

Chapter 1

Introduction

1.0 Introduction

1.1 Project Overview

Genex Power Limited (Genex) is seeking to establish the Kidston Renewable Energy Hub, a combination of solar and pump storage hydro, power generation facility at the Old Kidston mine in northwest Queensland. Queensland Electricity Transmission Corporation Limited (trading as Powerlink Queensland) has been engaged by Genex to connect this facility to its existing transmission network at Mount Fox, via a new 275 kilovolt (kV) electricity transmission infrastructure project known, as the Genex Kidston Connection Project (the Project).

The Project comprises the following components:

- a 275 kV substation proposed in the locality of Mount Fox, Queensland (the 'Mount Fox substation')
- a 275 kV substation proposed in the locality of Kidston, Queensland (the 'Copperfield River substation')
- an up to 195 kilometre (km) 275 kV double circuit or single circuit transmission line between Mount Fox substation, Copperfield River substation and Genex's Kidston Solar Farm Stage Two and Kidston Pumped Storage Hydro substations (the 'transmission line').

Depending on the Copperfield River substation requirements, Powerlink may realign the transmission line west of Copperfield River to run directly north-west into the Kidston Renewable Energy Hub. Both alignments are presented in this report.

1.2 Project Proponent

The Project owner, developer, operator and maintainer is:

Powerlink Queensland

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PO Box 1193, Virginia, QLD 4014

Telephone: (07) 3860 2111, Facsimile: (07) 3860 2100

Website: <https://www.powerlink.com.au/>

Powerlink Queensland is the registered business name of the Queensland Electricity Transmission Corporation Limited (ABN: 82 078 849 233), a Queensland Government Owned Corporation. It was established under the *Government Owned Corporations Act 1993* and is a Transmission Entity under the *Electricity Act 1994*.

Powerlink Queensland owns, operates and maintains Queensland's high voltage electricity transmission network. As a Transmission Network Service Provider in the national electricity market, Powerlink Queensland's primary role is to provide a secure and reliable network to transport high voltage electricity from generators to electricity distribution networks owned by Energex, Ergon Energy (Ergon) and Country Energy, which supply to nearly 4 million Queenslanders. Powerlink Queensland also transports electricity directly to large Queensland customers such as mines, gas producers, industrial smelters, rail network operators and to New South Wales via the NSW/QLD Interconnector.

Powerlink Queensland's operations are guided by the *Electricity Act 1994* and the *Electrical Safety Act 2002*. The *Electricity Act 1994* sets out the requirements which all electricity industry participants must follow to ensure a safe, efficient and reliable supply of electricity. It also requires the supply of electricity to be undertaken in an environmentally sound manner. Under Section 31(b) of the *Electricity Act 1994*, a Transmission Entity is required to properly take into account the environmental effects of its activities under its transmission authority.

The *Electrical Safety Act 2002* seeks to prevent through regulation, the death, injury and destruction that can be caused by electricity. Accordingly, the purpose of this Act is to establish a legislative framework for preventing persons from being killed or injured by electricity; and preventing property from being destroyed or damaged by electricity. The design of the Project will satisfy the requirements of the *Electrical Safety Act 2002*.

1.3 Approval Framework

The Project is proposed as 'Infrastructure' assessable under the *Planning Act 2016* Infrastructure Designation (ID) process. ID is a planning process under Chapter 2, Part 5 of the *Planning Act 2016* that allows the Minister to designate premises for a type of infrastructure. The process provides infrastructure entities a streamlined, considered whole-of government response on a request for infrastructure.

Three statutory instruments support the ID function, namely:

- *Planning Act 2016*, which includes provisions for making, amending, extending or repealing IDs
- Planning Regulation 2017, which identifies the types of infrastructure that may be designated
- Ministers Guidelines and Rules (MGR), which includes processes for making or amending ministerial designations (Chapter 7 of the MGR).

Section 36 of the *Planning Act 2016* provides criteria for making an ID, stating:

- (1) *To make a designation, a designator must be satisfied that—*
- (a) *the infrastructure will satisfy statutory requirements, or budgetary commitments, for the supply of the infrastructure; or*
 - (b) *there is or will be a need for the efficient and timely supply of the infrastructure.*

The Project achieves the requirements of Section 36(1) of the *Planning Act 2016* through providing for the efficient and timely supply of infrastructure through the following points.

- Evaluation of feasible solutions has identified the Project as the least cost, most technically efficient solution to enable the Kidston Renewable Energy Hub to connect to the Queensland Electricity Transmission Network.
- The Kidston Renewable Energy Hub is an integrated solar and pumped storage hydro power generation project. This Project facilitates connection of this and potentially additional projects in the geographical area to the Queensland transmission network.

Section 35 of the *Planning Act 2016* identifies that the Planning Regulation 2017 describes the types of infrastructure that may be designated by the Minister. Schedule 5, Part 2, Item 7 of the Planning Regulation 2017 identifies '*electrical operating works*', being operating works under the *Electricity Act 1994*, as infrastructure which may be designated.

In order to make a designation under Section 36 of the *Planning Act 2016* the Minister must also be satisfied that adequate environmental assessment, including adequate consultation has been carried out in relation to the Project. This EAR has been developed to address the MGR requirements prescribed under the Planning Regulation 2017 to satisfy the requirements of the Minister. The Environmental Assessment Report (EAR) process is discussed further in the following section.

1.4 Environmental Assessment Report Process

The MGR specifies the need for an Infrastructure Entity to prepare an EAR in support of an application for an ID by the Minister. For the purpose of this EAR, 'environment' is defined in Section 8 of the *Environmental Protection Act 1994* and includes:

- a. *ecosystems and their constituent parts, including people and communities*
- b. *all natural and physical resources*
- c. *the qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community*
- d. *the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).*

This EAR is to take into account the potential environmental effects relating to the construction, operation, maintenance and eventual decommissioning of the Project. In particular, this EAR:

- identifies the environmental values of the Project area
- assesses the potential impact of the Project on these values.

Where this EAR identifies 'Project area' reference is made to the wider area in which the Project is situated. Where this EAR identifies the Draft Alignment, reference is made to the easement corridor.

The scope of this EAR also included the preparation of three Environmental Management Plans (one for the transmission line and one for each of the substations).

A Terms of Reference (ToR) for the EAR was developed by Powerlink Queensland and public consultation was undertaken during May to July 2018. A copy of the final ToR is provided in Appendix A Terms of Reference. The ToR is not prescribed by the MGR, but is an initiative by Powerlink Queensland to ensure a robust environmental assessment is undertaken for the Project. A checklist against the ToR is included in Appendix B Terms of Reference Cross Check.

The key steps of the MGR process are outlined below.

- Part 1: Infrastructure Proposal - Submission of an Infrastructure Proposal to the Minister detailing a number of matters as prescribed in the MGR (See Appendix C Infrastructure Proposal and Ministers Requirements).
- Part 2: Ministers Acknowledgement - The Minister provides an acknowledgement of the Infrastructure Proposal, identifying State Interests and consultation requirements applicable to the Project (See Appendix C Infrastructure Proposal and Ministers Requirements).
- Part 3: Draft EAR - Preparation of a Draft EAR (this Report) in line with the requirements detailed in the MGR.
- Part 4: Consultation and State Interests Review - Consultation with affected parties and stakeholders identified in the Draft EAR. A State Interests Review of the Draft EAR will be undertaken by the relevant Queensland Government Departments.
- Part 5: Final EAR - The Draft EAR will be finalised into the Final EAR addressing all the requirements as applicable under the MGR, or as directed by the Minister.

1.5 Structure of Environmental Assessment Report

The structure of this EAR is as follows.

- An Executive Summary, which contains an overview of key issues and findings.
- Chapter 1, which provides an overview of the Project, details of the proponent, Project scope, and the EAR approvals process.
- Chapter 2, which details the Project justification along with alternatives examined.

- Chapter 3, which provides a detailed Project description.
- Chapters 4 to 24, which provide a description of the existing environmental, economic and social values, potential impacts from the Project and mitigation and management strategies reduce impacts where possible.
- Chapter 25, which summarises the short, long-term and cumulative impacts of the Project.
- Chapter 26, which provides a summary of Powerlink Queensland's environmental record and a summary of Environmental Management Plans detailing how impacts will be minimised and proposed environmental protection conditions for the Project.
- Chapter 27, which assesses the planning and approval obligations triggered by the Project.
- Chapter 28, which provides a summary of the consultation activities undertaken and issues raised by stakeholders and the community.
- Appendices including the final ToR, ToR checklist, Ministers Requirements, relevant technical reports, and draft Environmental Management Plans. The final EAR will also include a Consultation Report.

The ToR stated an assessment of the offset liability for the Project was to be included. This has not been included in this Draft EAR as the significant impact assessment for the Project under the *Environment Protection and Biodiversity Conservation Act 1999* has not yet been finalised.