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# **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 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 200MW which Genex is developing in a 50:50 partnership with Electric Power Development Co. Ltd (trading as **J-POWER**), is currently in feasibility stages along with a potential co-located solar farm of up to 270MW.

This Lessons Learnt Report will serve as a lessons learnt report, discussing issues around workforce management, with a particular focus on scheduling, logistics, competition for employees and COVID-19 impacts.

## 2. REMOTE WORKFORCE MANAGEMENT

### 2.1 Scheduling

Scheduling of the remote workforce management is critical to the successful completion of construction works and camp management.

The key areas for scheduling include:

- Food
- Construction Consumables
- Key Equipment

#### FOOD

Food is typically delivered once a week with either one or two trucks depending on the quantity required. Due to the remoteness of the site, the food trucking company only allows specific drivers to drive to site. A key lesson learnt in relation to food management at the Project site is to have contingency available to allow for a second day for food deliveries to be available in the case there are issues around food availability and food items are not available for dispatch on the single nominated day. This is currently being explored by the Project.

Wet season management is an integral part of the Project due to its remote location. The camp fridge/freezer setup includes nine 20-foot refrigeration containers and two internal cold rooms. This enables the camp to store between 4 to 6 weeks of food. As the wet season approaches each year, the Project reviews the wet weather management plan and ensures sufficient supplies are held onsite in case food truck deliveries are unable to access the site.

## CONSTRUCTION CONSUMABLES

Construction consumables relate to frequent delivery of construction items, namely cement, sands, explosives, reinforcing etc. These items are scheduled and repeatable. Where possible, such deliveries come from Townsville, though explosives are sourced from Western Australia.

## KEY EQUIPMENT

Key equipment relates to mobilisation/demobilisation of key construction plant, such as D9 / D10 dozers and 125T excavators, and the turbines and transformers supplied by Andritz Hydro. The size of such equipment requires dedicated transport planning and approvals. Installation of river crossings are required due to the size and mass of the equipment not being able to traverse the existing bridge structures.

### 2.2 Workforce Logistics

The Project operates on a Fly in Fly Out (**FIFO**) arrangement. By exception, workers drive to the Project site if they live locally.

The charter flights currently are:

DAY	DESCRIPTION OF CHARTER
Monday	10 seater charter plane from Cairns (run by Genex <sup>1</sup> )
Tuesday	10 seater charter plane from Cairns (run by Genex)
Wednesday	36 seat charter plane from Cairns (run by EPC Contractor <sup>2</sup> ) 36 seat charter plane from Townsville (run by EPC Contractor)
Thursday	10 seater charter plane from Cairns (run by Genex) 36 seat charter plane from Cairns (run by EPC Contractor)

Notes:

- 1: The charter flights run by Genex are operated by Hinterland Aviation. They operate both Cessna Caravan and Kingair B200.
- 2: The charter flights run by EPC Contractor are operated by AVMIN (whom in turn lease from Sky Trans). They operate the Dash-8 aircraft.

Logistic challenges for the flights revolve mainly around weather conditions and reliance of commercial flights (in and out of Townsville and Cairns). With the Kidston airstrip being gravel (with polymer modified wearing surface), it is affected by rain. A key lesson learnt around managing water on the airstrip would have been to explore techniques to allow standing water to be removed from the airstrip during the design of the airstrip upgrade and/or earlier into the construction process.

Low light conditions affect the ability to utilise the strip. Pilots need a clear view of the airstrip below approximately 4000 feet in order to land. The strip does not have instrument landing systems (ILS). The Project investigated the feasibility of providing ILS, though the strip length would be reduced by approximately 100m to certify it. Reducing the strip length is detrimental to the type of aircraft being

allowed to land. Increasing the strip by 100m is unfeasible due to surrounding environmental constraints, mainly the proximity to the Copperfield River.

When aircraft are unable to land, opportunities exist to land at the Einasleigh airstrip which is sealed runway but affected by low light and cloud conditions, similar to Kidston. A key lesson learnt around logistics is to have clear and efficient alternative options available in the event that the charter cannot land at the airstrip due to poor conditions. The Project has only been required to implement an alternative travel solution once due to rain over the airstrip at site. The mitigation strategy at the time was to bus workers in from either Townsville or Cairns and worked well.

## 3. COMPETITION FOR WORKERS

### 3.1 Indigenous employment at the Project

As part of the Northern Australia Infrastructure Facility (**NAIF**) \$610m funding for the Project, Genex was required to develop an Indigenous Engagement Strategy (**IES**) which was to be approved by NAIF. As part of the IES, the Project is required to reach an Indigenous employment target of 5%. Currently, the EPC Contractor has hired 8 Indigenous Full Time Employees (**FTE**) on the Project (excluding subcontractor data). The EPC Contractor is allowing for approximately 50 FTE roles meaning the Indigenous employment is well above the 5% target.

The EPC Contractor has engaged Australian Training Works (**ATW**) for Indigenous recruitment purposes on the Project. The EPC Contractors have hired 3 Indigenous workers through ATW to date. A key lesson learnt around Indigenous employment on the Project would be to engage a Group Training Organisation (**GPO**) like ATW prior to the hiring processes beginning. This would allow the GTO enough time to potentially train individuals to deliver a workforce suitable for the Project.

### 3.2 Construction Workforce

The competition for skilled workers within the construction industry remains high with other high profile construction projects under construction in major cities and the mining industry. Being a FIFO construction project, the ability to attract and retain skilled construction workers is essential. Currently the predominant skill base comprises a mixture of both civil workers, tunnelling workers, and miners. As the Project advances additional mechanical and electrical skill sets will be required.

Workers with tunnelling/mining backgrounds are susceptible to enticement to the mines where the larger mining companies are offering equal time rosters and sometimes offering sign on/retention bonus.

### 3.3 Camp Management Workforce

The hospitality industry heavily relies upon international worker support, in particular the backpacker community. With Covid-19 and restrictions on travel, it was initially very difficult to attract and retain cooking and cleaning workers. With travel restrictions currently starting to open up, more international workers are available to assist. The Project is competing with the remainder of the hospitality

industry who are also trying to ramp up operations, but located in more traditional holiday destination locations, like Cairns. The Project is trying to combat this by enticing workers with limited or no background in the hospitality industry and training them onsite.

## 4. COVID-19 MANAGEMENT AT SITE

Genex continues to monitor and adhere to advice from the Queensland Government with respect to COVID-19. Genex has established a COVID-19 Management Plan for the Oaks Rush Village. This was developed using best practice guidance from industry and in consultation with the major contractors, camp management and the onsite Registered Nurse.

The Oaks Rush Village contains a quarantine area in an isolated area of the accommodation blocks which has been successful in isolating those infected, minimising the spread and ensuring COVID-19 cases at the Project site to a minimum.

The onsite Registered Nurse has been instrumental in keeping the Project abreast of the Covid-19 status on site and whether restrictions to camp operations is required or not. The Registered Nurse is well supported and assisted by the Genex HSEQ Manager and EPC Contractor Safety Team.

Examples of positive COVID-19 mitigation measures include:

- Health self-declaration prior to coming to site (within 24hrs);
- Wearing of face masks;
- Promotion of good hygiene by washing hands and sanitising;
- Separation in the dining room – limiting two to a table;
- Get tested when unwell (there are RAT tests onsite for self administration);
- Establishment of the COVID-19 quarantine accommodation block. This entails a separate laundry, waste collection procedures, room cleaning and linen changing procedures, meals delivered to rooms, health and well-being checks, online access to the camp shop, and opportunities to undertake exercise outdoors (walking); and
- RAT tests were provided to persons so that they could self-test prior to returning to site. It was noted that this provided limited benefit and the Project resorted to testing persons upon arrival and then if someone tested positive, all persons on that flight would be tested three days later.