



21.0 ENVIRONMENTAL COST-BENEFIT SUMMARY

21.1 BACKGROUND AND METHODOLOGY

The environmental cost benefit assessment has assessed the existing environmental costs associated with proposed substation site and provided comparison analysis with the anticipated benefits associated with the construction and ongoing operation of the proposed sub station facility. 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 defined by the Queensland Treasury.

21.2 SHORT TERM COSTS AND BENEFITS

The development of a substation on the Project site is considered to have minimal short term environmental impacts both on the Project site itself and within the surrounding area.

The Project site is zoned 'Rural' under the Chinchilla Planning Scheme, but has not been recently utilised for agricultural purposes. The development of a substation will therefore not reduce the agricultural production capacity of the Project site. Whilst there is a high provision of Good Quality Agricultural Land (GQAL) within the surrounding area, and across the Chinchilla District as a whole (see Section 5.3), the Project site is not identified as GQAL under the Chinchilla Planning Scheme. The quantity of GQAL in the Chinchilla District will therefore not be negatively impacted by the development of a substation on the Project site.

The Chinchilla Planning Scheme identifies the Biodiversity Planning Assessment areas within the District. These areas have, or potentially have, high conservation values. The Project site is not identified as a Biodiversity Planning Assessment Area under the Planning Scheme, nor does it have any other identified conservation values. Therefore the development of a substation on the Project site will not have any costs on the provision of area of high conservation values within the surrounding area.

As discussed in Section 18, the short term cost generated by an increase in greenhouse emissions is related to the construction activities involved in establishing the proposed substation. These greenhouse gas emissions have been calculated based on the various construction components and activities. The calculated greenhouse gas emissions are as follows:

- Heavy Vehicle Movements – 64 tCO₂^e
- Private Vehicle Movements – 254 tCO₂^e
- Site Works – 918 tCO₂^e
- Material Selection – 1,298 tCO₂^e
- Total – 2,534 tCO₂^e

From an employment perspective, the development of a substation on the Project site will generate short term employment opportunities. The construction of the substation facility is expected to employ between 20 to 30 employees onsite. 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. The remainder of the onsite workforce will be sourced predominantly from the broader South East Queensland region.



21.3 LONG TERM COSTS AND BENEFITS

The development of a substation on the Project site is considered to have minimal long term environment impact both on the Project site itself and within the surrounding area. The long term impact of the proposed development is in keeping with the potential short term implications.

The Project site is zoned 'Rural' under the Chinchilla Planning Scheme, but has not been recently utilised for agricultural purposes. The development of a substation will therefore not reduce the agricultural production capacity of the Project site. Primary industry is the economic base of the Western Downs economy and any reduction in the provision of GQAL will adversely affect the economy. The long term reduction in the quantity of GQAL may be caused by the emerging coal mining and coal-seam gas activities in the Surat Basin.

Whilst there is a high provision of GQAL within the surrounding area, and across the Chinchilla District as a whole, the Project site is not identified as GQAL under the Chinchilla Planning Scheme. The development of a substation on the Project site will therefore not be contributing to a reduction in GQAL within the community.

The Chinchilla Planning Scheme identifies the Biodiversity Planning Assessment areas within the District. These areas have, or potentially have, high conservation values. The Project site is not identified as a Biodiversity Planning Assessment area under the Planning Scheme, nor does it have any other identified conservation values. Therefore the development of a substation on the Project site will not have any costs on the provision of area of high conservation values within the surrounding area.

Furthermore, it is anticipated that any emissions from this project phase would be potentially offset by the increased efficiency of electricity supply and lower distribution losses.

As previously stated, the development of a substation on the Project site may generate long term, permanent employment opportunities for the operation of the substation however it is more likely that the existing employees associated with the Kogan Creek Power Station will maintain the ongoing operation of the proposed facility. The development of additional energy infrastructure within the region will increase the economic capacity of the region as a whole. A substation development of the Project site, 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 direct economic contribution that the proposed substation will make to the local and regional economy once operational will be minimal. The opportunity for further power station establishment due to increased network capacity has potential to boost these economies. Furthermore, the increased efficiency of electricity supply and lower distribution losses as a result of the project, is anticipated to offset any greenhouse gas emissions.

21.4 POTENTIAL IMPACTS

The development of a substation on the Project site is considered to have minimal short term and long term environmental impacts both on the Project site itself and within the surrounding area.

The Project site has not been identified as GQAL nor has it been identified as having or potentially having a high conservation value. The anticipated environmental impacts associated with the proposed substation



development are predominantly short term and are related to the anticipated increase in greenhouse gas emissions which equate to an estimated 2,534 tCO₂^e as a result of the required construction activity.

The economic benefits related to the construction of the proposed substation facility will be the employment generated throughout the construction period (estimated to be between 20 to 30 jobs) and potentially additional long term employment opportunities. The completed substation will add to the existing energy related infrastructure in the region and increase the region's overall economic value.

21.5 CONCLUSION

The development of a substation on the Project site is considered to have minimal short term and long term environmental impacts both on the Project site itself and within the surrounding area. There will be an increase in greenhouse gases of approximately 2,534 tCO₂^e as a result of the required construction activity at the Project site.

The short term economic benefit related to the proposed substation facility will be an estimated 20 to 30 construction related jobs at the Project site. The long term economic benefits will be potentially additional employment related to the ongoing maintenance and operation of the substation facility and an increase in the overall economic value of the region as a result of the operation and industry output of the substation facility.