



Greater Whitsunday Regional Projects Forum - 2025

Capricornia Pumped Hydro - making Queensland's energy system more stable, reliable, and affordable.

September 2025

Agenda

- 1 Overview
- 2 Scope
- 3 Partners
- 4 Timeline
- 5 Procurement





Project located on Widi Country

- ILUA signed and registered
- Widi's first ILUA after native title claim determination in 2019
- Cultural Heritage Management Plan for construction and operations agreed and registered.

Section 1

Overview





The Capricornia Pumped Hydro Project will provide **clean and reliable** power to homes and businesses across Central Queensland and is an important part of a secure and affordable energy system for all of Queensland.

About us



COPENHAGEN INFRASTRUCTURE PARTNERS (CIP)

Owner/Investor

Copenhagen Infrastructure Partners is the world's largest dedicated greenfield clean energy investor, with a market-leading portfolio totaling more than 120GW across offshore and onshore wind, solar, energy storage, and renewable hydrogen. CIP has over A\$45 billion under management from more than 160 institutional investors globally, including Australian superannuation funds, and has an ambitious target of raising around A\$180 billion for green energy investment by 2030.

CIP acquired the project in December 2022.



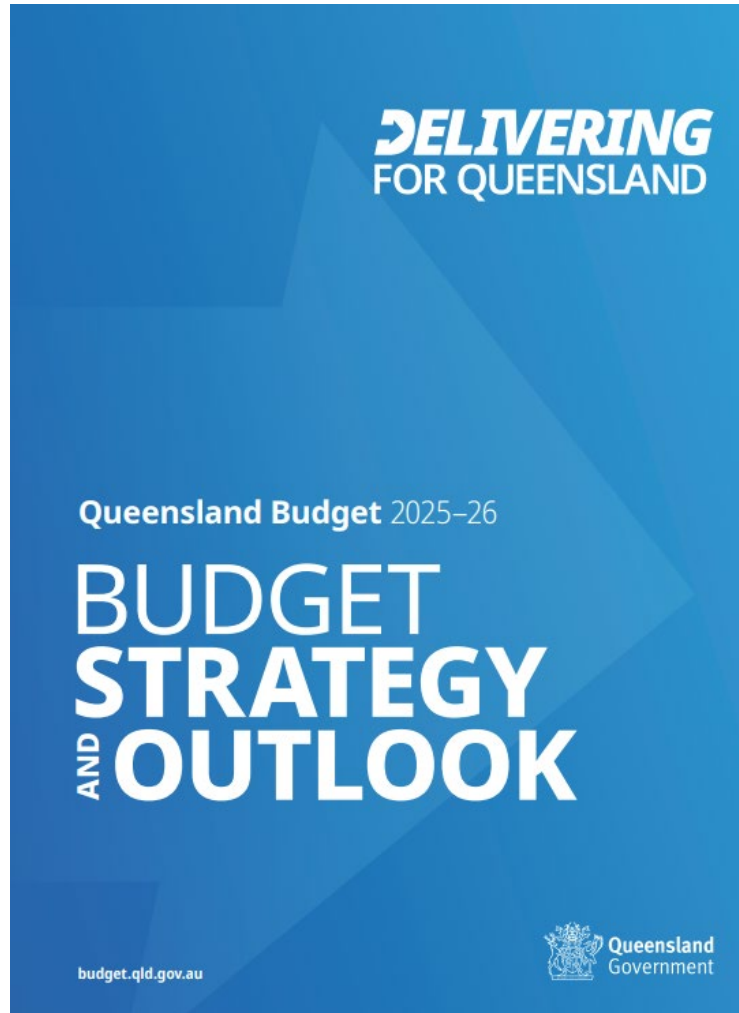
CS ENERGY

Offtake/Operator

In 2022, the project entered into an MOU with CS Energy (CSE). Since that time, the project has worked with CSE to reconfigure the PHES to meet CS Energy's portfolio requirements.

CS Energy is a Queensland owned and based energy company that provides reliable, competitively priced electricity.

State Government support



Supporting private sector investment



GOCs will continue to partner with industry to enable greater private sector investment in renewable energy and firming assets. This includes Stanwell's Wambo Wind Farm in partnership with Cubico, energy offtake agreements across all generator GOCs, and connecting new customers to the grid.



Energy generator GOCs are also progressing smaller, more manageable pumped hydro investments in partnership with the private sector, including the Mount Rawdon, Big T and Capricornia smaller, more manageable Pumped Hydro Energy Storage (PHES) projects.

Progressing pumped hydro energy storage

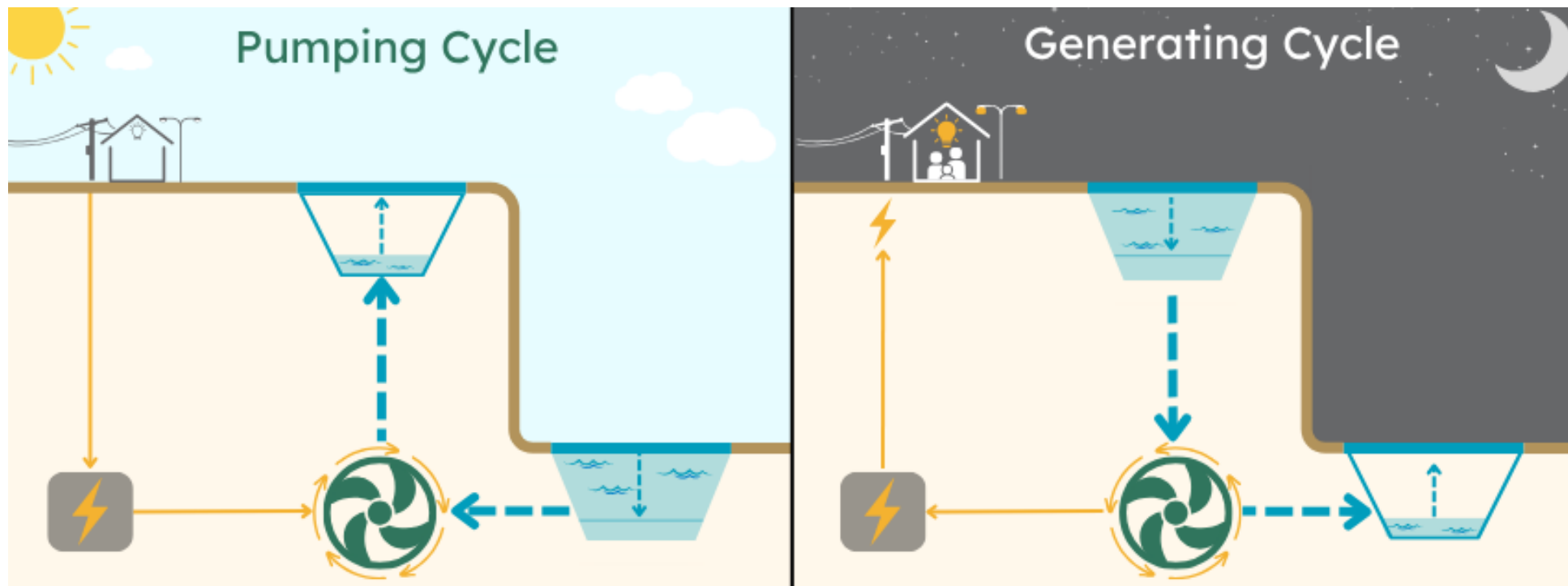


In 2025–26, Queensland Hydro will invest \$355 million towards early works on the Borumba PHES (\$3.0 billion over 4 years to 2028–29).

In 2025–26, \$79 million will be invested in the acquisition of the Mount Rawdon and Big T PHES projects to proceed with ongoing development activities. Additionally, CS Energy will continue to progress the Capricornia PHES project.

Technology

- Large battery. Stores potential energy rather than electrical energy.
- Water moves between reservoirs to generate electricity or recharge the upper reservoir.
- Recharges at times of low demand and generates during high demand.
- Highly reliable technology: 90 worldwide and 60 under construction.



Project in brief



PHES

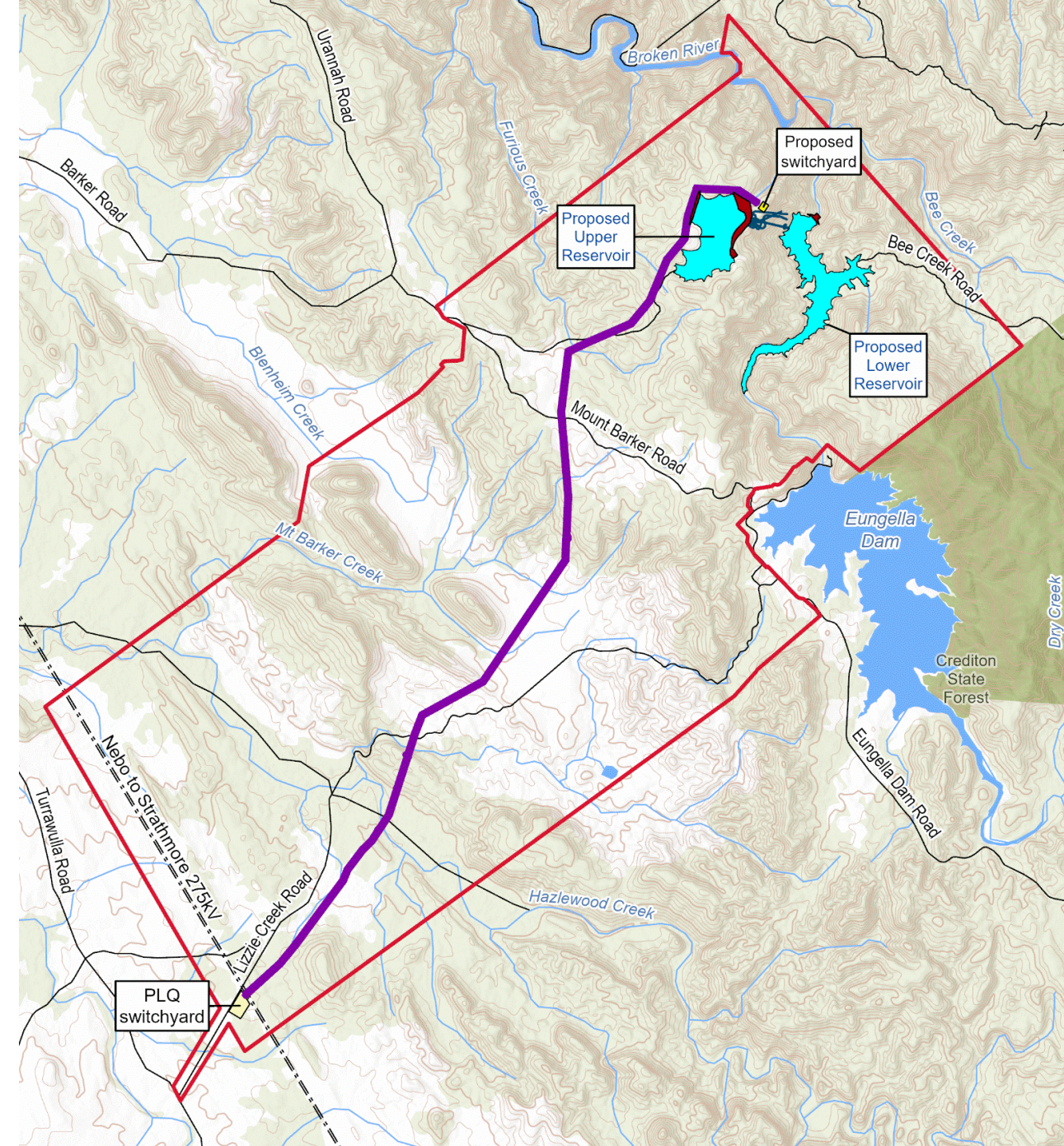
750MW & 16 hours of Storage

- Two reservoirs
- One underground powerhouse
- Connecting waterways (tunnelling)
- Designed to support CS Energy planning portfolio transition

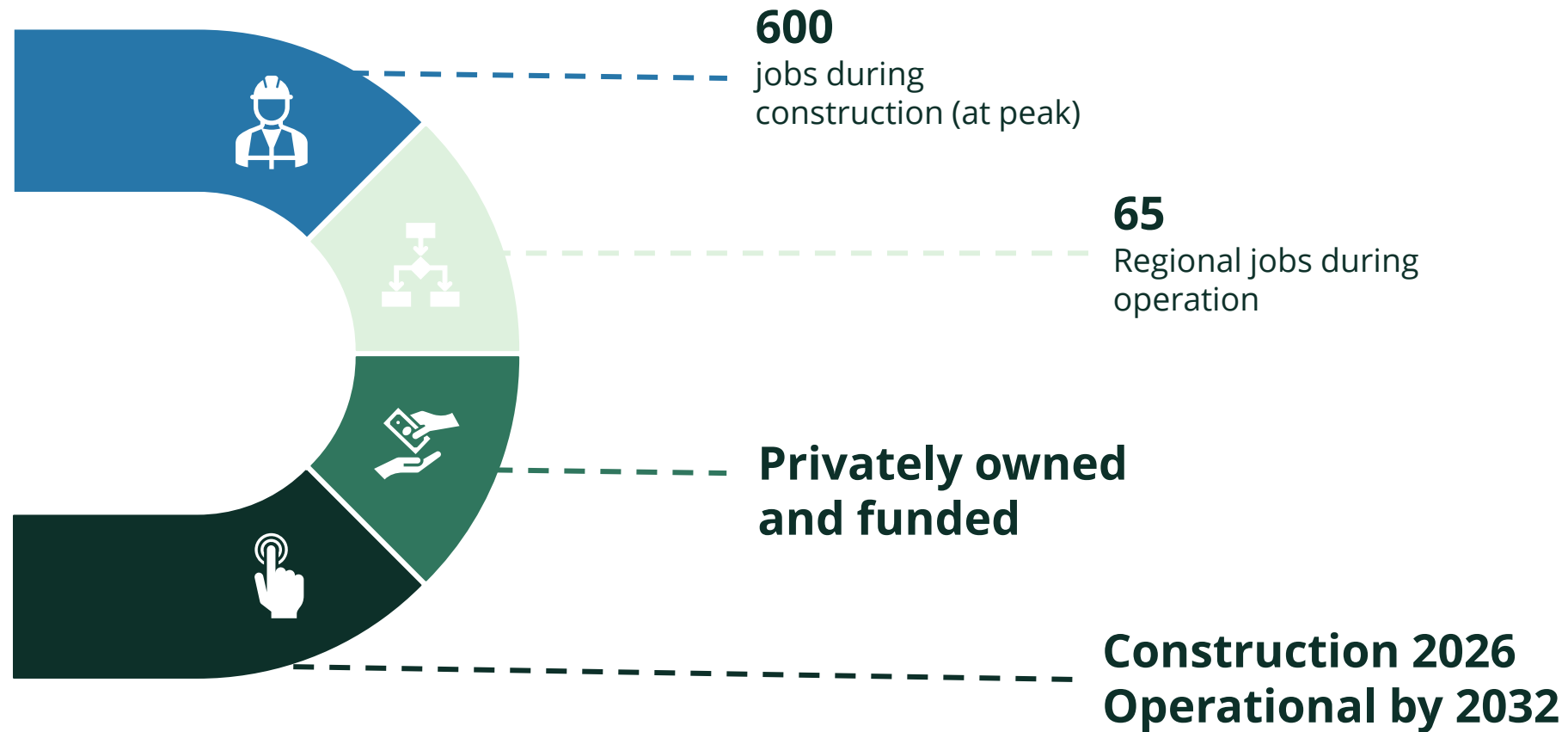


Infrastructure

- Upgraded and new roads
- Temporary construction camp
- 18km of new transmission line
- New substation and switchyard

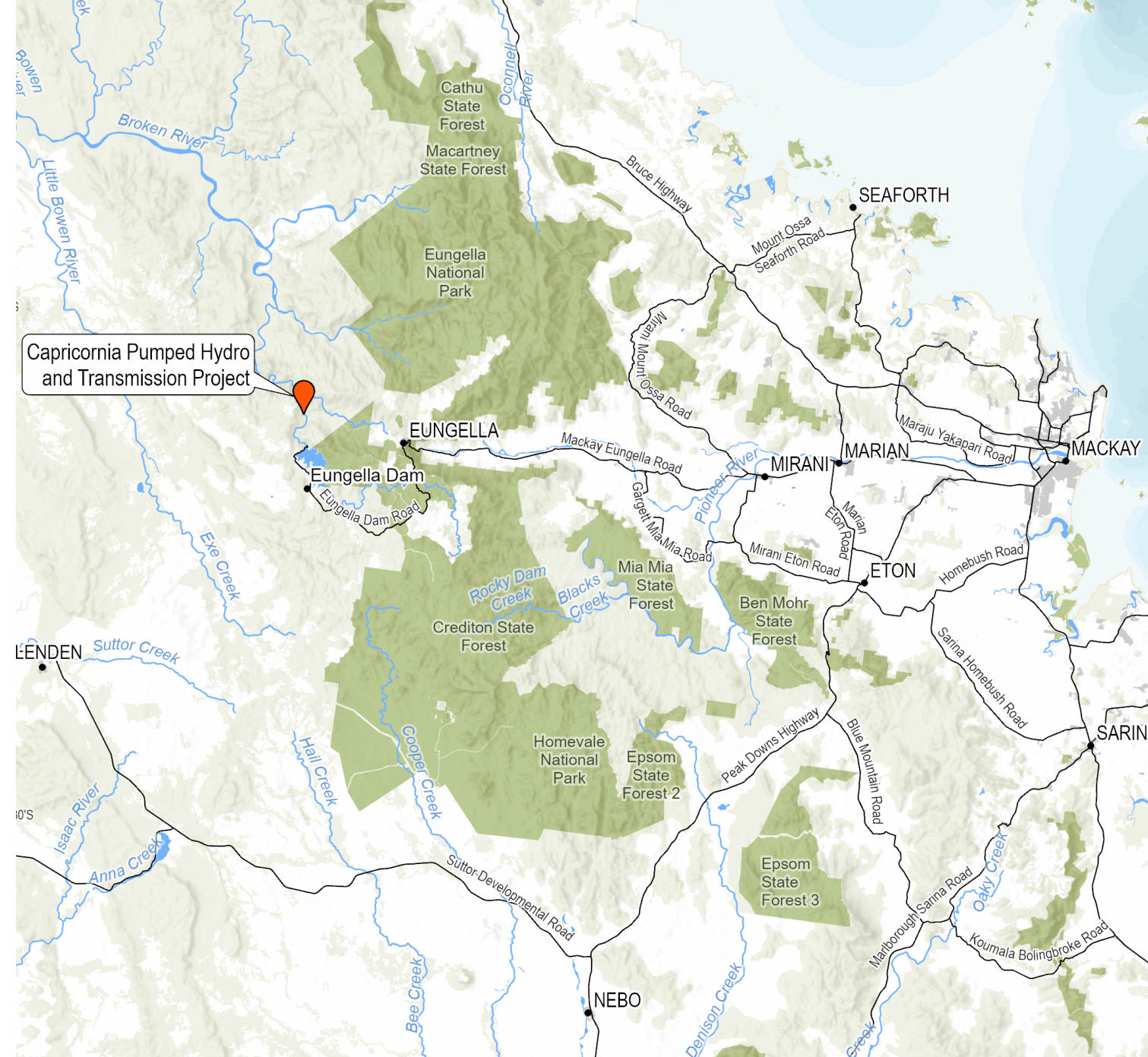


Key facts



Location

- 6km downstream of Eungella Dam.
- Mainly grazing land. Two landholders.
- Pastoral lease land and some freehold.
- Close to:
 - Multi circuit 275KV network
 - Peak Downs Highway and Suttor Development Road
 - CQ's substantial skilled workforce
 - Eungella/Moranbah pipeline
- Roster change by bus to/from Mackay

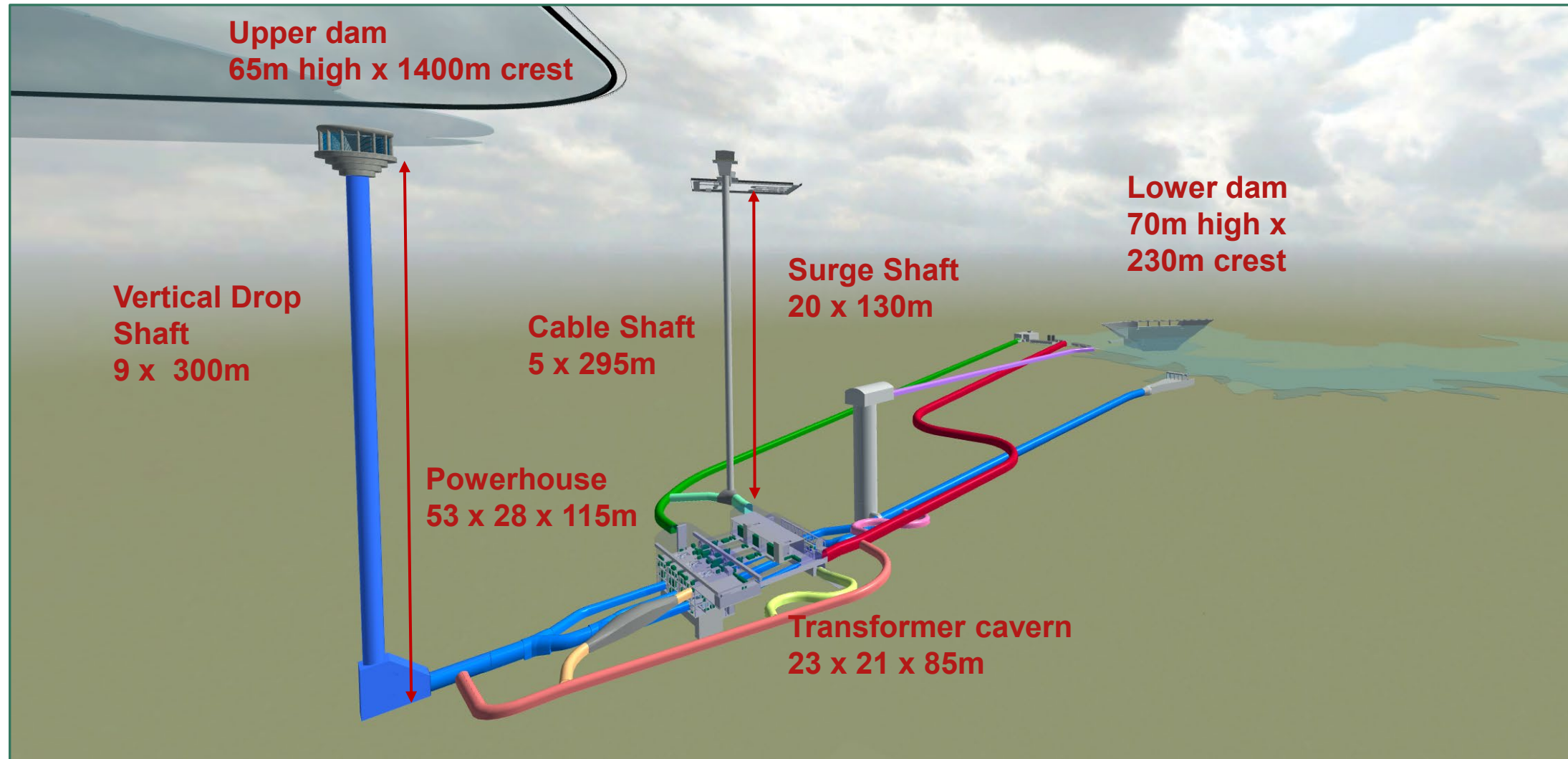


Site characteristics

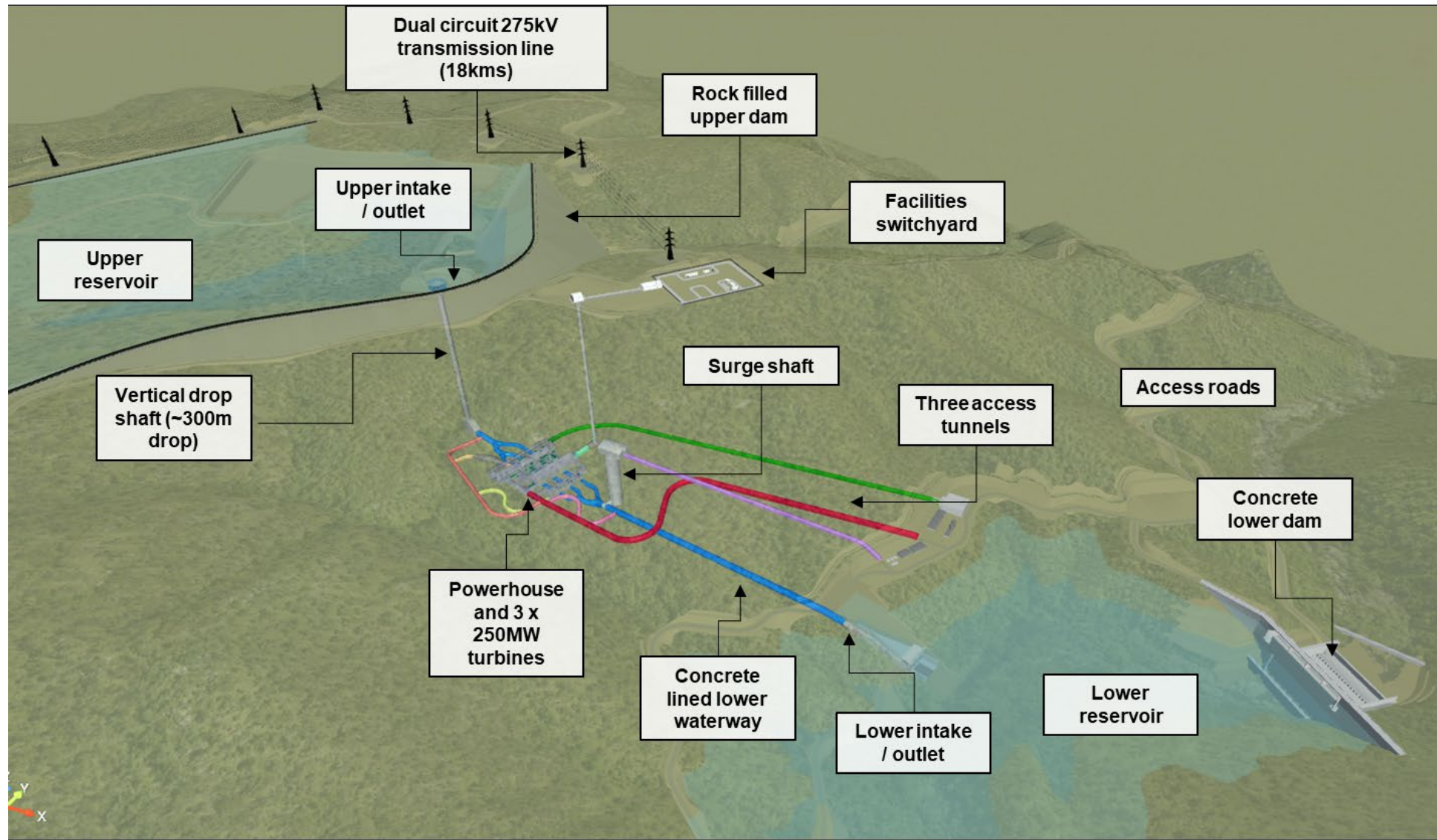
- Rural site location. Dry woodland with varying densities.
- Abrupt contrast of undulating and very steep terrain.
- Lower dam within the Broken River. Upper Dam 300 meters higher on a natural bowl.
- Hard and consistent rock.



General arrangement – subject to change



General arrangement – subject to change



Section 2

Scope

Quantities and schedule



Large & truly multi disciplined

Civil - surface

- Largest camp since Curtis island LNG
- 2x 70 m high dams
- Very large qty of site batched concrete
- Very large qty of site processed rock
- 45 kms of roads

Civil - underground

- 5 kms of drill and blast (6x6 & 8x8)
- 700m of raise boring, 3 x 5m diameter
- 300m of slashing to 9m diameter drop shaft

Utilities

- WTP, WWTP
- 5-7MW of elec. gen.
- Large bandwidth data link
- 17 kms HV trans.
- Switchyard

Mech/Elec/Hyd.

- 750 MW generation
- 750 MW pumping
- Off site operation
- 200T transformers
- 200T valves



Construction requirements

- Internal and new external roads
- Construction camp
- 50-seater bus
- RC/shotcrete lined tunnels
- Caverns
- UG gantry cranes
- Shafts (concrete lined)
- Site batched concrete
- Reinforcement
- Site processed rock (excl. concrete)
- Upper dam liner
- Pump/Generator & transformer
- Prefabricated steel liner (in sections)
- Cable shaft stairs and elevator
- Backup generators
- Facilities switchyard
- 275KV transmission line
- Temp. water line (500m³/day)

Section 3

Project partners



Development: Reference Design Stage

Role	Partner
Geotechnical investigation, testing, reporting	RIX Group, Mac Geo, Tonkin Taylor
Engineering and design	Mott MacDonald
Lead EIS Consultant	GHD
Grid modelling	Amplitude
Original Equipment Manufacturer	Voith
Independent Estimator	Kenesis
ECI EPC Contractor	Gamuda-Ferrovial Joint Venture

Development: FID Stage

Role	Partner
Geotechnical investigation, testing, reporting	RIX Group, Mac Geo, Tonkin Taylor
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Grid modelling	Amplitude
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ECI EPC Contractor	Gamuda-Ferrovial Joint Venture
Engineering and design	To be confirmed by Contractor
Original Equipment Manufacturer	To be confirmed by Contractor

Delivery: Construction and commissioning

Role	Partner
Grid modelling	Amplitude
ECI EPC Contractor	Gamuda-Ferrovial Joint Venture
Engineering and design	To be confirmed by Contractor
Original Equipment Manufacturer	To be confirmed by Contractor
Geotechnical investigation, testing & reporting	To be confirmed by Contractor

Delivery model

- Single Lump Sum EPC Contract
- Inclusive of:
 - Early-works
 - Engineering and procurement
 - Civil and underground scope
 - OEM scope
- Risk Allocation
 - Ground risk: Principal Contractor (site investigations complete pre-award)
 - Schedule risk: Principal Contractor (shared through incentives/disincentives)
 - Performance guarantees: standard hold points in R2 testing



Key EPC Contractor risks

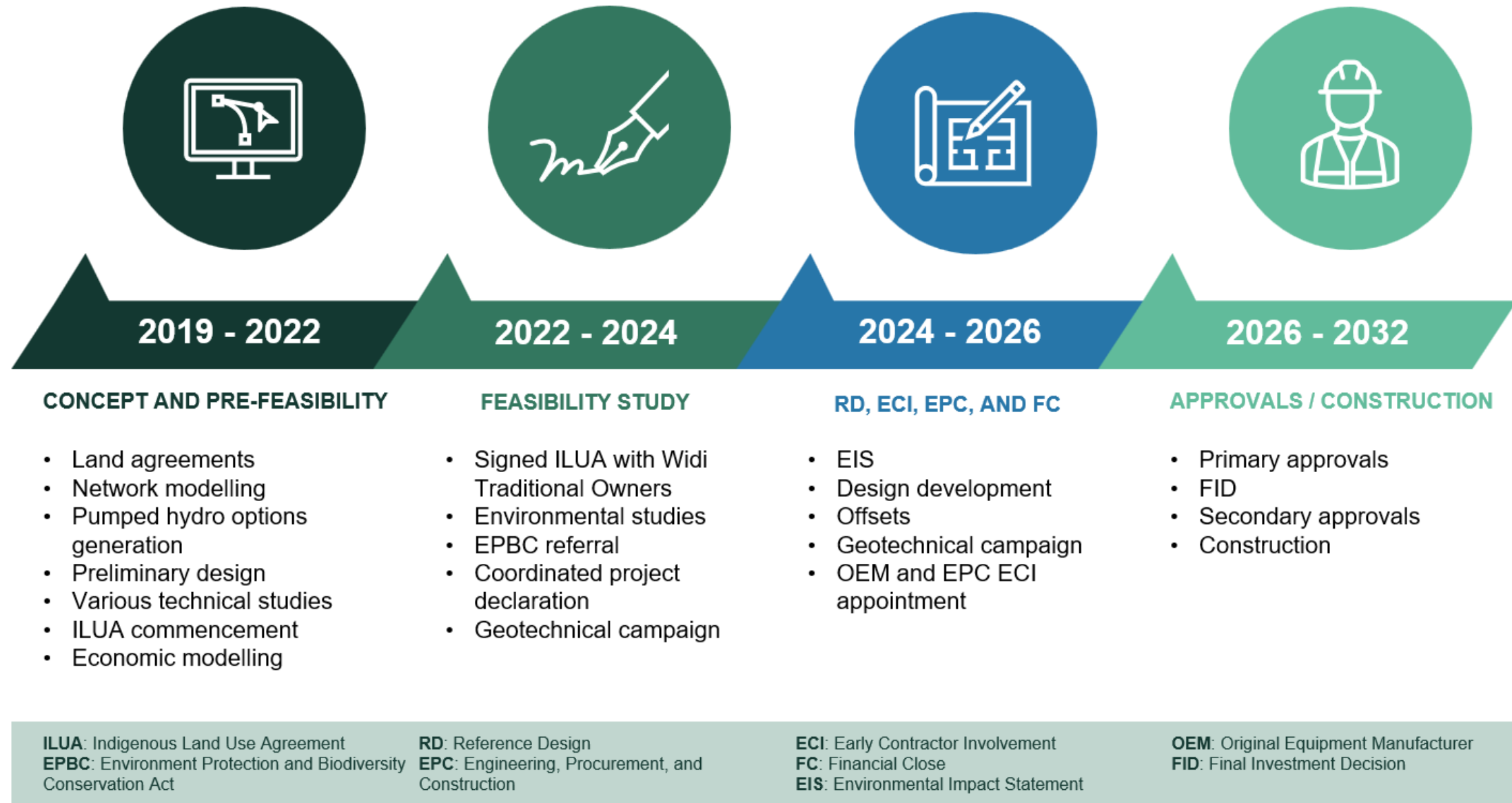
Package	Key Risks
Early Works (roads, camps)	Ground conditions
Dams & Reservoirs	Volume & productivity
Tunnels & Caverns	Geological variability
Turbine Generators (OEM)	Long lead times
Switchyard & Transmission	Long lead times & safety

Section 5

Project timeline



Project timeline



Section 6

Procurement



Register as a vendor on our Felix portal



Procurement principles

- Value for money
- Responsible procurement
- Ethical and embedded integrity, probity, accountability
- Leaders in procurement practice
- Collaborate for more effective outcomes
- Strong governance and planning



Targets and best practice principles

Aim to contribute to the Queensland Government local content targets.

These targets currently include:

- 3% of addressable spend from First Nations businesses
- 30% of procurement by value from Queensland 'small and medium enterprises.



Key selection criteria

Proven Technical Capability

A strong track record on similar hydro-storage projects demonstrates technical expertise and reliability in project delivery.

Safety and QHSE Performance

A zero-harm culture and robust management plans are vital for ensuring safety and high QHSE standards.

Operational and Financial Strength

The ability to mobilize crews for continuous operations and strong financial resources are essential for project success.

Local Engagement Commitment

Engaging local communities and ensuring their participation strengthens project outcomes and social acceptance.



Current opportunities

- Next stage of geotechnical site investigations will run September 2025 – June 2026.
- These works are critical to understanding the geological conditions around key elements of the design and will help to refine the scheme design.
- Interested suppliers should subscribe, register and complete the open EIO through our Felix procurement hub.
- The project is interested in hearing from suppliers of the following services:
 - Surveyors
 - Geophysics service providers
 - Drilling and coring services
 - In situ rock testing service (stress, strain, permeability, and downhole wireline geophysics, including Acoustic televiewer equipment)
 - Geotechnical engineering and geological services
 - Soil and rock sample laboratories (*NATA accredited)
 - Wet and dry hire equipment providers



apricornia
Pumped Hydro

Geotechnical site investigations

Supplier EOI

Register interest through our procurement hub Felix



Thank you

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