 million over the 9 – 12 month construction period (current \$2017).

When fully operational it is estimated that the wind farm project will support an annual contribution to Gross State Product of \$0.7 million per annum and 8.3 FTE jobs per annum including the direct and indirect (or multiplier) effects.

Introduction and Methodology

This report outlines an estimate as at July 2017 of estimated economic benefits associated with the proposed Naroghid Wind Farm Project being undertaken by Naroghid Wind Farm Pty Ltd, a wholly owned subsidiary of Alinta Energy, and the contribution it will make to the Victorian economy by estimating gross employment effects and impacts on Gross State Product (GSP).

This is measured through an estimation of the construction costs and economic modelling to estimate the direct and indirect (multiplier) economic benefits resulting from the proposed development. The assessment does not factor in employment that might be displaced from other projects, or loss of production from current land uses. However, this is expected to be minor as wind farm land use is typically less than 3%.

It should be noted that this report is a desk-top report only. No primary consultation or research has been undertaken, and the proposed development has no definite costings at this stage. The findings are therefore preliminary estimates only provided in current \$2017 and based on a number of assumptions, as outlined further in the report.

Outline of Estimated Economic Benefits of Investment in Infrastructure Development

The economic outcomes from investment in the Naroghid Wind Farm project of both infrastructure and operations relate to both local community benefits (direct employment) in addition to multiplier effects that benefit local, state and national economies.

In reference to the Naroghid Wind Farm project, this can be considered in two complementary contexts:

1. The extent to which the project creates jobs and income opportunities for the community that supports it, through investment and operations including:
 - Payment of wages, a cost to the developer, but a benefit for the community.
 - In a static economy context, and all other things being equal, new job opportunities represent opportunities to reduce unemployment or underemployment (particularly relevant where it is considered to be involuntary), increase hours and overtime options.
 - In a dynamic economy context, job opportunities stimulate growth of a region, and contribute to more effective provision and efficient use of public infrastructure, etc.
2. The extent to which a new activity provides a greater range of consumption opportunities (adding value through the creation of more choice) and/or increases the degree of competition in the market (providing a price benefit to purchasers).

The following sections provide assessments of economic benefits associated with the project spend on infrastructure and operations. The level of economic activity is based on economic modeling with estimates comprising:

- Total jobs, wages paid and expenditure associated with the project (i.e. direct employment effects); and
- Induced or indirect economic impacts (the multiplier effects) associated with this direct employment and flow through of spending in the regional economy.

Construction Phase Gross Economic Benefits

Costings calculated in this section of the report are based on a number of key assumptions, including data provided by Naroghid Wind Farm Pty. Ltd.

Construction phase infrastructure, including 12 wind turbine generators and associated equipment, is estimated to be \$76.7 million with 60% of this infrastructure spend assumed to be imported from outside Victoria (i.e. from interstate and/or overseas).

Victorian Input/Output Tables (adjusted for inflation since 2014) have been used for the calculation of job and income (GSP) outcomes associated with this construction activity. Based on these tables, and assuming a 60% import ratio, a construction investment of \$1 million is estimated support incomes (value added) of \$472,000 and 4.12 FTE jobs, comprising both direct and indirect (or multiplier) employment. As such, the total value added (or contribution to Gross State Product) of the Naroghid Wind Farm project is estimated to be \$76.7 million (\$2017) and 316 FTE jobs over the 9 – 12 month life of the construction project.

Operational Phase Gross Economic Benefits

Operational phase expenditure is estimated by Naroghid Wind Farm Pty. Ltd. to be \$906,000 per annum with an estimated 25% import ratio from interstate and/or overseas. Based on Victorian Input/Output Tables, it is estimated that this annual operational expenditure will support an annual contribution to Gross State Product of \$0.7 million per annum and 8.3 FTE jobs per annum including the direct and indirect (or multiplier) jobs.