

be big-G™

The Big-G Pumped Hydro Energy Storage Project



About the Project

- The Big-G Pumped Hydro Energy Storage (PHES) Project is a proposed renewable energy project located at Mount Alma, Queensland - approximately 55km from Gladstone located in renewable zone REZ6
- The Project has a planned generating capacity of 800 megawatts of hydroelectricity with 12 hours of storage duration at full output (9.6GWh total storage)
- Project is expected to commence construction in late 2027 and last for circa 6 years delivering significant economic benefits to the local region



Q2 2033

Indicative start date for commercial operations



9.6GWh

Maximum energy storage capacity (800MW x 12 hours)



26.6Mt CO2

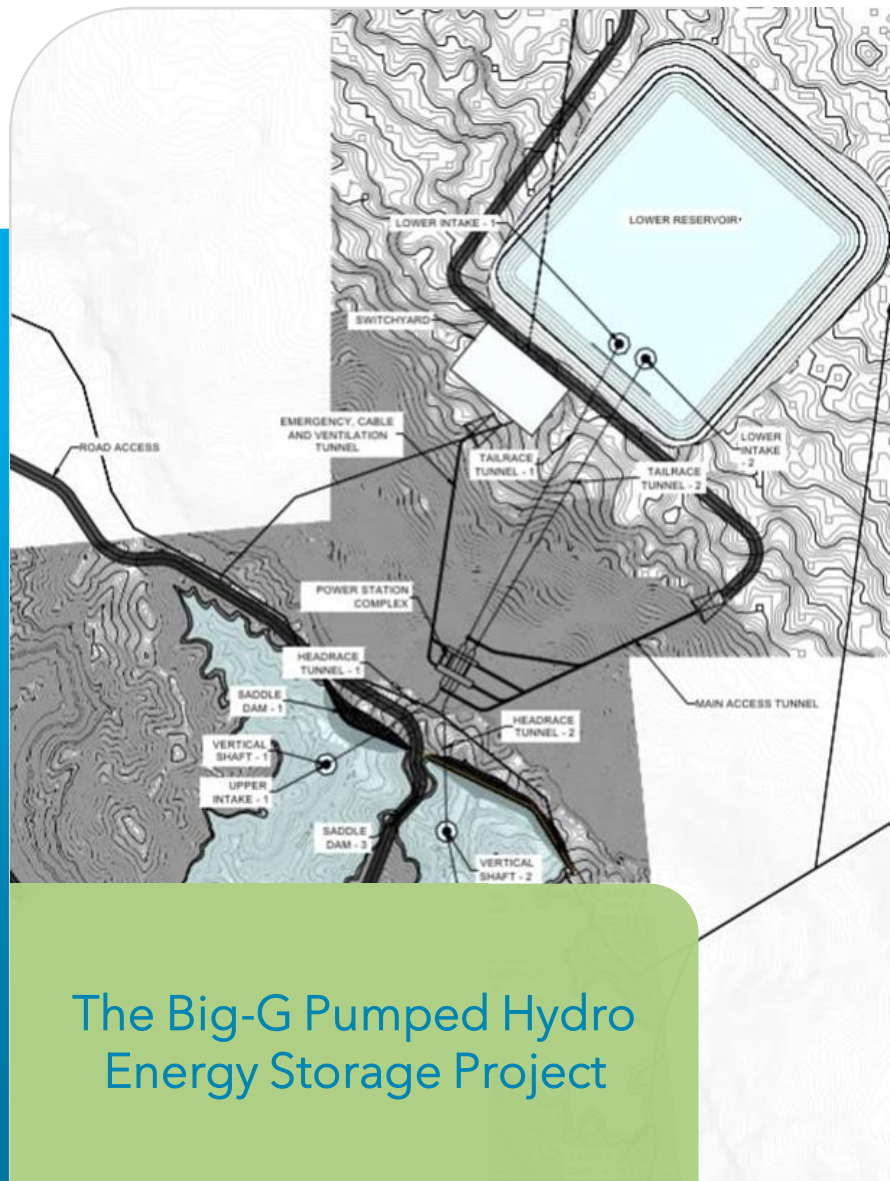
Potential reduction of emissions using the plant

Introducing the Big-G

The Big G PHES project, located at Mount Alma near Gladstone, Queensland, represents a pioneering closed-loop pumped storage initiative set to revolutionize renewable energy storage capabilities. As one of the most cost-effective projects globally, it stands to significantly firm up local grid requirements, providing unparalleled support to the region's energy infrastructure. Beyond its technical innovations, the project is poised to deliver substantial economic benefits, both during its construction phase and throughout its operation, by stabilising power prices and contributing to the economic resilience of the area.

Project Status

- The Project has completed the Concept Study and initial environmental assessment. Grid connection and water access applications have been made.
- Initial Advice Statement is currently being prepared for submission to the Qld Office of the Coordinator General.
- The plan for initial geotechnical investigation and Bankable Feasibility Study is being developed.



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The Project utilizes a complex of two valley dams and several saddle dams to form the upper reservoir, alongside a turkey-nest type dam for the lower reservoir, showcasing a unique approach to harnessing natural topography for energy storage. At its core, the underground power station complex, equipped with four 200 MW fixed-speed reversible Francis pump-turbine units, aims for an 800 MW generation capacity.

Water sustainability is a key focus, with the project's water requirements planned through the Sunwater Awoonga – Callide Water Supply Scheme Pipeline, ensuring an environmentally conscious approach to its substantial initial and operational water needs.

Grid connectivity is secured with two viable options, demonstrating the project's strategic integration into the existing energy network. Endorsed by Powerlink, these options underscore the Project's significance within the broader energy infrastructure