Genex Power

KIDSTON PUMPED STORAGE HYDRO PROJECT - LESSONS LEARNT REPORT

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1. EXECUTIVE SUMMARY

Genex Power Limited (**Genex**, **Company** or **Owner**) is the 100% owner and developer of the Kidston Clean Energy Hub, located in North Queensland (the **Kidston Hub**). Stage 1 of the Kidston Hub was completed in the form of the 50MW Stage 1 Kidston Solar Project, which was energised in November 2017. Stage 2 of the Kidston Hub is the 250MW Pumped Storage Hydro Project (**K2-Hydro** or **Project**) which is currently under construction, having reached financial close in May 2021. A further Stage 3 of the Kidston Hub, being a wind project of approximately 150MW, is currently in feasibility stages along with a potential co-located solar farm of up to 270MW.

This Lessons Learnt Report will aim to provide details on the lessons learnt from the transmission line development and lessons learnt in respect to the EPC Contractor.

2. LESSONS LEARNT– TRANSMISSION LINE

The following are key lessons learnt from the 186km 275kV Transmission Line being designed and constructed by Powerlink Queensland (**Powerlink**), and focusses on the Development Approvals (**Approvals**) required to secure the land corridor prior to proceeding to construction works onsite:

2.1 Approvals

ENVIRONMENT PROTECTION AND BIOSECURITY CONSERVATION ACT 1999

- The Department of Agriculture, Water and Environment (**DAWE**) has advised that the Project is likely to require an environmental offset to manage the residual impacts on Matters of National Environmental Significance (**MNES**).
- Given the scope and scale of the Project, it is important to gain a comprehensive understanding of a Project's offset requirements whilst understanding the prevailing renewable energy development market conditions, type of infrastructure being developed and the associated land use.
- When new electrical transmission infrastructure is developed, it inadvertently generates interest in the surrounding areas for potential renewable energy developments. This can add a layer of complexity when negotiating with landholders to secure land offset. Often landholders cannot provide for an offset due to contractual arrangements, or do not wish to further encumber their land due to its development potential.
- As the Project impacts rural primary production land it can be difficult to negotiate and secure an offset that balances the needs of both the landholder and DAWE. The key lesson learnt has been that achieving this balance can be a comprehensive and time-consuming process that can impact the delivery of the Project.

LAND ACQUISITION

- To acquire the required easements for the transmission line infrastructure, Powerlink is executing a concurrent acquisition strategy. The strategy focuses on negotiating commercial settlements

with landholders to allow easements to be registered, whilst also commencing as a backstop a compulsory acquisition process pursuant to the *Acquisition of Land Act 1967* (Qld) (**ALA**) and its rights under the *Electricity Act 1994* (Qld).

- Wherever possible, Powerlink seeks to reach a voluntary negotiated settlement with each landholder. This flexible approach to progressing easement acquisition has proved successful as it allows for negotiated outcomes to be achieved whilst also ensuring timely delivery of the Project.

2.2 Issues Resolution

MINISTERIAL INFRASTRUCTURE DESIGNATION

- Powerlink is seeking Approval for the transmission line infrastructure through a Ministerial Infrastructure Designation (**MID**) process pursuant to the *Planning Act 2016* (Qld).
- A Ministerial Infrastructure Designation Assessment Report (**MIDAR**) is required to be prepared and submitted to Department of State Development, Infrastructure, Local Government and Planning (**DSDILGP**) that demonstrates how social, environmental and economic impacts have been considered as part of the Project.
- The MID process requires extensive community and stakeholder consultation to be undertaken. Landholders, stakeholders and the wider community were provided with the opportunity to lodge submissions in relation to the MIDAR.
- Grounds of submission are not restricted and Powerlink must respond to any submissions as part of the DSDILGP Approval process.
- As a result of submissions, DSDLIGP may require amendments to the MIDAR to demonstrate that submissions have been appropriately considered.

LAND ACQUISITION

- Should a negotiated agreement not be possible, and a resumption process is required, the ALA provides for an objection process whereby landholders may object on any grounds to the proposed resumption, other than compensation.
- This process would be undertaken by an independent Delegate, with the landholder provided the opportunity to be heard in support of the grounds of objection.
- The information and recommendations provided as part of the objection process would be further considered by the Minister for Resources and Governor in Council when making the decision whether to compulsorily acquire the easement/s.

SUMMARY

The Approval process needs to commence immediately upon contract execution. A key lesson learnt would be to undertake early works to obtain background data to support Approval documentation, in order to ensure a fast start. The Approval process stages are typically sequential and the timings for

each step with respect to review and public consultation are fixed durations. It is also recommended that allowance for adequate time contingency be included for the Approval phase.

A further lesson learnt is that land acquisition should first and foremost be on the basis of a negotiated agreement. The compulsory acquisition process needs to be run in parallel as a contingency plan.

3. LESSONS LEARNT - EPC CONTRACTOR

The key lessons learnt from the EPC Contractor since mobilisation to the Project site are as follows:

- Early mobilisation and acceleration of program critical items has allowed the EPC Contractor to maintain program despite any setbacks with respect to logistics, specifically supply of items, availability and breakdown of key plant and the remoteness of the Project in terms of availability of personnel and COVID-19 related restrictions for travel interstate.
- Trial works for the Wises Dam have resulted in unforeseen conditions being encountered resulting in minor amendments to dam design. The geotechnical investigations (boreholes and seismic survey) undertaken did not fully identify these unexpected conditions. The collaboration between design and construction teams has been shown to be strongly valuable to ensure an optimal design.
- The provision of an electrical reticulation system including earthing has been delayed due to supply lead times for distribution boards. All electrical works on the Project are taking longer than expected due to supply constraints. Temporary measures with diesel generators are also assisting EPC Contractor.
- Explosives licences from the Regulator have taken more time to obtain than anticipated. Early lodgement is required. Mitigation involves using packaged explosives in the short term.
- The ground conditions for the main access tunnel (MAT) being encountered (110m tunnelled) are as expected or better resulting in simpler ground support types being adopted early in the MAT length.
- The wet season results in the site access road being periodically unpassable due to water over the causeway. Whilst workers are flying in and out of site, logistics by road transport needs to be planned in advance to ensure sufficient supply onsite. Although sufficient supply of materials etc was onsite during the recent wet weather event (early Feb 2022), the importance of early procurement and road transport logistics needs to be always front of mind.