

Hydro project pumped up

It takes patience, perseverance and lots of collaboration to establish a large scale renewable energy project in Australia.

Tony Boyd
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Four years after listing on the stock exchange, Genex Power has passed the last key milestone for the construction of the Australia's first pumped-storage hydroelectric power project in more than 30 years.

Genex's project, which is located on the site of the former Kidston open-cut gold mine in far north Queensland, provides a good case study of the complexities involved in developing a renewable energy project.

On Friday, Genex said it had received approval from the Australian Energy Market Operator to connect to the national electricity network after it met the national operational standards applied to synchronous generators.

Genex Energy's Kidston solar and pumped-hydro plant at the old Kidston Gold Mine, west of Townsville. **Tony Moore**



The Kidston pumped-hydro project should strengthen the grid in a part of Australia that is ideally suited to large-scale solar projects but suffers from a lack of investment in the transmission network.

It is slightly bizarre that an area of the country with the highest solar irradiance is largely off limits to new solar investment because the grid is too “thin” to absorb solar-generated energy.

The fact that Genex has got this far in such a relatively short space of time is a tribute to the collaboration and co-operation of energy regulators, the Queensland state government, the federal government and the patience of investors.

A significant breakthrough occurred earlier this month when Japan’s Electric Power Development Co, also known as J-Power, agreed to invest \$25 million in the company and entered into a technical services agreement. This agreement will ensure someone with technical expertise in pumped-storage hydro can be at the site for its development and operational stages.

The funding structure for the 250MW pumped-storage hydro includes up to \$9 million from the Australian Renewable Energy Agency, a long-term energy storage services contract with EnergyAustralia and a concessional loan of up to \$516 million from the Northern Australia Infrastructure Facility.

Stage one of the Kidston project is a 50MW solar project which generated \$2.6 million in revenue in the March quarter of this year, taking cumulative revenue to \$9 million. This solar project was underpinned by a 20-year revenue support deed from the Queensland government.

It is obvious the transition to a renewable energy future is happening with a combination of private local capital, heavy government subsidies and foreign direct investment. The largest shareholder in Genex is Chinese company Asia Ecoenergy, a subsidiary of Chinese hydro equipment-maker Zhefu Holding Group.