



21.0 ENVIRONMENTAL COST-BENEFIT SUMMARY

21.1 BACKGROUND AND METHODOLOGY

The environmental cost benefit assessment has reviewed the existing environmental costs associated with the proposed transmission line alignment and provided a comparative analysis with the anticipated benefits associated with the construction and ongoing operation of the transmission line. Where environmental and economic costs/benefits can not be quantified, they have been described to be consistent with the terms of reference for Environmental Cost Benefit Analysis as defined by the Queensland Treasury.

21.2 SHORT TERM COSTS AND BENEFITS

The development of a transmission line in the study area is considered to have minimal short term environmental impacts both on the properties which will be directly affected by the transmission line and the surrounding area as a whole.

The majority of allotments located along the transmission line corridor are zoned 'Rural' under the respective Wambo and Chinchilla Planning Schemes, and are utilised for agricultural purposes. The development of a transmission line and towers along the study alignment may influence the current agricultural during the construction phase of the Project, however this impact is not expected to reduce the agricultural production capacity of the area. Whilst the transmission line will pass over areas identified as Good Quality Agricultural Land (GQAL), it is intended that through consultation with the landowners, the placement of the transmission towers will have negligible impact on existing agricultural uses, as tower positioning will factor in any potential negative impact.

The Chinchilla and Wambo Planning Schemes identify the Biodiversity Planning Assessment areas within the District. These areas have, or potentially have, high conservation values. The study alignment extends over a few areas which have been identified as a Biodiversity Planning Assessment Area under the Planning Scheme. However, it is Powerlink's intention to ensure that the transmission towers are placed in locations which have minimal impact on existing uses and minimal social and economic implications. In addition, the identified Biodiversity Planning Assessment Areas within the study alignment are small in scale and it is therefore anticipated that they will be avoided by transmission towers. Therefore the transmission line development will have negligible costs on the provision of area of high conservation values within the surrounding area.

As discussed in Section 18.0, the short term cost generated by an increase in greenhouse emissions is related to the construction activities involved in establishing the proposed transmission line. These greenhouse gas emissions have been calculated based on the various construction components and activities. The calculated greenhouse gas emissions are as follows:

- Loss of Carbon Sink – 33,300 tCO₂-e
- Heavy Vehicles – Site Works – 887 tCO₂-e
- Light Vehicles for Staff Transport – 50 tCO₂-e



From an employment perspective, the development of a transmission line will generate short term employment opportunities. The construction of the transmission line is expected to employ approximately 120+ employees. It is estimated that approximately 10% to 15% of the workforce are expected to be sourced from the local Dalby/Chinchilla area with an additional 15% expected to be sourced from the Toowoomba region.

21.3 LONG TERM COSTS AND BENEFITS

The development of a transmission line in study area is considered to have minimal long term environment impacts both on the properties which will be directly affected by the transmission towers and the surrounding area as a whole.

The majority of allotments located along the transmission line corridor are zoned 'Rural' under the respective Wambo and Chinchilla Planning Schemes, and are utilised for agricultural purposes. The development of a transmission line and towers along the corridor may influence the current agricultural during the construction phase of the project, however this impact is not expected to reduce the agricultural production capacity of the area. Whilst the transmission line will pass over areas identified as GQAL, it is intended that through consultation with the landowners, the placement of the transmission towers will have negligible impact on existing agricultural uses, as tower positioning will factor in any potential negative impact.

The transmission towers will have a relatively small base coverage area, which is anticipated to be approximately 100 to 150 Sq m each. Transmission towers will be located approximately 400m apart depending on span constraints/opportunities. The development of the transmission line will therefore have minimal impact on the agricultural production capacity of the local area. Primary industry is the economic base of the Western Downs economy and any reduction in the provision of GQAL will adversely affect the economy.

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The long term greenhouse gas emissions from maintaining the transmission line are expected to be minimal, with the potential that operations may be integrated into existing maintenance regimes for the local plant/substations so not to increase overall travel requirements. Furthermore, it is anticipated that any emissions from this maintenance phase would be potentially offset by the increased efficiency of electricity supply and lower distribution losses.

As previously mentioned, the development of a power transmission line may generate a few long term, permanent employment opportunities for the operation of the transmission line. The development of additional energy infrastructure within the region will increase the economic capacity of the region as a whole. The Western Downs Substation development together with the supporting transmission line to the existing network, in



correlation with the existing Kogan Creek Power Station and Coal Mine on Banana Bridge Road, will increase an already existing energy industry precinct in the surrounding area.

The actual economic contribution that the proposed transmission line will make to the local and regional economy needs to be quantified and will be included in the final report, following consultation and discussion with Powerlink regarding the function of the proposed facilities.

21.4 POTENTIAL IMPACTS

The development of the transmission line is considered to have minimal short term and long term environmental impacts both on the affected properties and on the surrounding area.

Whilst small areas of the transmission line corridor are identified as GQAL, the development of transmission towers within the corridor will have minimal impact on existing land uses, as the towers only require a minimal footprint and existing land uses can continue. It is our understanding that wherever possible, towers will be placed in strategic locations to ensure minimal negative impact. The anticipated environmental impacts associated with the proposed transmission line development are predominantly short term and are related to the anticipated increase in greenhouse gas emissions, loss of vegetation and potential for soil erosion, which equate to an estimated 6,260 tCO₂-e as a result of the required construction activity.

The economic benefits related to the construction of the proposed transmission line will be the employment generated throughout the construction period (estimated to be approximately 150 jobs) and potentially additional long term employment opportunities. The completed substation and supporting transmission line will add to the existing energy related infrastructure in the region and increase the region's overall economic value.