



# Pioneer-Burdekin Pumped Hydro

The Queensland Government has announced the commencement of detailed analytical studies for a potential 5 gigawatt (5 GW) pumped hydro energy storage (PHES) facility located in the west of the Pioneer Valley.

While the Pioneer Valley has been identified as a potential site for a large-scale, long-duration pumped hydro project, further studies are required to better understand the impacts and benefits of PHES at this site.

Analysis will include detailed hydrological modelling, assessment of environmental and social impacts, engineering optioneering and design, geological investigations and financial modelling.

## Queensland Hydro

The Queensland Government has established a publicly-owned entity, Queensland Hydro, to develop and deliver the large-scale pumped hydro assets that will be the cornerstone of the state's energy system.

Queensland Hydro will undertake the detailed analytical studies to advise the government on whether to proceed with further pumped hydro development.

## Site location

The proposed site for the lower storage reservoir is in the Pioneer Valley approximately 75 kilometres west of Mackay. The proposed site of the upper reservoirs are located to the north-east of Eungella.

## Site selection

The Pioneer Valley was chosen following a state-wide assessment of potential pumped hydro locations through the Queensland Hydro Study.

The site has significant potential for a large-scale, long-duration pumped hydro facility. The Pioneer Valley's mountainous topography makes it a favourable location as it provides a large vertical separation between reservoirs needed for pumped hydro.

It is also located close to high quality wind and solar generation sources in the Central and Northern Queensland Renewable Energy Zones which has the potential to unlock large volumes of renewable energy.

If fully developed, the Pioneer-Burdekin pumped hydro facility has the potential to power a significant portion of Queensland's electricity requirements.

## Public consultation

The government and the project team is committed to engaging early, often and transparently with the community, landowners, Aboriginal and Torres Strait Islander people and other stakeholders.

The government welcomes community and stakeholder feedback at any stage of the project.

For more information visit [www.qldhydro.com.au](http://www.qldhydro.com.au), email [pioneer-burdekin@qldhydro.com.au](mailto:pioneer-burdekin@qldhydro.com.au) or call 1800 875 099.

## Technical and commercial assessments



### Engineering

Engineering and geotechnical assessments will consider the site's geology, height and horizontal distance between dams, potential reservoir storage capacity, required civil works and site logistics.



### Technology and design

Technology and design issues vary from site to site, and assessments will consider factors such as project efficiency (including hydraulic and water losses), and connection to the electricity transmission network.



### Commerciality

The scale of PHES projects and their site-specific nature are the key factors impacting project costs. Assessments will consider the cost of developing the PHES project and will assess a full suite of location and technology factors.

## Environment and social assessments



### Environment

Understanding the environmental issues and impacts is one of the guiding principles in the development of PHES. Environmental assessments include existing tenure and use of land, impact on flora and fauna, hydrological assessments, water source and the impact on waterways, water supplies and requirements for environmental offsets.



### Indigenous

The conservation values of Queensland's protected areas are indivisible from their cultural significance for Aboriginal and Torres Strait Islander people. Assessments will include Native Title investigations and the potential impact of the project on sites of cultural significance.



### Community

While PHES projects are an important part of the future energy system, the size and scale of these projects can affect local amenity. Assessments will examine the project's impact on local communities, including those on existing community activities in the project area and impact on roadways during and after construction.