

# CLEAN ENERGY, ON DEMAND

Approved by the Board of Genex Power Limited

## Uniquely positioned in the clean energy thematic



## Diverse Renewable Energy base

Genex is focused on delivering on its portfolio of renewable energy generation and storage projects

### KIDSTON CLEAN ENERGY HUB



50MW Kidston Solar Project (Operating)



250MW Kidston Pumped Storage Hydro Project (Construction)



150MW Kidston Wind Project (Development)

Up to 270MW Kidston Stage Two Solar Project (Feasibility)

### BOULDERCOMBE BATTERY PROJECT (BBP)

50MW Large Scale Battery Energy Storage System (Development)

### JEMALONG SOLAR PROJECT (JSP)

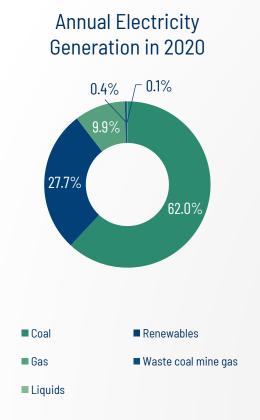


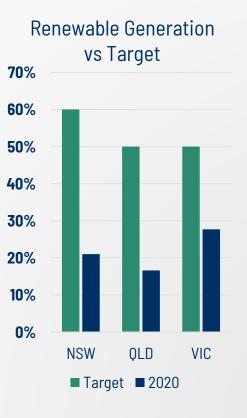
50MW Jemalong Solar Project (Operating)

## Producing clean energy for Australia

By 2025 our portfolio of renewable power projects will provide clean energy to over **350,000 homes removing almost 2mtpa of CO**<sub>2</sub> The clean energy sector in Australia is accelerating, yet many states are well short of their targets providing growth opportunities for Genex<sup>1</sup>







## Our people, communities and the environment



### People, Health and Safety

- Continuation of COVID-19 protocols to ensure our people and communities remain safe
- Commitment to managing risk and driving safety leadership through our organisation and ensuring our contractors implement best practice
- Strong focus on diversity and indigenous engagement within our workforce



### Environment

- Strict focus on minimising disturbance
- Commitment to conserving and protecting the environments we operate in
- K2-Hydro converting disturbed mine site to sustainable energy generation
- 2 million tonnes CO<sub>2</sub> abatement by 2025



### Community

- Focus on job creation in our local communities
- At Jemalong, 151 jobs were created, 68% were local, 22% were women and 11% were Indigenous
- Indigenous Engagement Strategy to promote Indigenous employment and procurement for K2-Hydro
- 800 jobs created at Kidston and along the transmission route

## Track record of delivery



Infrastructure status Kidston **Clean Energy Hub in** Queensland





secured in renewable energy funding

of Australia's first Pumped Hydro project in 40 years

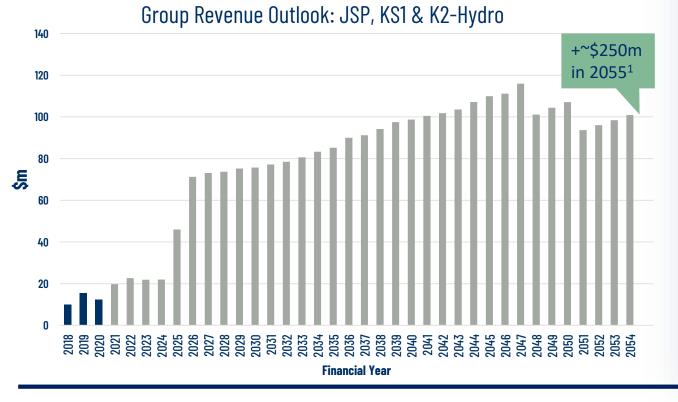
## Strong relationship with Tier 1 stakeholders

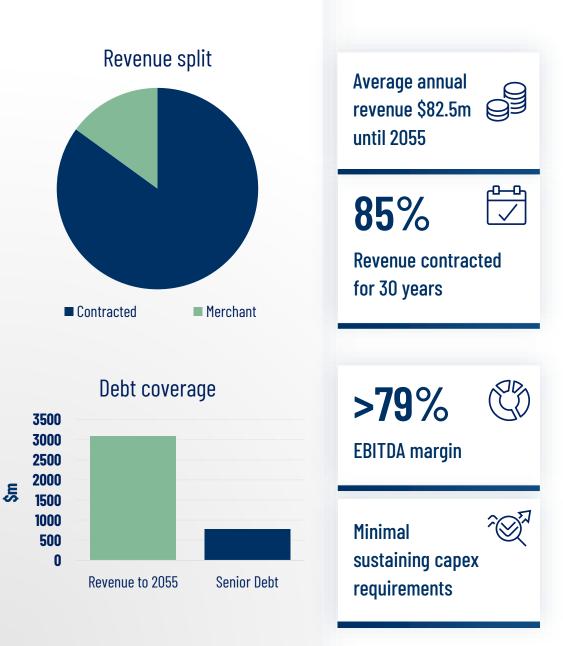
Significantly reduced execution risk via carefully structured contracts and selected counterparties



High level of secured revenue provides utility like cashflow

Contracted volumes deliver utility like cashflow profile, supporting our debt and underpinning future dividends and growth





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## Fully funded to deliver 350MW of generation

### Group Debt & Grant Funding

\$610m of long term debt ٠



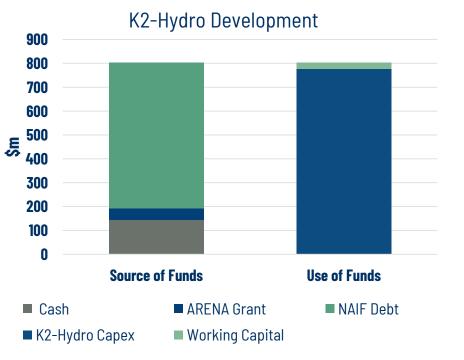
- Largest NAIF loan to date ٠
- 15-year tenor ٠

- \$47m grant from Australian Renewable Energy Agency (ARENA) ٠
- Largest ARENA grant to date ٠

### lestpac .

NORD/LB

- \$192m for funding of JSP and KS1 Solar projects
- 5-year tenor ٠
- First Green Loan to be Certified under the Climate Bonds Standard **DZ BANK**



Group Senior Debt Summary	\$780m
Debt amortisation 2021-2024	\$23m
Debt amortisation 2025-2055	\$757m
Average interest rate <sup>1</sup>	2.96%



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### Growth Strategy

Genex will use its core competencies of project identification, execution, partner relations and



Apply our knowledge and skill set

Identify other renewable energy

 $\checkmark$ 

Identify further storage opportunities

## Kidston pumped Hydro provides growth and scale



J. 250MW/2,000MWh Third largest electricity **First pumped hydro** pumped storage storage device in project in Australia hydro for 40 years Australia ₽  $\bigcirc$ Low capex due to 800 direct Unlocks the renewable unique reuse of jobs created generation potential exhausted mining pits of North Queensland 6 3  $\bigcirc$ Adds much needed **Dedicated transmission** Helps the State achieve system strength to the line unlocks the potential its **Renewable Energy** weak North Queensland of the Kidston Clean Target of 50% by 2030 grid **Energy Hub at Kidston** 

### Solar energy portfolio



### Kidston – operating since 2017



Located in North West Queensland



50MW / 145,000MWh



30 year project life



33% Capacity factor



20 year offtake with the Queensland Government





### Jemalong – operating since 2021



Located near Forbes NSW



50MW / 128,700MWh



30 year project life



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29% Capacity factor



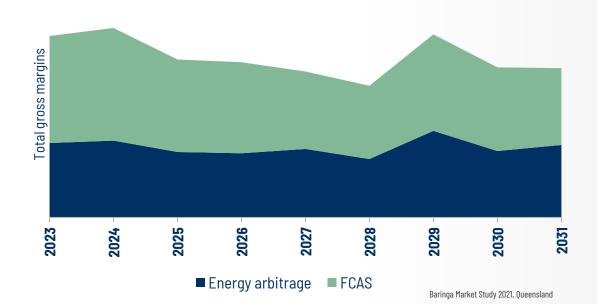
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## Our battery growth plan

Battery storage diversifies GNX's renewable portfolio and builds on our knowledge base of energy markets and expertise in financing renewable energy & storage projects



Strong FCAS market in the near to medium term including introduction of Fast Frequency Response



Attractive outlook for price arbitrage in certain states with the introduction of 5-minute settlement in late 2021



FCAS represents majority of total project revenue

Strong revenues from arbitrage (Queensland)

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**Batteries provide the National electricity** Market (NEM) with:

- ✓ Reduced renewable energy curtailment
- ✓ Frequency regulation services
- ✓ Voltage control
- ✓ Rapid and flexible ramping
- ✓ Black start services
- ✓ Ability to operate in both the electricity and FCAS markets

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#### **Benefit to Genex**

- ✓ Rapid roll out
- ✓ Scalable
- ✓ High return

## Bouldercombe Battery Project

### 50MW BESS located in Bouldercombe, Rockhampton in Queensland - adjacent to the Powerlink substation.

- ✓ Genex's first battery project
- Land to be secured under 30 year leasing arrangement next to Powerlink's Bouldercombe substation
- ✓ Connection and GPS process well advanced
- Funding discussions with potential lenders and strategic investor
- ✓ Battery supplier and integrator have been selected



### Kidston Wind

K3-Wind will leverage existing infrastructure (transmission line) and co-location advantages to K2-Hydro The land portfolio has been secured



Development funding agreement signed with **J-POWER to earn 50%** in the project through an initial A\$1.5m funding investment

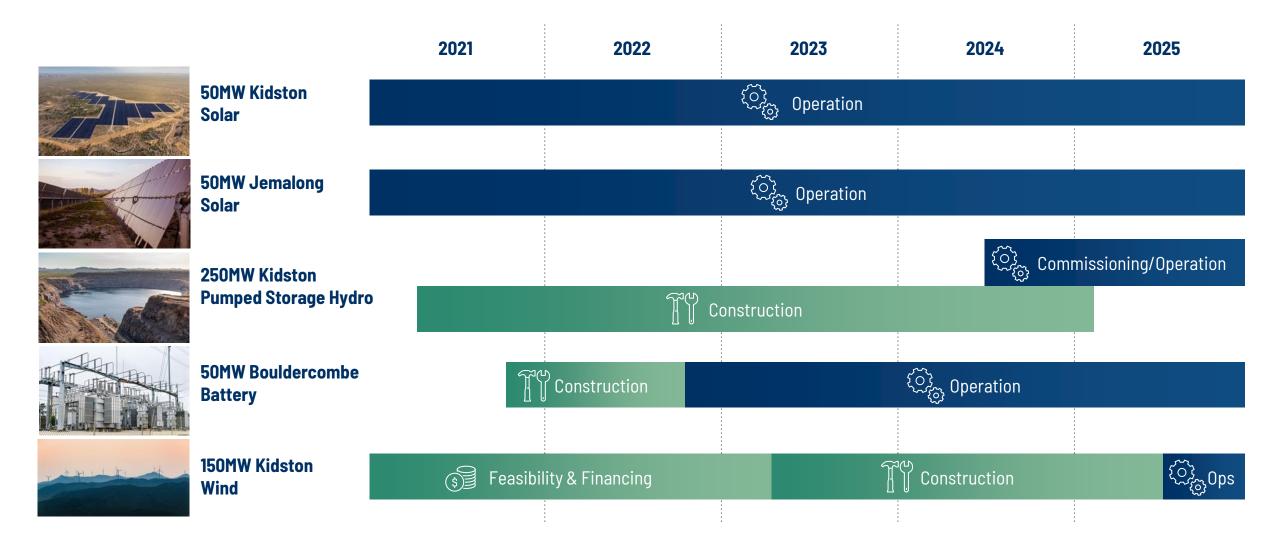


Development of the Project will be expedited through monitoring, planning and other feasibility workstreams **over the next 12-18 months** 



Combination of wind, solar and hydro completes the **Kidston Clean Energy Hub** (a globally unique integration)

### Genex Diversified Renewable Portfolio



### Corporate snapshot

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ASX code:	GNX
Shares on issue:	1,069,900,045
Market cap (23.03.2021):	\$245M
Cash (18.05.2021):	\$69M



Dr. Ralph Craven Chairman



Michael Addison Director



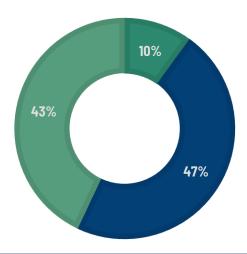
James Harding Chief Executive Officer



Simon Kidston Executive Director

### SHAREHOLDERS

■ J-POWER ■ Institutions ■ Other



F.

**Teresa Dyson** Non-Executive Director



Yongqing Yu Non-Executive Director



Ben Guo Finance Director



Kenichi Seshimo Director

## Investment highlights

## Diverse renewable energy and storage portfolio

- ✓ 2 operating 50MW solar projects (KS1 & JSP)
- ✓ K2-Hydro funded and in construction
- $\checkmark$  Battery and wind projects in advanced stages



### Proven track record

- of project execution
- ✓ Successfully developed >\$200m worth of projects
- ✓ Secured long term energy contracts providing secure cash flows
- ✓ Developed, financed and built KS1 and JSP on time and on budget



### Strong relationships





### ARENA NAIF CEFC



C Energy Australia

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### **Revenue stream certainty**

- \$
- ✓ 85% revenue contracted for 30 years
- ✓ >79% EBITDA margin
- $\checkmark \quad \text{Minimal sustaining capex}$
- ✓ Average annual revenue \$82.5m until 2055
- ✓ Utility like nature of cashflow and revenue stream

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### Fully funded to deliver 350MW of power generation

- ✓ \$1 billion renewable energy & storage portfolio
- ✓ Average interest rate of 2.96% locked in via long term hedge



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## Near term development of pipeline opportunities



#### ✓ 200MW of near term development opportunities

- 50MW Bouldercombe Battery

   construction 2021
- 150MW Kidston Wind
   construction 2023

### Contact





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## Diversified renewable energy base

1 her		Status	<b>Revenue Model</b>	
	<b>Kidston Solar Project</b> 50MW Solar Project	Production (since 2017)	20-year Queensland Government Contract (PPA)	
	<b>Jemalong Solar Project</b> 50MW Solar Project	Production (since 2021)	Merchant/Spot	
	<b>K2-Hydro</b> 250MW Pumped Hydro Project	Construction	Long term rental agreement with EnergyAustralia	
	Bouldercombe Battery Project 50MW Large Scale Battery Energy Storage System	Development	Contract/Merchant	
	<b>K3-Wind</b> 150MW Wind Project	Feasibility	To be confirmed	
	<b>K2-Solar</b> Up to 270MW Solar Project	Feasibility	To be confirmed	
	K3-Wind 150MW Wind Project K2-Solar			

20 May 2021

## Evolving energy market – the need for storage



Growth of intermittent wind and solar creating volatility in the market



Need for low-cost, large-scale storage to facilitate high penetration of renewables and maintain reliability requirements



5 minute settlement in late 2021 likely to increase price volatility



Large scale batteries can respond to the market in under a second

Genex is addressing the need for energy storage via:



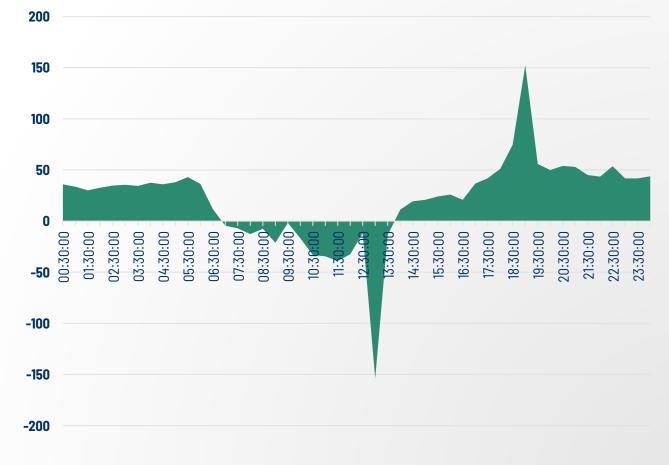
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250MW Kidston Pumped Storage Hydro Project; and

50MW Bouldercombe Battery Project.

### Paid to Charge / Paid to Discharge QLD Retail Electricity Price

#### Example day electricity trading - October 2020



### Pumped Storage Hydro



### Mature technology

In use for over 130 years with >200 projects worldwide

## Lowest cost of energy storage

available

250MW Kidston Project with up to 8 hours of storage



### Peak power generator

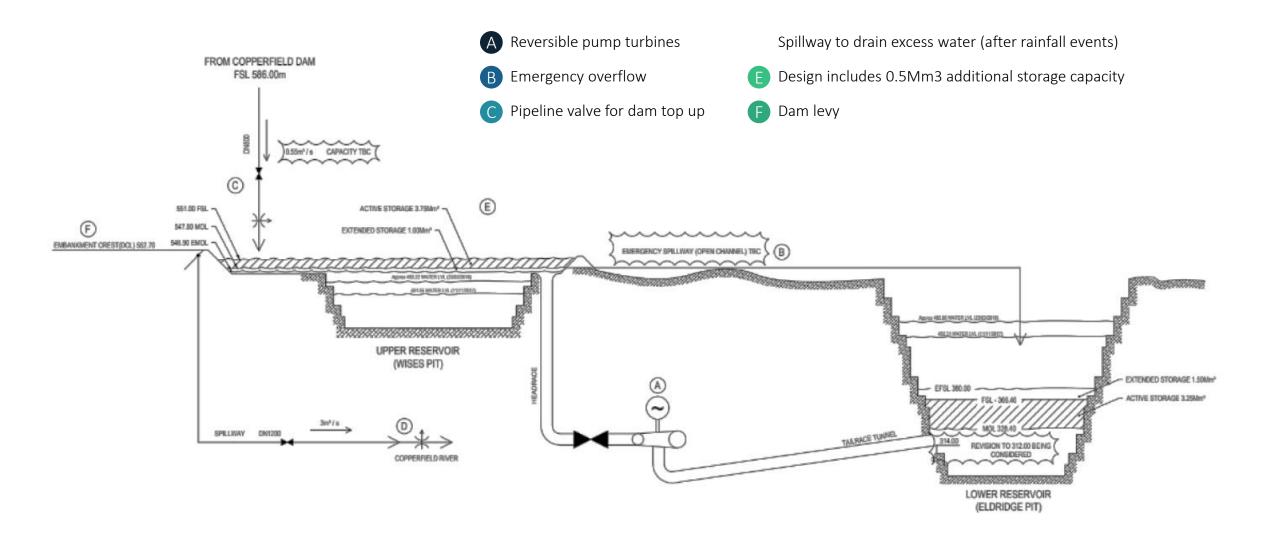
Able to dispatch into periods of high demand

### Can be integrated with renewables Perfect component to firm intermittent renewable generation

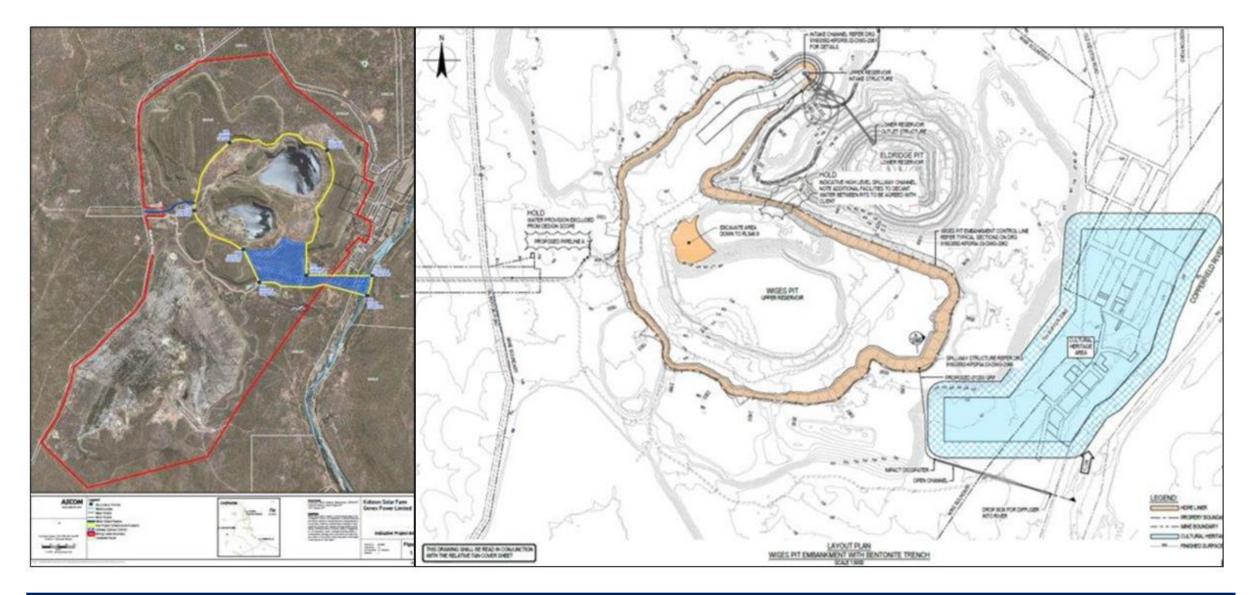


### 80+ year project lifespan

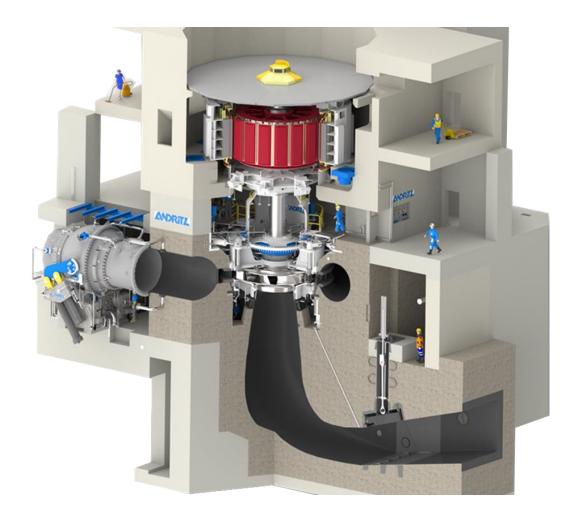
## Legacy topography assists the project

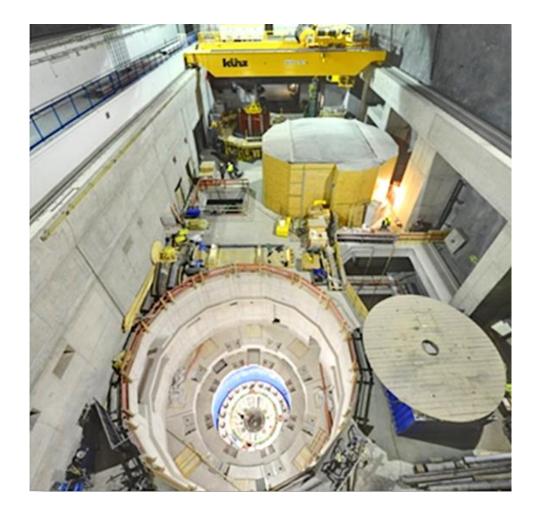


## Minimal environment footprint



## Andritz Hydro equipment

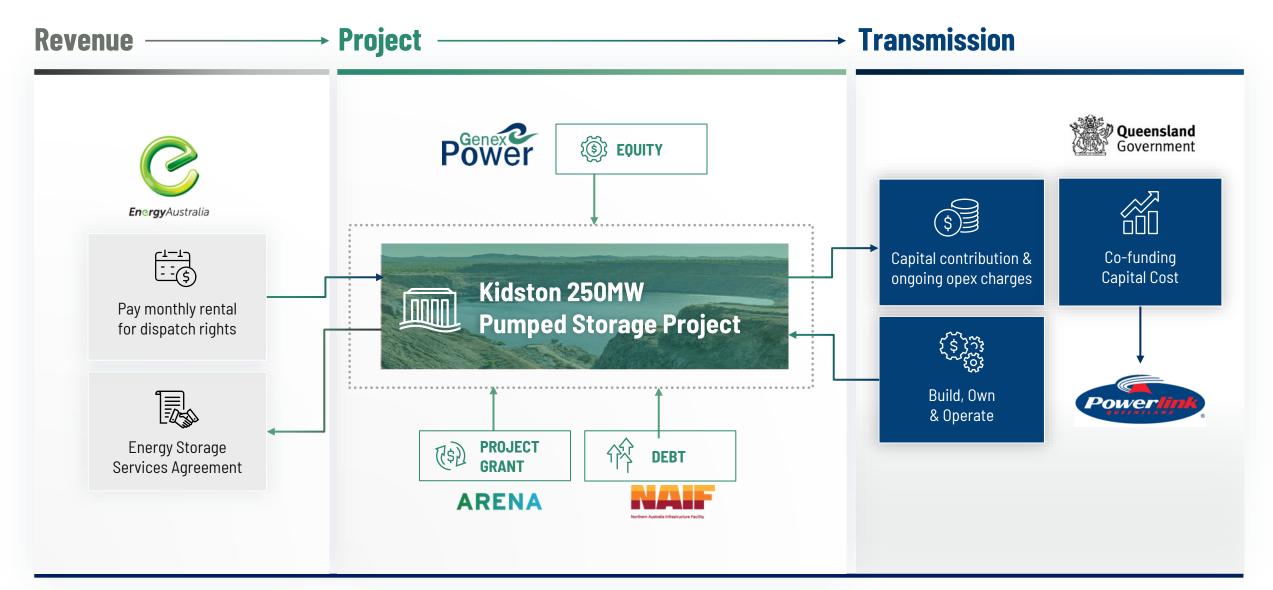




Photos for illustrative purposes

Illustration of a reversible pump turbine unit

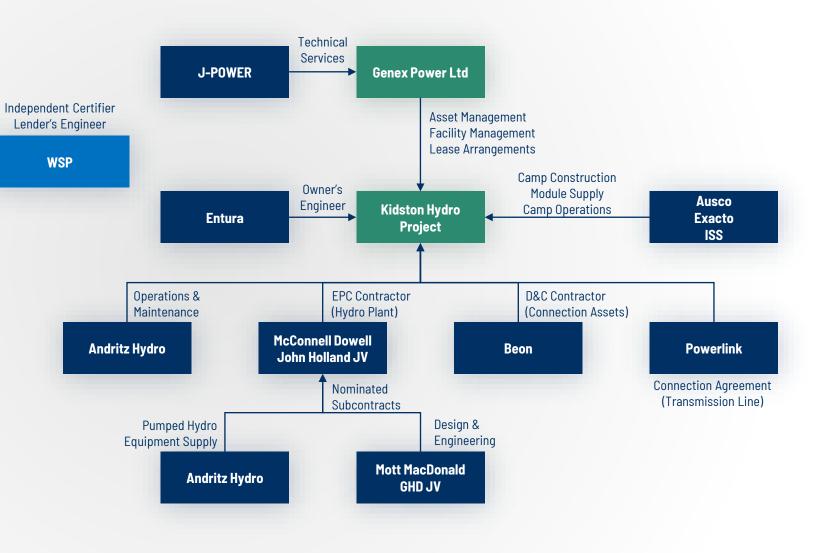
## K2-Hydro Ownership and Funding Structure



## Project Delivery -Major Contracts Structure



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