



ASX Announcement

28 April 2016

UPDATE ON KIDSTON HYDRO PROJECT FEASIBILITY STUDY AND PROJECT DESIGN POTENTIAL TO INCREASE GENERATION CAPACITY UP TO 450MW

HIGHLIGHTS

- Extensive design optimisation process leads to the selection of an improved design for the Kidston Pumped Storage Hydro Project
- Optimised design includes a “Turkey’s Nest” upper reservoir
- New design has the potential to increase generation capacity up to 450MW
- Provides the lowest cost per MW of installed capacity out of all options considered
- Lowest operating and environmental risk
- Genex now engaged in detailed design phase
- Ongoing support from Australian Renewable Energy Agency (ARENA) under the funding agreement
- Meaningful support from the Queensland State Government as a “State Prescribed Project”
- Feasibility Study progressing well and remains on track for completion in Q3 2016
- Project funding discussions advancing ahead of schedule

Genex Power Limited (**ASX: GNX, Genex** or the **Company**) is pleased to provide the following market update on the progress of the Company’s Kidston Pumped Storage Hydro Project (**Project**) Feasibility Study.

Feasibility Study Update

Since the appointment of its Feasibility Study consultants in August 2015, Genex has been closely engaged with both Entura and HydroChina in rapidly progressing the Feasibility Study for the Project.

The Feasibility Study is now well advanced with Entura and HydroChina currently working on finalising the detailed design for the scheme. The design layout of the Project has evolved substantially since the pre-feasibility study (PFS) concept was initially identified. The optimal design identified provides for a “Turkey’s Nest” shallow dam design for the upper reservoir to be adopted to maximise the potential of the Project. The “Turkey’s Nest” is proposed to be constructed on top of one of the existing waste rock dumps adjacent to the Eldridge lower reservoir.

The Turkey’s Nest design incorporates a number of strategic advantages, with the new configuration removing a number of the previous constraints inherent in the initial concept and, most significantly, enables a significant increase in the installed capacity of the Project. Whilst the ultimate size and scale of the Project has yet to be determined after the conclusion of a detailed market study (now underway) and further design refinements, the new design is expected to have the capacity to generate up to 450MW of peaking power over a 5-6 hour period.

Project Design

During the course of the first phase work of the Feasibility Study, a detailed design optimisation exercise was conducted by Genex in conjunction with its consultants, Entura and HydroChina, which included analysis of a number of different design options which could be adopted for the Project.

Option 1

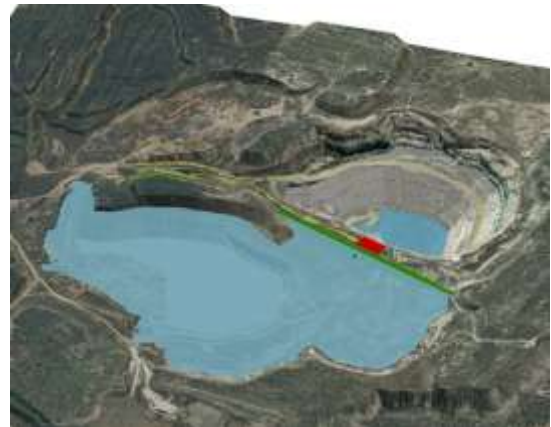
The original (PFS) design proposed the Wises Pit as the upper reservoir and the Eldridge Pit as the lower reservoir. Option 1 provides for a surface trench to be excavated to allow the water intake structure to be erected. The underground powerhouse is located between the two pits.



Option 1 (above):

Option 2

Option 2 expands on Option 1 by increasing the size of the Wises Pit upper reservoir. This is achieved by taking advantage of the elevated topography surrounding the Wises Pit and increasing the maximum height of the upper reservoir. The powerhouse location is unchanged between the upper and lower reservoir.



Option 2 (above):

Option 3

Option 3 involves the construction of a new "Turkey's Nest" shallow dam upper reservoir on top of the Eldridge Pit North Rock Dump. This option will involve building a relatively low (5-6m) embankment around the existing dump to create the "Turkey's Nest" dam. The new upper reservoir would be lined using HDPE (high density polyethylene). Under Option 3, the elevation of the upper reservoir will be 35m-40m higher than upper reservoir elevations under Options 1 and 2 as the existing waste rock dump is 20m to 40m above the natural ground level. The powerhouse is located directly below the south eastern end of the "Turkey's Nest" adjacent to the west side of the Eldridge Pit.

Option 3 "Turkey's Nest" (below):



Each of the above design options have been examined in detail to assess installed capacity, constructability (with respect to environmental and other risks during both construction and operation) and economy of scale with respect to estimated capital costs.

Following assessment of the potential options, it has been determined that the “Turkey’s Nest” upper reservoir (Option 3) is the most ideal configuration to now progress to the detailed design phase.

Turkey’s Nest

The “Turkey’s Nest” construction will involve, firstly, reshaping part of the existing North Eldridge Rock Dump and, secondly, constructing the levee banks of the new upper reservoir utilising existing waste rock dump material. Sealing of the new reservoir will be by way of an HDPE liner installed over the inside surface of the new structure.

The key advantages afforded by this design are:

- A significant reduction in the water level variance during the generation cycle;
- A significant increase in the average and maximum water head available (principle reason for ability to increase power station size);
- Elimination of water seepage issues from the upper reservoir;
- Enables the Wises Pit from the PFS design to be utilised for excess water storage and water balancing for stormwater and flood mitigation purposes, both during construction and during operation of the scheme; and
- “Turkey’s Nest” dams are commonly constructed around the world and utilise readily available and accepted construction techniques.

The illustration below shows the revised scheme layout including the location of the “Turkey’s Nest” upper reservoir, the underground power station cavern, the intake shaft and the tailrace discharge tunnel, as well as the Eldridge Pit lower reservoir.

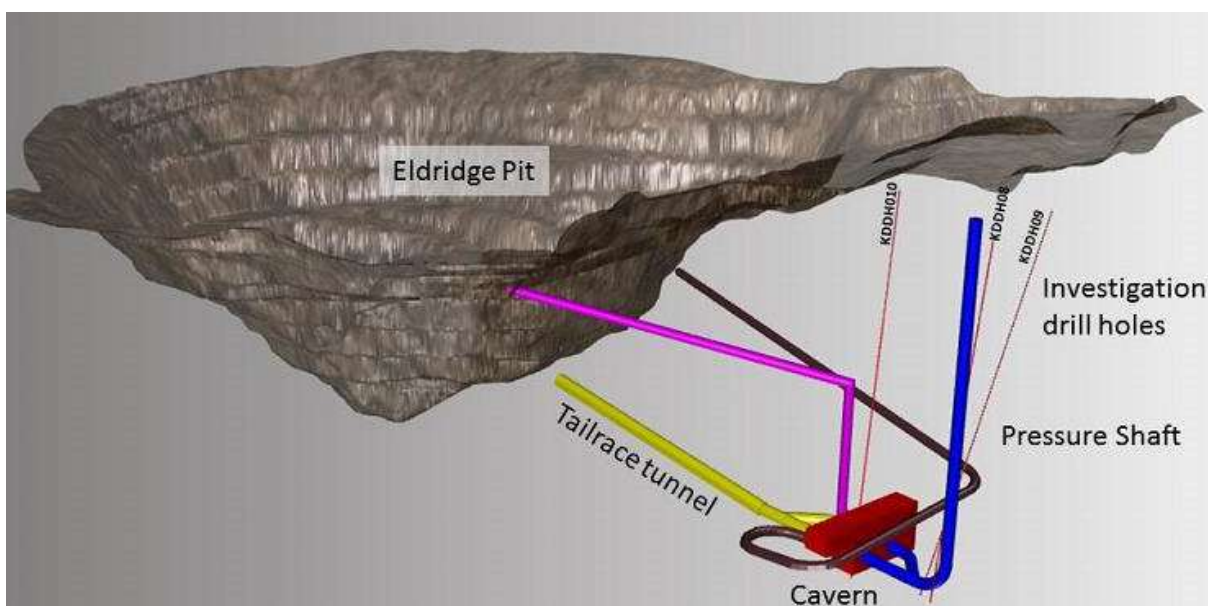


Geotechnical Investigations

A detailed geotechnical investigation of the Project site has now been completed. Key activities undertaken as part of this investigation included deep core drilling, geological mapping of the existing pits, compressive strength testing of core samples, permeability testing of the underground rock mass and in-

situ stress testing of the underground rock mass. These activities were undertaken to assess the geotechnical competence of the rock in which the underground structures will be constructed (including water intake shaft, powerhouse cavern, tailrace discharge tunnels and the access decline tunnel). The geotechnical investigations have confirmed the ground conditions are well suited for the construction of the proposed power station cavern and water conveyance shafts and tunnels. The geotechnical parameters determined through these investigations will now be used during the detailed design phase of the underground excavation and civil construction works.

The results of these investigations also indicate that the quantum and extent of reinforced concrete and steel lining that will be required will be substantially less than that anticipated in the PFS design. This in turn will mitigate capital costs for the required underground construction works.



In relation to the proposed "Turkey's Nest" upper reservoir, significant geotechnical investigations by way of bulk test pit excavation and sampling works have been concluded. These works provided key geotechnical parameters including bulk material densities and gradings, which have been used to verify the suitability of on-site materials for use in construction of the "Turkey's Nest". In addition, these parameters have been used as inputs to verify settlement modelling to further substantiate the technical viability of the "Turkey's Nest" construction on top of the North Eldridge Pit waste rock dump.

Turbine and Tunnel Configuration

The Feasibility Study has determined that a single pressure tunnel, twin turbine, and single tailrace tunnel configuration offers the best economic outcome. The turbines will be constructed to enable the generation output to be varied during the course of the generation phase, with fixed pumping speeds.

Transmission Line

A connection options study report has now been completed. The study has confirmed that the existing Powerlink main transmission network is robust enough to accept envisaged generation output and pumping loads from the proposed Kidston power station, without suffering any normal constraints. The connection options study considered a number of possible connection points for a new 275kV transmission

line from Kidston. These connection points included the existing Ross 275kV substation in Townsville and a possible new 275kV substation at Mt Fox, which is located approximately 115km northwest of Townsville on Powerlink's existing 275KV Ross to Chalumbin transmission line. Further work is now underway to identify possible route options for a 275kV line from Kidston. The output of this work will provide input to a detailed consultation phase with all stakeholders prior to identifying a preferred route option.

ARENA Funding

Since the signing of the funding agreement with ARENA, Genex has received 3 milestone payments from ARENA in relation to feasibility study costs for the pumped storage project. Support from ARENA has been critical in ensuring the feasibility program is progressing on track and a thorough work program is implemented so as to properly de-risk the project. Importantly, with ARENA's support, the project will be able to significantly contribute to "knowledge sharing" in relation to large scale energy storage in Australia and showcase an innovative storage solution to balance intermittencies inherent to renewable energy generation.

Prescribed Project

Following the Kidston Project's designation as a "State Prescribed Project", Genex has received significant support from the Queensland State Government in navigating the various state departments during the project development phase. This support has had a meaningful impact in terms of progressing the project through the various approval stages. Working with the State Government, Genex will continue to engage actively with all stakeholders to ensure that final project approvals can be achieved in a timely manner and in line with Genex's development timetable.

Project Funding

Genex is currently advancing project funding discussions with a number of parties. These discussions include innovative funding arrangements in respect of the power transmission line. The Company has clear visibility of available debt, equity and other funding alternatives and financing structures.

Updated Work Program

The Feasibility Study work program remains on track, with key milestones being reached in accordance with the original study timetable. Completion of the Feasibility Study is targeted for Q3 2016.

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About Genex Power Limited:

Genex Power is a power generation development company listed on the ASX. The Company is focussed on innovative clean energy generation and electricity storage solutions which deliver attractive commercial returns for shareholders. Genex is currently pursuing a number of unique energy development opportunities across Australia.

The Company's current focus is on the development of its large-scale Kidston hydroelectric pumped storage generation project and its large-scale solar PV project located in Northern Queensland.