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CORPORATE PRESENTATION

RENEWABLE ENERGY ON TAP





# Genex at a glance

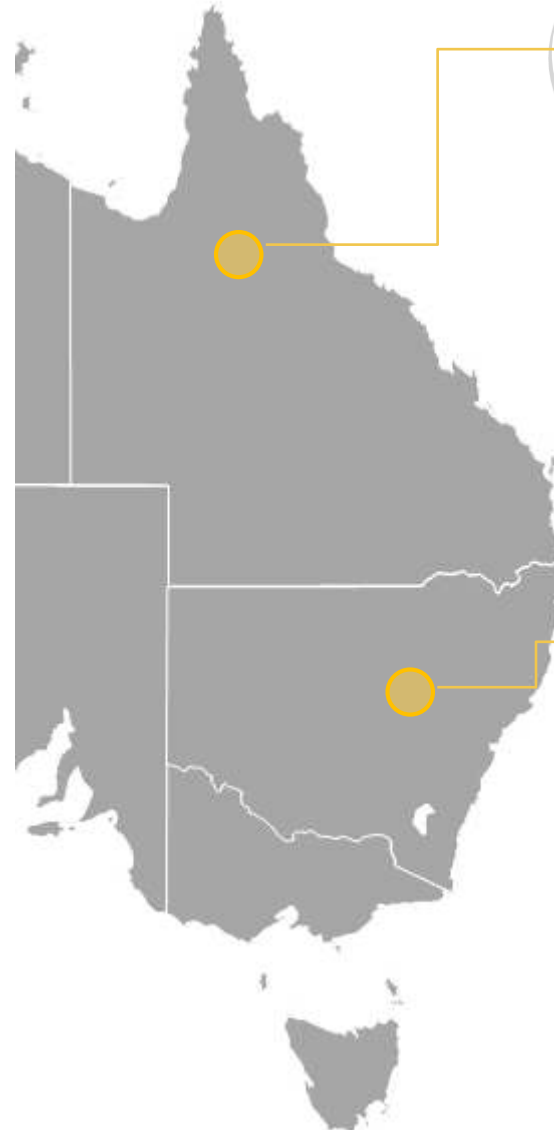
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## Renewable energy generation and energy storage

ASX code:	GNX
Shares on issue:	401.8M
Market cap:	\$104M
Cash (21.08.2019):	\$18.8M
Undrawn ARENA:	\$0.3M
Favourable Tax Ruling:	\$39.5M
Major Shareholders:	Board & Management – 16%
	Asia Ecoenergy – 9%
	Institutional – 26%
	Other – 49%



\* Up to 19.99%, conditional upon hydro financial close



### Kidston Clean Energy Hub

Stage 1: 50MW Kidston Solar Project

Stage 2: 250MW Kidston Pumped Storage Hydro Project & Stage 2 Kidston Solar Project

Stage 3: 150MW Kidston Wind Project

### Jemalong Solar

50MW Jemalong Solar Project



# Corporate Portfolio

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## Kidston Stage 1

50MW Solar Project

## Status

Production  
(since 2017)

## Counterparty



Queensland  
Government

## Revenue Model

20-year Government Revenue Guarantee  
Selling into National Energy Market.



## K2-Hydro

250MW Pumped Hydro Project  
(Genex 50% share)

## Status

Construction expected  
H2 CY19

## Counterparty



EnergyAustralia

## Revenue Model

Long term rental over the pumped  
hydro assets. Genex has no exposure to  
energy prices through the project.



## K2-Solar

Up to 270MW Solar Project  
(Genex 100% share)

## Status

Feasibility

## Counterparty

To be confirmed

## Revenue Model

To be confirmed



## Kidston Stage 3

150MW Wind Project

## Status

Feasibility

## Counterparty

To be confirmed

## Revenue Model

To be confirmed



## Jemalong Solar

50MW Solar Project

## Status

Construction

## Counterparty

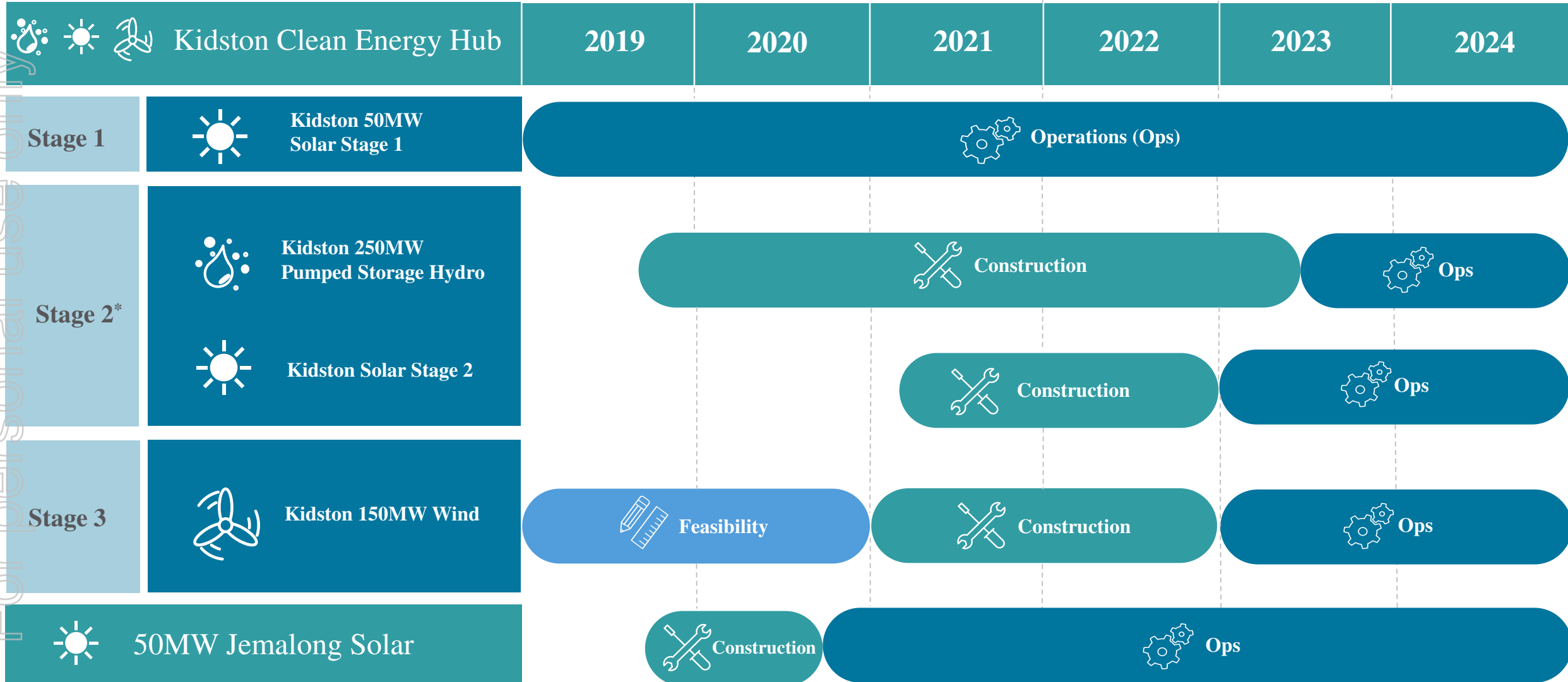


AEMO

## Revenue Model

Merchant/Spot

# Corporate Timeline



\*Includes the construction of a new 275kV transmission line



# Operational Highlights

For the year ending 30 June 2019

## KS1

- Operations and maintenance phase. Contract with UGL.
- 20 year revenue support with Queensland Government commenced.

## K2-Hydro

- Non-Binding term sheet with EnergyAustralia (December 2018).
  - Long term energy storage/revenue arrangements.
  - 50% investment into the project.
  - Documentation and approval process underway.
- \$610m NAIF debt facility.
- \$25 million conditional equity investment by J-POWER.
- Currently aiming to finalise the transmission line arrangements with Qld Gov/Powerlink.
- On track for K2-Hydro financial close H2 CY2019.

## Jemalong

- 50MW NSW solar project acquired.
- Connection, planning and land secured.
- Construction to commence September 2019 with first revenue late CY2020.



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# Financial Highlights

For the year ending 30 June 2019

	30 June 2018	30 June 2019	
<b>Revenue</b>	<b>\$m</b>	<b>\$m</b>	<b>Comment</b>
Sale of electricity and environmental products	8.273	10.819	20 year revenue contract with Queensland Government.
Other Income	1.667	4.800	Includes liquidated damages from UGL (KS1 Project).
<b>Total Revenue</b>	<b>9.940</b>	<b>15.619</b>	
<b>Expenses</b>			
Project & Site costs	(6.319)	(6.455)	Project development and site costs.
Depreciation	(3.017)	(6.369)	KS1 depreciation costs.
Admin	(5.343)	(3.576)	Salary, office, fees and other.
<b>Total</b>	<b>(14.679)</b>	<b>(16.400)</b>	
EBITDA	(1.722)	5.588	
EBIT	(4.740)	(0.781)	
Operating Profit (Loss)	<b>(4.740)</b>	<b>(0.781)</b>	
Finance Costs	(2.971)	(4.922)	Interest cost of KS1 senior debt facility.
Finance Income	0.250	0.225	Interest income.
Tax	0	0	
<b>Loss</b>	<b>(7.461)</b>	<b>(5.478)</b>	
<b>Cash flow</b>			
Cash utilised from Operating Activities	(6.103)	0.522	Receipts from customers, payments to suppliers and interest.
Cash flow from Investing Activities	(82.331)	(12.343)	KS1 completion of construction.
Cash flow from Financing Activities	88.340	4.289	KS1 debt draw down.
<b>Net cash increase</b>	<b>(0.94)</b>	<b>(7.532)</b>	
<b>Balance Sheet</b>			
Cash at Bank	10.994	3.463	Excludes cash from June 2019 share placement.
Project Debt	99.696	98.924	Senior debt facility (KS1).










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# Genex – Clean Energy Credentials

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Clean Energy Production	Total Generation (Per Year)	Offsets CO2 production (Per Year)	Houses Powered (Per Year)
<b>2019</b>	 <b>KS1: 50MW</b> 145,000MWh	 <b>120,000t of CO2</b>	<b>26,500</b>
<b>2020</b>	 <b>KS1: 50MW</b> 145,000MWh  <b>Jemalong: 50MW</b> 128,700MWh	 <b>226,510t of CO2</b>	<b>50,000</b>
<b>2023</b>	 <b>370MW</b> 1,056,700MWh  <b>250MW</b> 730,000MWh <sup>1.</sup>  <b>150MW</b> 525,600MWh <sup>2.</sup>	 <b>1,913,628t of CO2</b> <sup>1,2,3.</sup>	<b>240,000</b> <sup>1,2,3</sup>

1. Assumes K2-Hydro dispatches once a day.

2. Based on a typical wind farm in the region with a capacity factor of 40%.

3. Assumes K2-Hydro pumps water using green energy.



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# Market Transitions: Renewables & Storage





# Evolving Energy Market – The Need for Storage

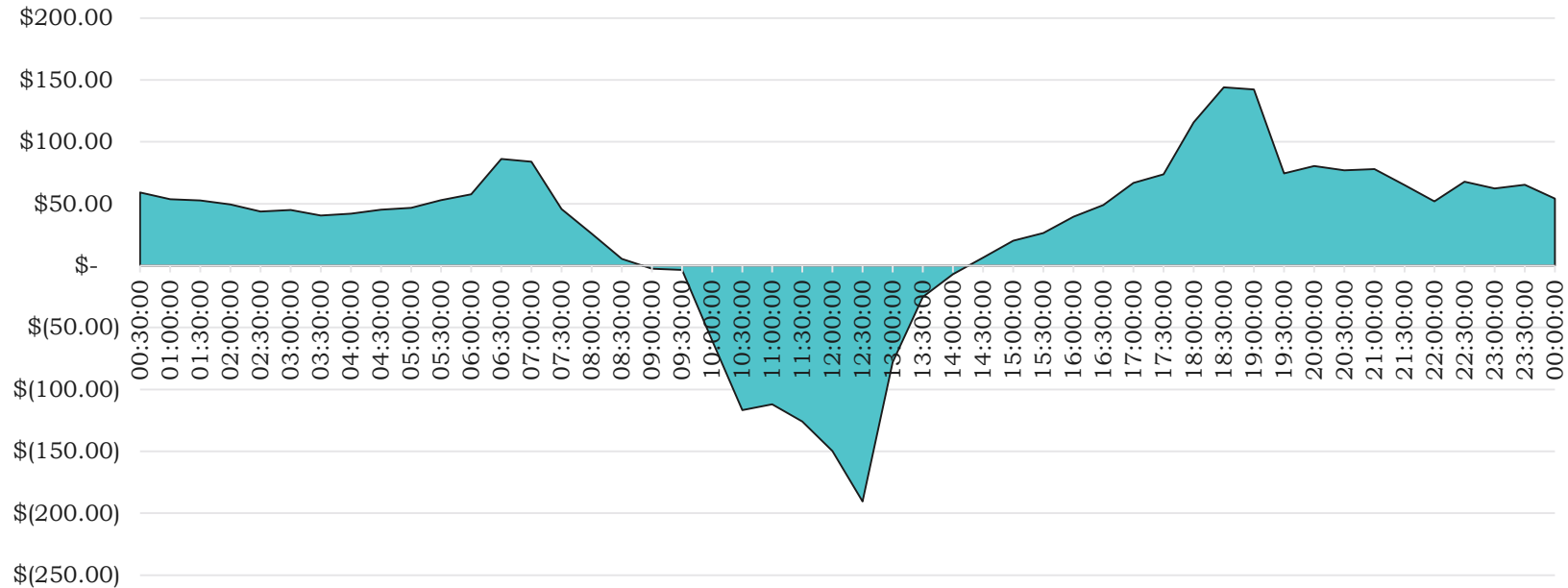
- Growth of intermittent wind & solar creating volatility in the market and is having an impact on energy prices with recent periods of negative pricing.

Need for low-cost, large-scale storage to help facilitate high penetration of renewables & to accomplish the Government's renewable energy targets and reliability requirements.

Pumped storage hydro is the most efficient form of energy storage available in the world.

The shift in the National Energy Market (NEM) towards 5-minute settlement in 2021 likely to increase price volatility. Pumped hydro can ramp up in under 30 seconds to dispatch into 5 min pricing (gas closer to 15 minutes from cold start).

**Paid to Pump / Paid to Generate**  
Average Electricity Price in Qld week 1 September 2019





# Pumped Storage Hydro

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- 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 is ~15x more affordable than the cost of equivalent lithium-ion battery storage.
- Peak power generator – able to dispatch into peak periods.
- Can be integrated with renewables.
  - Perfect component to firm intermittent & volatile renewable generation.
- 80+ year project lifespan.





# Lithium Batteries VS Pumped Storage Hydro

## Batteries

Project	Nameplate capacity (MW)	Storage capacity (MWh)	CAPEX \$M	CAPEX/MWH (\$/MWh)	Economic lifespan (years)
Hornsedale Power Reserve (SA) <sup>1</sup>	100	129	90	697,674	10-15
Gannawarra Energy Storage System (VIC) <sup>2</sup>	25	50	37	740,000	10-15
Ballarat Energy Storage System (VIC) <sup>3</sup>	30	30	35	1,166,667	10-15

## Pumped Storage Hydro

Project	Nameplate capacity (MW)	Storage capacity (MWh)	CAPEX \$M	CAPEX/MWH (\$/MWh)	Economic lifespan (years)
250MW Kidston Pumped Storage Hydro Project	250	2000	466 <sup>4</sup>	233,000	80+

1. Reneweconomy – 21.09.18

2. Reneweconomy – 16.11.18

3. Reneweconomy – 19.10.18

4. Average of Morgan's (04/09/2019) & Baillieu's (11/06/2019) Broker Reports. Excludes Genex's contribution to the 275kV transmission line.



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# Kidston Stage 1: 50MW Kidston Solar





# 50MW Kidston Solar Project

- Currently producing electricity into the National Electricity Market.
- 20-year Revenue Support Deed with Queensland Government.
- 145,000MWh per annum at full capacity.
  - Equivalent to 26,500 homes.
- 30-year project lifespan.
- Use of first-tier suppliers & contractors to mitigate risk (UGL, AECOM, First Solar, NEXTracker, SMA).

**UGL AECOM**



**NEXTracker**  
POWER ON.



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# 50MW Kidston Solar Project



**Queensland  
Government**

- 20-year Revenue Support Deed with Queensland State Government

	FY 2018	FY 2019	FY 2020 to date	Cumulative
<b>Generation (MWh)</b>	52,220.15	126,759.19	21,676.60	200,655.93
<b>Revenue (\$M)</b>	8.273	10.819	1.870	20.962

Table 1. KS1 generation and revenue figures – 1 December 2017 to 31 August 2019.

Notes to Table 1:

1. FY2018 revenue is for the period 1 December 2017 to 30 June 2018;
2. 'FY 2020 to date' only includes revenue from July & August 2019 and is unaudited;
3. Revenue comprised of energy and LGC sales up to and including 30 July 2018; and
4. Queensland Government Revenue Support Deed commenced 31 July 2018 with LGC revenue reverting to the Govt. from that date.



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# **Kidston Stage 2: 250MW Pumped Storage Hydro Project**





# 250MW Pumped Storage Hydro

Strategic location given existing combination of abandoned gold mine and existing infrastructure.

Feasibility complete, design optimized for up to 8 hours of peaking, dispatchable generation (2,000MWh).

Water licence in place for external top-up if required.

Integrated with Kidston Solar 2 – solar generated will result in low-cost intra-day pumping.

Revenue will be generated from rental of the dam and associated infrastructure to EnergyAustralia. Genex will not have exposure to energy pricing through the project.

Construction will see 500+ direct jobs generated through construction.

Construction to commence 2H FY2019.

Finalising arrangements with funding partners.





# K2-Hydro – Construction Ready

## Long-term energy offtake and 50% equity investor in the project

- Completing final due diligence.
- Commencing final investment approvals process.

## Funding partners arranged

- Long term \$610m concessional loan facility of \$610m from Northern Australian Infrastructure Facility.
- \$9m funding by ARENA.

## Genex equity investor

- \$25m share subscription agreement signed.
- Technical support.

## EPC Contractor/supplier of pump turbines

- Binding EPC Contract with final negotiations, Early Works Stage 1 completed.

## Transmission network service provider

- Will construct and operate new 275kV transmission line from Kidston to Mt Fox.
- Offer to Connect submitted.
- GPS approved.

## Critical infrastructure/coordinated project





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# Kidston Stage 2: 270MW Solar Project

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# Project specifications

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- Phased 270 MW development:

- 165MW; and
- 105MW staged over time.

- Ability to integrate with K2-Hydro Project.

- Produces low-cost solar power that can drive pumping cycle.
- When integrated will be world first renewable energy powered Pumped Storage Hydro Project.

- Co-located with K2-Hydro. Project to be funded and operated separately.

UGL selected as preferred EPC Contractor following success on Solar Stage One.



- Development Approval received from local Council.





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# Kidston Stage 3: 150MW Wind Project





# Project development

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▪ Stage 3 of the Kidston Clean Energy Hub.

▪ Globally unique integration of solar, wind and hydro.

▪ Dispatchable renewable energy on demand 24/7.

▪ Leverage existing infrastructure and co-location advantages.

▪ Land option secured, feasibility studies commenced.

▪ Diversification of renewable power with wind capable of generating clean power to pump the hydro through the night.

▪ Pre-feasibility works indicate excellent wind resource, utilizing naturally elevated escarpment measuring ~21km in length.





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Artist's impression

# 50MW Jemalong Solar Project

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# Development milestones



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- Located 26km south-west of Forbes, NSW.

- Provides geographic diversity in GNX portfolio.

- 128,000MWh per annum forecast (P50).

Status:

- ✓ Land secured & Development Approval granted;
- ✓ GPS approved;
- ✓ Offer to Connect received;
- ✓ Key advisors and consultants appointed;
- ✓ BEON Energy Solutions selected as preferred EPC; and
- ✓ Connection Agreement.

- Construction on track to commence H2CY2019.

- Potential to double Genex's revenue from 2020.





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# Outlook

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# Outlook

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- **KS1** steady state cash flow supported by long term contract.

- **Jemalong cash flow CY 2020**

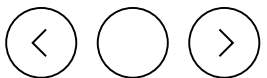
- Step change revenue growth on commissioning.
- Funded with construction to commence September 2019.
- Exposure to high merchant energy prices in NSW.
- Potential to contract revenues in due course.

- **K2 Hydro**

- On track to be first pump hydro project developed since 1980s.
- Strong partners with J Power, NAIF and EnergyAustralia.
- Funded with construction to commence CY 2019 pending board approvals and transmission line arrangements.

- Financing and management in place to execute growth.

- On track to become a **diversified renewable energy producer.**





# Board & Management



## **Dr. Ralph Craven (Chairman)**

- Chairman of Stanwell Corporation
- Director of Senex and AusNet Services
- Former CEO and Chairman of Ergon Energy
- Former CEO of Transpower New Zealand



## **Michael Addison (Director)**

- Founder of EndoCoal and Carabella
- Water Engineer with extensive finance experience



## **James Harding (Chief Executive Officer)**

- 30 years experience in international project business.
- Former head of Business Development in Abengoa Solar Power Australia & General Manager of Renewables with IPS Australia and MAN Ferrostaal.



## **Simon Kidston (Executive Director)**

- Founder of EndoCoal and Carabella
- Former banker with HSBC, Macquarie, Helmsec



## **Ben Guo (Finance Director)**

- 13 years finance and accounting experience with PWC, E&Y, Helmsec and Carabella Resources



## **Teresa Dyson (Non-Executive Director)**

- Director of Energy Queensland, Seven West Media & Energy Super, Power & Water Corporation
- Former Partner of Ashurst & Deloitte
- Member of FIRB and Takeovers Panel



## **Yongqing Yu (Non-Executive Director)**

- Engineering background with extensive global hydro experience
- Vice Chairman of Zhefu



## **Arran McGhie (Chief Operations Officer)**

- 20 years experience in senior project management roles for underground excavation and civil construction projects
- Management roles with Lend Lease, John Holland, CPB Contractors and Thiess



## **Craig Francis (General Manager - Commercial Finance)**

- Over 10 years investment banking and finance experience in Australia and the UK focusing on the energy and natural resources sectors



## **Justin Clyne (Company Secretary/Legal Counsel)**

- 15 years experience in the legal sector
- 10 years experience as a corporate governance specialist
- Director and Secretary of a number of listed & unlisted public companies



## **Harrison Holihan (Commercial Manager)**

- Bachelor of Science (Psych) – University of Sydney
- Undergraduate Certificate – Oxford University
- Masters in Environmental Science – Harvard University (Active)



# Contact

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