



## Investor Presentation



May 2016

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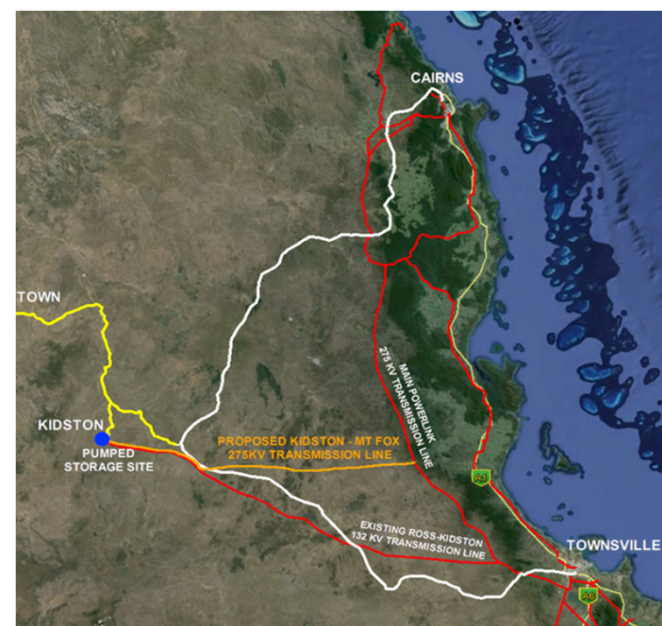


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# OVERVIEW

## Company Summary

<b>Focus</b>	Renewable Energy and Energy Storage
<b>Location</b>	North Queensland
<b>ASX Code</b>	GNX
<b>Shares on Issue</b>	158,393,750
<b>Market Cap</b>	\$25 million
<b>Cash (31 March)</b>	\$6.2 million
<b>ARENA (undrawn funding )</b>	\$2.3 million



	Pumped Storage	Solar
<b>Project Status</b>	Feasibility due 3Q 16	Feasibility Q2
<b>Generation Capacity (up to)</b>	450MW	Stage 1 – 50MW Stage 2 – 100MW
<b>Target Generation</b>	2019	2017

## Major Shareholders

<b>Board &amp; Management</b>	36%
<b>Zhefu Hydropower</b>	20%
<b>Institutional</b>	9%
<b>Other</b>	35%

# WHY WAS GENEX ESTABLISHED?

## GROWTH OF RENEWABLE ENERGY GENERATION

- Intermittent Generation
- Excess Generation during low demand
- Need for large scale energy storage
- Pumped storage integration with renewable generation (ie Kidston Solar Project)
- Increasing gas prices in Queensland



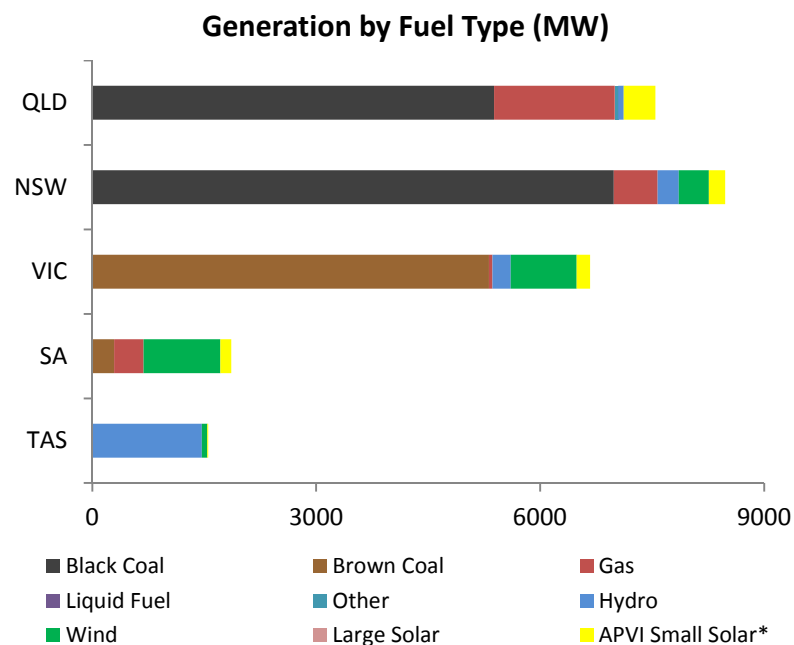
Royalla Solar Farm



Cathedral Rocks Wind Farm

## UNIQUE ENERGY GENERATION MIX IN QUEENSLAND

- Coal fired Baseload
- Gas Peaking
- Effect of rising gas prices on OCGT & CCGT
- Opportunity for low cost/low emission peaking generation





# Renewable Energy Hub



# Kidston Solar PV– Near Term Cash flow

- 50MW AC Solar Farm
- Located in Far North Queensland
- Highest solar resource in Australia connected to the NEM
- One of the lowest \$ per MWh solar projects in Australia
- Strong local community support
- Project Approvals in place (Development and Environmental Approval)
- Targeting first generation 4Q 2017
- Co located with large scale hydroelectric energy storage



## Key Project Parameters

AC System Capacity	50 MW
DC System Capacity	67 MW
Annual Generation	>130,000 MWh
Capacity Factor (Tracking)	>30%
MLF	1.07

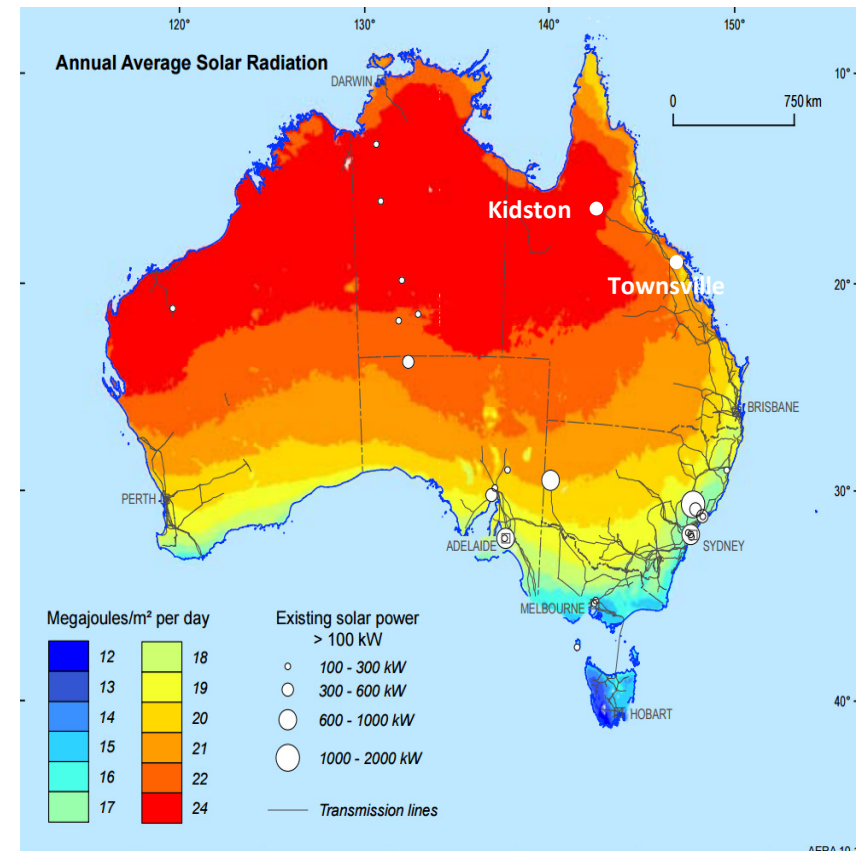
## Project Status

- ✓ *Development Approval*
- ✓ *Freehold land acquired*
- ✓ *Environmental Approval*
- ✓ *Feasibility Study*
- ✓ *EPC Contractor shortlisted*
- ✓ *Grid Connection secured*



# Kidston Solar PV – Near Term Cash flow

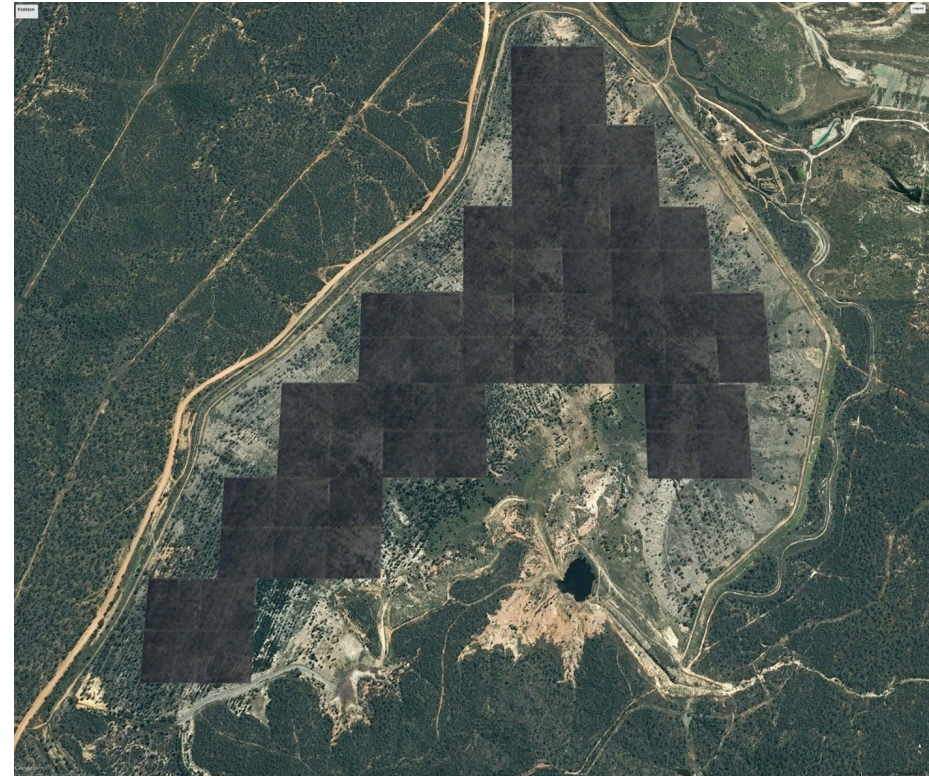
- Located at the old Kidston Gold Mine
- 300km north west of Townsville
- The site was selected for a number of reasons
  - ✓ *One of the highest solar radiation areas in Australia*
  - ✓ *The only solar project located in the “red zone” which is also connected to the NEM*
  - ✓ *Consistent strong solar exposure throughout the year*
  - ✓ *Accessible by highway from Townsville and Cairns*
  - ✓ *Onsite accommodation camp suitable for construction needs*
  - ✓ *Good condition access road throughout the site*
  - ✓ *Co located with large scale hydroelectric energy storage project*
- Existing substation and transmission line located adjacent to plant
- Remote community in need of development to drive economic growth
- No adverse impact on local community



Source: Bureau of Meteorology

# Kidston Solar PV – Project Advantages

- Project will be constructed on the tailings storage facility (TSF) of the former Kidston Gold Mine
- TSF well suited for solar PV installation
  - *Flat, dry and compacted surface*
  - *Sparse vegetation easily removed*
  - *Elevated 25m above natural ground level*
  - *Consistent ground conditions throughout TSF*
- Geotechnical analysis indicates ground is amenable for PV installation
- Independent site analysis completed by EPC tenderers
- Good vehicle access with ramp and road way all around the site
- Minimal environmental issues
  - *Solar farm will reduce existing leaching issues of the TSF*
- No alternative land use





# Kidston Solar PV – Grid Connection

- Connection to NEM via existing substation on site
- Substation connected to the main grid via existing 132kV transmission line
- Transmission line and substation owned by Ergon
- Minimal load currently on the line
- Connection agreement in place with Ergon



*132kV transmission line to Townsville*



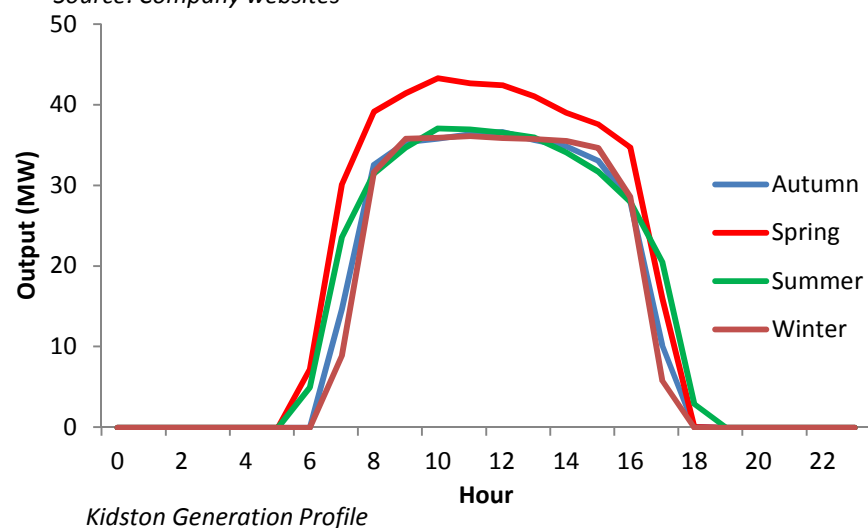
*Kidston substation*



# Australian Solar Project Comparison

	Kidston	Royalla	Moree	Nyngan	Broken Hill
MWac	50	24	56	102	53
Capacity Factor	>30%	18%	30%	26%	27%
Annual Generation	>130,000	37,000	146,180	233,000	126,000
CAPEX	TBC	\$155m	\$164m	\$290m	\$150m
CAPEX/MWh	TBC	\$4,189	\$1,122	\$1,245	\$1,190
CAPEX/MWac	TBC	\$6.46	\$2.93	\$2.84	\$2.83
Racking	Tracking	Fixed	Tracking	Fixed	Fixed
Household supplied	17,000	4,400	17,500	33,000	17,000

Source: Company websites

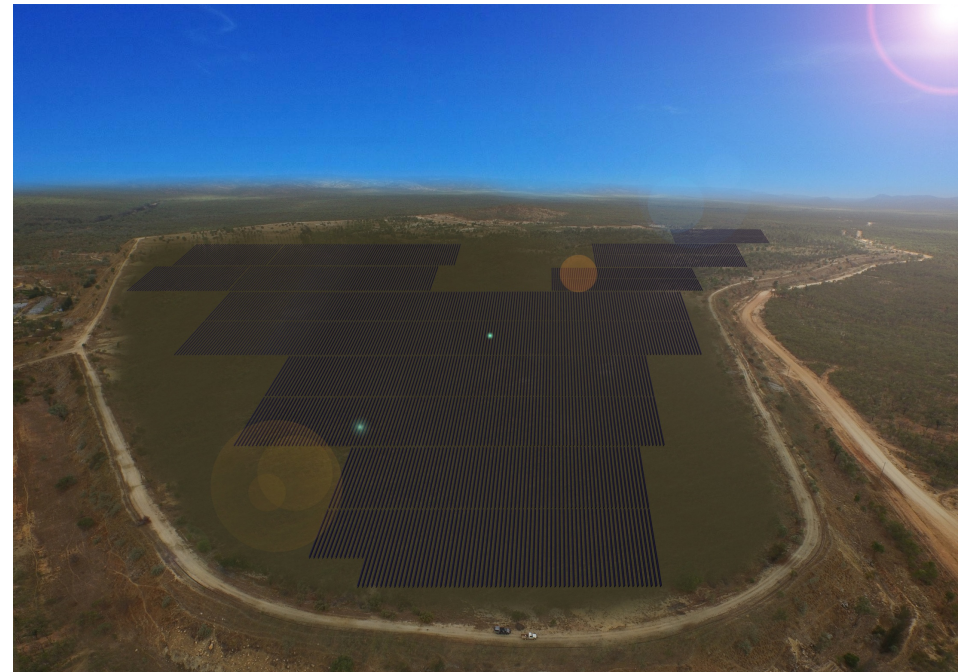


Solar monitoring station at Kidston



# Kidston Solar PV - Project Benefits

- ✓ Genex cash flow anticipated from 2017
- ✓ Long life project (over 25 years)
- ✓ High solar yield and low project costs
- ✓ Potential to expand to 150MW over time
- ✓ Significant contributor to Australia's Renewable Energy Target
- ✓ Significant greenhouse gas reductions of approximately 120,000 tonnes per year
- ✓ Investment and jobs for far north Queensland
- ✓ Co location with large scale hydroelectric energy storage





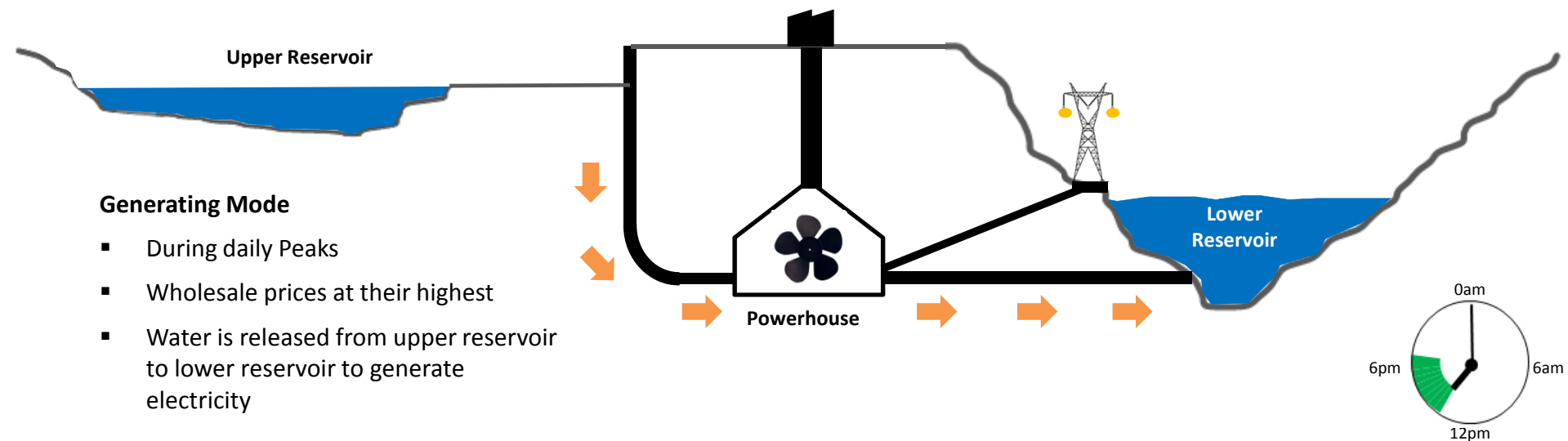
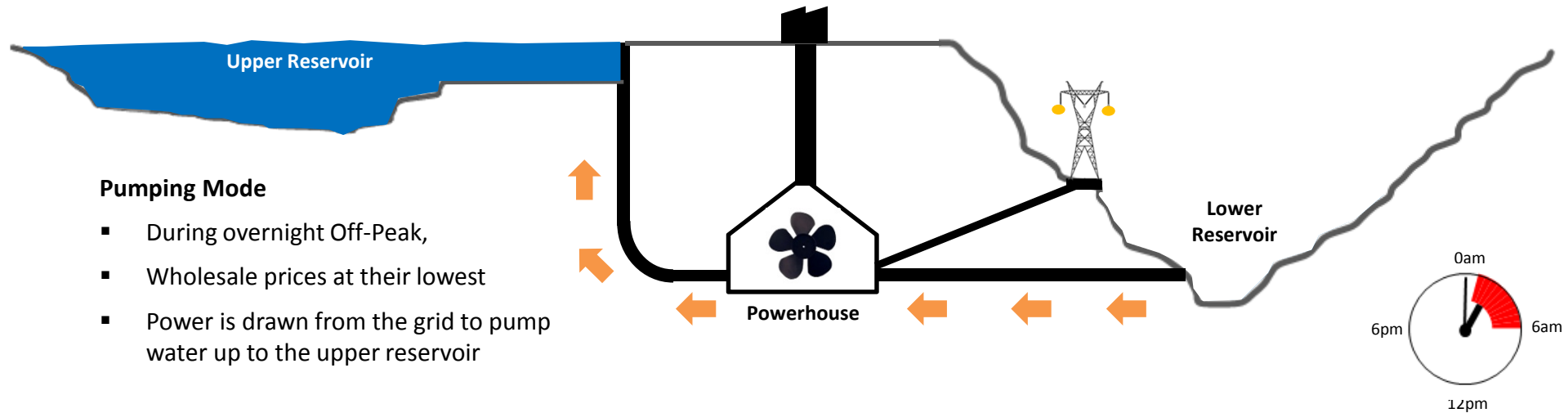
# KIDSTON PUMPED STORAGE (FLAGSHIP PROJECT)



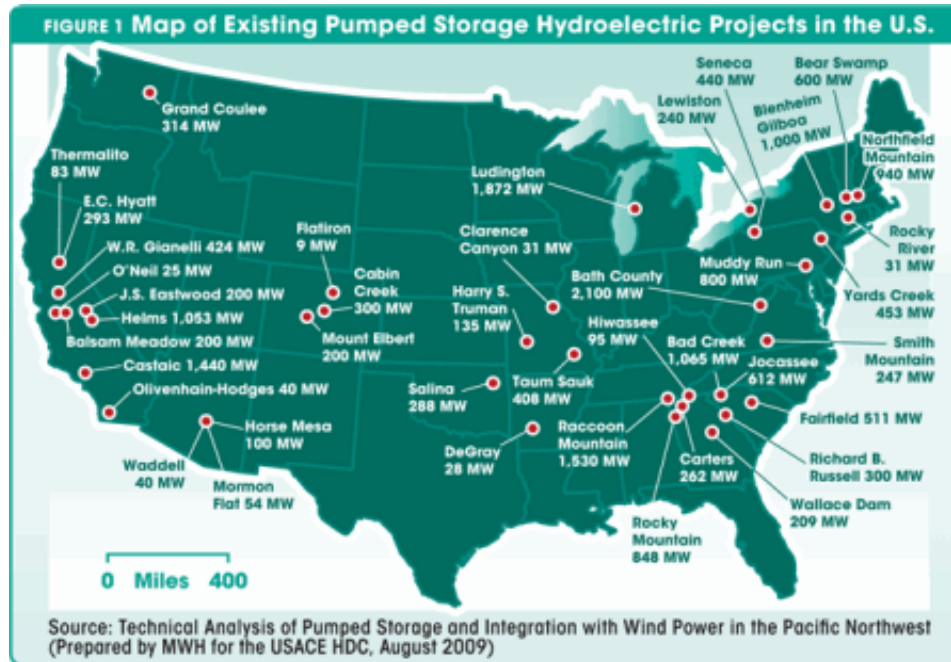
## The Kidston Site

- Two large adjacent pits and elevated waste rock dump
  - *52ha and 54ha respectively*
  - *Lower Reservoir 270m deep*
  - *Approximately 400m apart at surface*
  - *30m waste rock dump*
- Site substantially rehabilitated since mine closure in 2001
- Water license in place for top up water
- Site 100% held by Genex Power
- Site covers 1,237ha
- Feasibility completion due Q3 2016

# KIDSTON PUMPED STORAGE



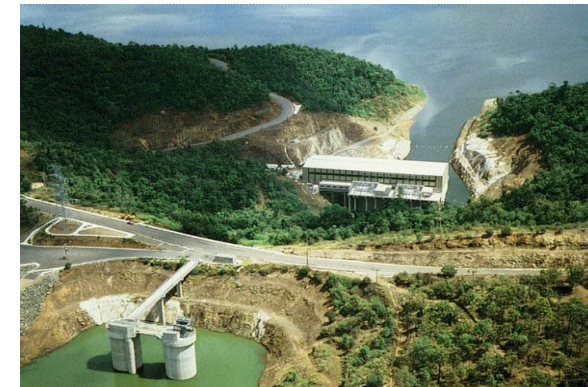
# KIDSTON PUMPED STORAGE



- Pumped Storage is an established technology since 1890s
- Hundreds of installed schemes around the world
- Three pumped storage schemes in Australia
  1. Tumut 3 – 1,500MW
  2. Wivenhoe – 500MW
  3. Shoalhaven – 240MW



*Tumut 3, Snowy Hydro Scheme, NSW Australia*



*Wivenhoe PSP Scheme, Queensland Australia*



*Shoalhaven Scheme, NSW Australia*



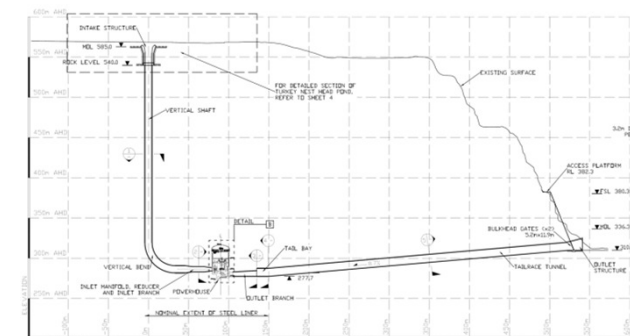
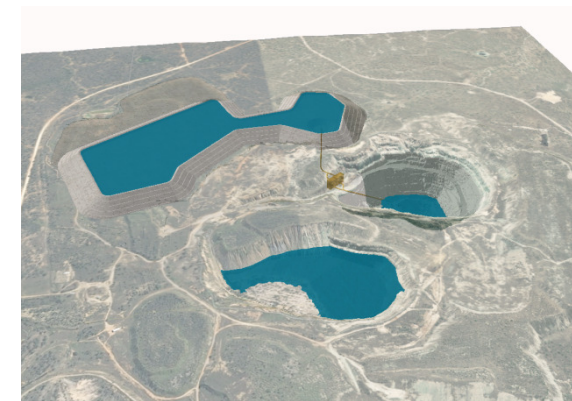
# KIDSTON PUMPED STORAGE PROJECT

## Key metrics

- Nameplate capacity (up to) 450 MW
- Continuous generation 5 hours
- First Generation planned 2019

## Feasibility study

- Design optimisation stage
- Focusing on capital efficiency per installed MW
- Optimised design uses waste rock dump and existing reservoirs
  - reduction in the water level variance during the generation
  - increase in the average water head
  - elimination of water seepage
  - enables the Wises Pit to be utilised for excess water storage and water balancing
- Ongoing support from Australian Renewable Energy Agency (ARENA) under the funding agreement
- Meaningful support from the Queensland State Government as a “Prescribed Project”
- Feasibility Study on track for completion Q3 2016



# KIDSTON PROJECT

Fixed Assets	Licenses and Permits	Data and Information
<ul style="list-style-type: none"> <li>✓ Existing Reservoirs</li> <li>✓ Onsite building materials and infrastructure</li> <li>✓ Existing 132kV transmission line (for Kidston Solar Project and Pumped storage construction power supply)</li> <li>✓ Ergon substation on site</li> <li>✓ In-situ water in pit</li> <li>✓ Access to Copperfield Dam (water top up)</li> <li>✓ Genex owned water pipeline from Copperfield Dam</li> </ul>	<ul style="list-style-type: none"> <li>✓ Ownership of freehold land over Kidston Mine Site</li> <li>✓ Pastoral Lease extinguished</li> <li>✓ Native Title extinguished</li> <li>✓ Environmental Authority (EA) in place</li> <li>✓ Water License in place with allocation of 4,650ML p.a.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Water Quality</li> <li>✓ Rainfall/Runoff</li> <li>✓ Geological/Historical Drilling</li> <li>✓ Surveys and mapping</li> <li>✓ Hydrology</li> </ul>



*Top Up Dam – connected to site by Genex pipeline (overflowing in 2015 wet season)*

# ELECTRICITY GENERATION

Peaking power generation is usually supplied by



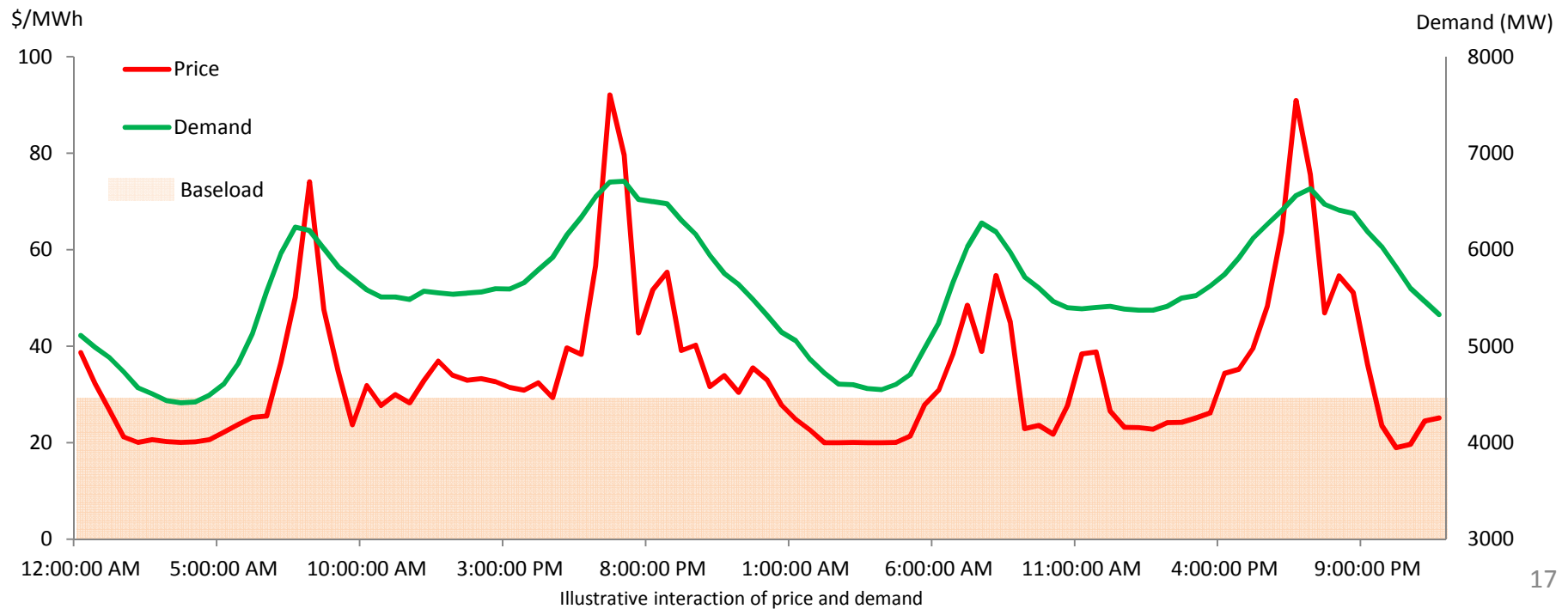
*Open Cycle Gas Turbines*



*Diesel Generators*



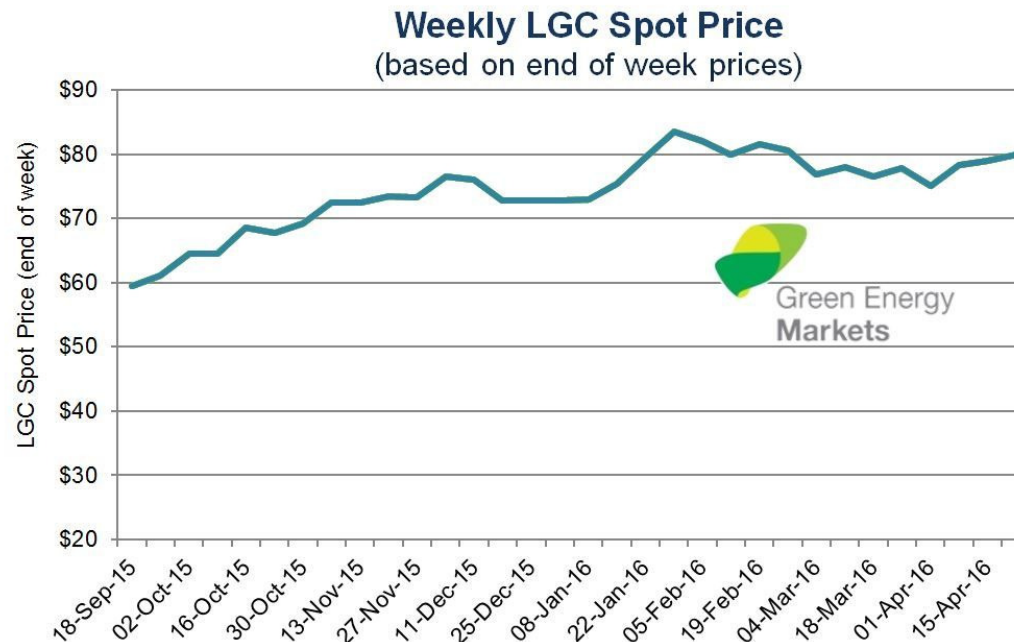
*Pumped Hydro*





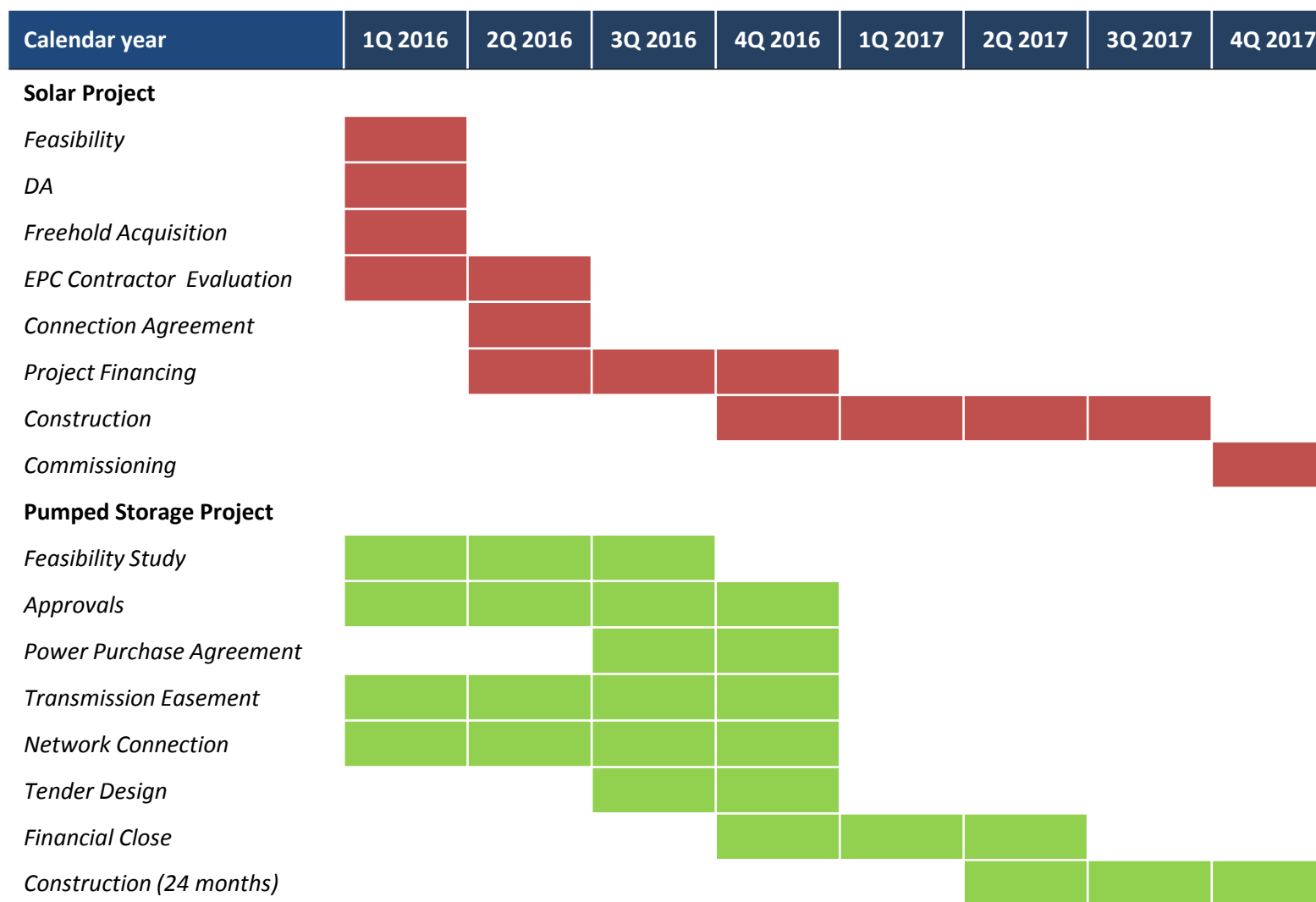
# WHOLESALE ELECTRICITY PRICES

- Queensland has significantly higher peak prices and more volatility compared with other states in the NEM
- Pricing volatility due to generation mix and principal reliance on gas for peak and shoulder power generation (increasing gas prices due to Gladstone LNG exports)
- Queensland wholesale electricity prices expected to increase significantly over the next decade, driven by increasing generation fuel prices, increasing electricity demand and changing generation mix
- Peak and Off-Peak price differential expected to remain significant going forward
- LGC prices have increased significantly following the government decision on the Renewable Energy Target (RET) in 2015



Source: Green Energy Markets as at 9 May 2016

# DEVELOPMENT TIMELINE



# BOARD & MANAGEMENT



**Dr Ralph Craven**  
*Non Executive Chairman*

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



**Simon Kidston**  
*Executive Director*

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



**Michael Addison**  
*Managing Director*

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



**Ben Guo**  
*Finance Director*

- 10 years experience with PWC, E&Y Helmsec and more recently with Carabella Resources



**Alan du Mée**  
*Non Executive Director*

- Former CEO of Tarong Energy
- Former Chairman of the Australian National Generators Forum



**Arran McGhie**  
*COO General Manager*  
*B.Eng, GradDip (Applied Fins/Investment)*

- 20 years experience in senior project management roles for underground excavation and civil construction projects



**Yongqing Yu**  
*Non Executive Director*

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



**Justin Clyne**  
*Company Secretary/ Legal Counsel*

- Experienced lawyer & company secretary





**Michael Addison**  
MANAGING DIRECTOR

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