

## Redesigned hydro-electric scheme to boost output west of Cairns

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1 May 2016

The Cairns Post



An aerial view of the two mine pit dams as part of Genex Energy's Kidston hydro-electric power scheme near Einasleigh.

A REDESIGN of a \$282 million hydro-electric power scheme southwest of Cairns has increased the potential output to 450 megawatts – up by 120MW.

Genex plans using two water reservoirs and existing infrastructure at the former Kidston gold mine 400km southwest of Cairns for the project. It involves the construction of a new “turkey’s nest” shallow dam upper reservoir on top of a pit rock dump.

Genex executive director Simon Kidston said a feasibility study was now well advanced with two expert companies, 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,” Mr Kidston said. “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 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 (from 330MW to 450MW) of the project.

“While 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 five to six hour period.”

Genex is working with Powerlink Queensland towards a viable route for the proposed 275kV transmission line required to connect the Kidston project to the national grid. Mr Kidston said the company had received “significant support” from the Queensland Government in navigating the various state departments during the project development phase since it was declared a “state prescribed project”.

Kidston is an abandoned gold mine west of Cairns and if all goes according to plan will become the third-largest hydro-electric energy storage project in Australia.

Genex Energy, which bought the old mine from Barrick Gold in 2014, is behind the project with the backing of a Chinese investor.

The aim is to create power at peak times for the state, up to 200 construction jobs and a new use for an idle mine with existing infrastructure.