

stock brief
RECOMMENDATION: SPECULATIVE BUY

Genex Power Limited

Powering ahead

Stock Code: GNX

Last Price: \$0.27

Market Cap (fd): \$60.8m

Risk Level: High

16 November 2016 EVENT

- Genex Power Limited (GNX) has completed the Technical Feasibility Study (TFS) for the Kidston Pumped Storage Hydro Project (PSHP).

KEY HIGHLIGHTS

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- GNX is an early stage, clean energy company. Two projects are being developed, the PSHP and a large scale Solar Photovoltaics (PV) project both co-located NW of Townsville at the "Kidston Renewable Energy Hub". Cash flow is expected by 1Q 2018.
- The development site is at the location of the old Kidston Gold Mine. GNX will benefit from existing infrastructure including roads, an airstrip, accommodation, reservoirs and a grid connection to an existing power line. An ATO Private Ruling has granted GNX access to \$39.5m in tax losses accrued by the holding company of the Kidston Gold Mine that GNX acquired. The site has been substantially rehabilitated since its closure in 2001 and environmental issues are considered to be minimal.

PSHP Feasibility

- The TFS paves the way for GNX to proceed with the PSHP with no key issues being identified that can't be appropriately managed. This is a key milestone for the company.
- The project is fully designed and capacity will be 250MW with six hours continuous generation.
- The PSHP will use proven technology to generate electricity by releasing water from an upper reservoir to a lower reservoir. Off peak power is used to pump water to the upper reservoir with generation occurring during peak periods to take advantage of higher prices.
- A 275kV transmission line will be required to be constructed to connect Kidston to the main North-South transmission line. The preferred grid connection location is at Mt Fox with early indications that GNX will be able to follow existing easements over much of the distance. This remains a key hurdle that must be overcome for the viability of the PSHP.

Kidston Solar PV (Solar Project)

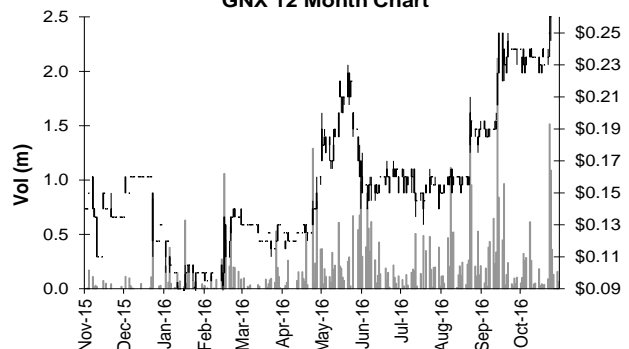
- Initial power generation capacity will be 50MW. Phase II has the potential to deliver capacity growth of an additional 200MW-300MW. Kidston is within the highest solar radiation region in Australia (see map on page 3).
- All required permits and approvals in respect to the Solar Project have been obtained.
- The QLD government (State) has agreed to a 20 year deal with Genex for the supply of 100% of the power generated from the Solar Project.
- The deal is structured as a one way CFD. The State will pay a minimum floor price (likely to be around ~\$90) and when the spot price exceeds the floor price, GNX will receive the spot price. The large-scale generation certificates (LGC) (green certificates) are transferred to the State who may trade them at the prevailing market price.
- The company has executed a debt funding mandate with Société Générale with the company seeking to achieve financial close during 1H17.

SELECT EQUITIES RECOMMENDATION

- We rate GNX as a SPECULATIVE BUY with the potential for multiple re-ratings as project milestones are successfully completed. Any adverse project developments present a risk to the present valuation as does the company's future capital requirements.

Cash (30 Sept. 16) (\$m)	6.7
Undrawn ARENA Grant	
Solar (\$m)	8.9
PSHP (\$m)	1.6
Diluted Shares (m)	225.4
Avg. Mthly Volume (m)	4.1
Diluted Mkt Cap (\$m)	60.8
Net Debt (\$m)	3.4
Enterprise Value (\$m)	64.2
Substantial Shareholders	Shares (m) %
Zhefu Hydropower	31.7 14.1%
Rivonia Super Fund	27.5 12.2%
Gundimaine	17.7 7.9%
Downing Family	12.9 5.7%

Source: Company Reports & Select Equities Research

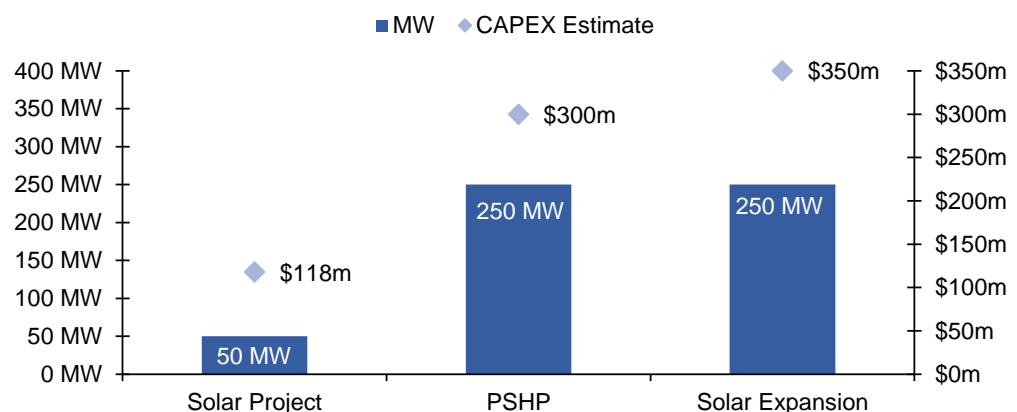
GNX 12 Month Chart


Source: IRESS

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**PSHP
FEASIBILITY
STUDY**

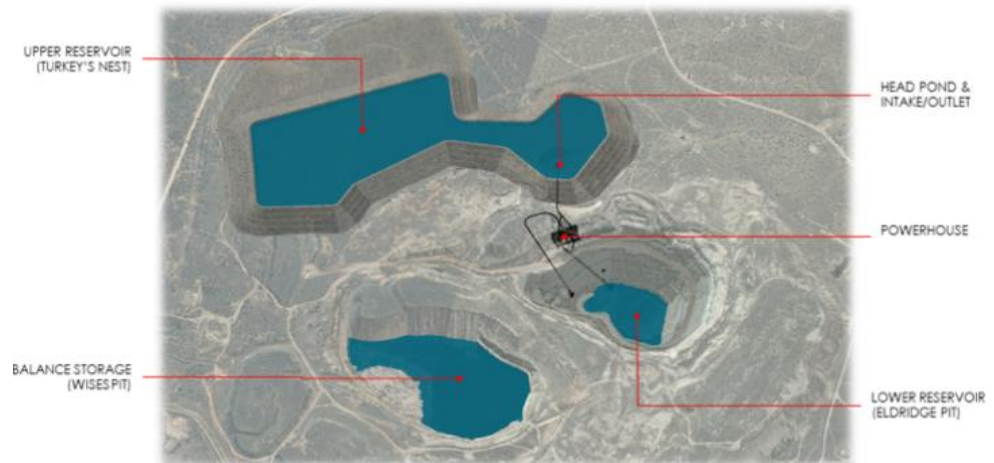
- The completion of the Technical Feasibility Study (TFS) in respect to the PSHP is a positive development for the company with no critical issues being identified.
- The optimum capacity has been determined to be 250MW with 6 hours continuous generation (the 'battery', being the upper reservoir, has 1500MW of storage capacity). This size was considered to be optimum in light of the assessment of the pricing and revenue opportunities for the company in the TFS.
- The capacity is at the lower end of the 250MW to 450MW range. The configuration is 2 x 125MW fixed speed turbines. There is potential for the capacity to be increased slightly if desired as the PSHP progresses without affecting the overall design of the project.
- The PSHP has been designed to take advantage of volatility in the National Electricity Market (NEM) with the ability to ramp up to full generation capacity within 30 seconds. Volatility is expected to increase as renewable energy becomes a greater share of the NEM, although this could be muted to the extent that household batteries become more popular.
- GNX is seeking to achieve revenue certainty by entering into an offtake agreement to secure stable and long term revenue for the project. The intention is also to retain some exposure to the spot market prices.
- Capital costs for the project have not been finalised. The company will work with engineering and construction contractors and generator/turbine suppliers to determine the likely capital expenditure needed. Tenders will be issued for the construction of components of the project.
- Prior estimates provided by the company for the construction of the transmission line were for a total cost of \$115m.
- The absence of detailed costings mean that significant uncertainty around the expected project economics remain.

**GENERATION
CAPACITY AND
CAPEX**


Source: Company Reports & Select Equities Research

- The target construction completion for the PSHP and the expansion of the Solar Project (Solar Expansion) is 3Q19.
- Our financial forecasts include our estimate of \$300m of capital expenditure for the construction of the PHSP and the 275kV transmission line.
- We have estimated the Solar Expansion capex requirements to be around \$350m. We have assumed that the capacity will be 250MW.
- Grants of \$50m are expected to be received to assist with the funding of the capital expenditure for the PSHP and Solar Expansion, thereby reducing the capital requirements of the company.

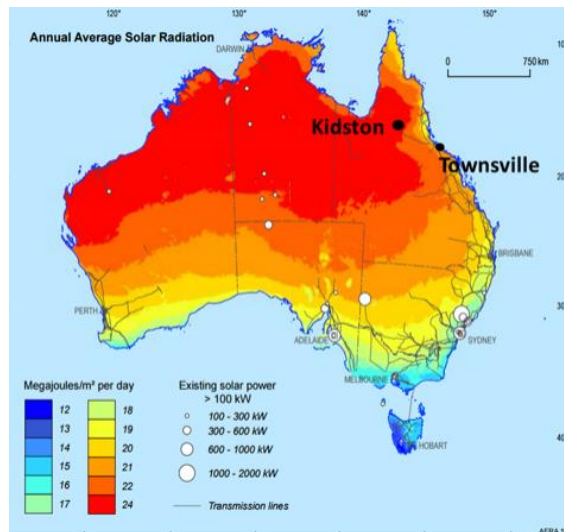
PHSP DESIGN



Source: Company Reports

- The reservoirs shown above are existing, reducing the infrastructure costs required to complete the PHSP.

PROJECT LOCATION & SOLAR RADIATION



Source: Company Reports and Bureau of Meteorology

- Kidston is ideally positioned in the highest solar radiation region of Australia.
- The inland location enables solar power to be generated and sold to meet evening peak demand in Queensland coastal centres.

EV / EBITDA VALUATION

Our EV / EBITDA sum-of-the-parts valuation is \$1.44 per share assuming successful project execution and based on FY20 earnings. Discounted for time and the probability of each project proceeding, the valuation is \$0.68 per share.

We have forecasted EBITDA as at FY20E for the Solar Project, the PSHP and the Solar Expansion, being the first year all projects are expected to be operational.

Solar Project

The Solar Project (50 MW) will be the first project to generate revenue for the company. We estimate that in FY20E, the Solar Project will contribute EBITDA of \$12.3m. The Solar Project is expected to be at full capacity from Q417. In calculating the guaranteed minimum revenue, we assume that 145,000MWh is available, the panel degradation rate is 0.35% pa and that the floor price agreed with the State is \$89 per MWh. We assume that the Solar Project will be funded by debt at the project level and not with funds from a

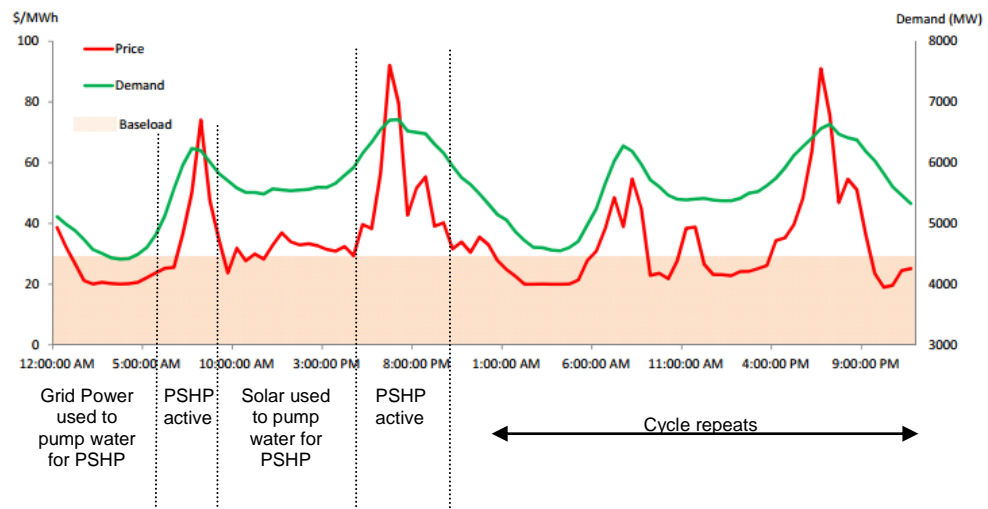
subsequent capital raise.

FY20E	(\$ (m))
Revenue (Solar Project)	
Guaranteed minimum	12.9
Top up (Spot price exceeds Floor Price)	0.5
'Avoided TUOS' (Ergon Energy rebate)	0.3
Total Revenue	13.7
OPEX	-1.4
EBITDA	12.3

PSHP & Solar Expansion

We have forecasted the FY20E EBITDA for the PSHP and Solar Expansion to be \$79.6m. FY20 will be the first complete year of operation. We assume that the price achieved for electricity generated is \$130 per MWh, given the project's ability to service peak demand. As shown in the chart below, the following will occur on a daily basis:

- 12:00am to 6:00am: power will be drawn from the grid to pump water to the upper reservoir. We assume that the off peak power costs are \$19 per MWh and that six hours of off peak power will be required to be purchased;
- 6:00am – 9:00am: power generated via PSHP for sale during the morning peak;
- 9:00am – 5:00pm: potential for solar to be used to pump water to upper reservoir; and
- 5:00pm – 10pm: power generated via PSHP for sale during the evening peak.



Source: Company Reports & Select Equities Research

Our analysis assumes that the above operational schedule for the PSHP will generate 730,000MWh of electricity for sale per annum, being eight hours of generation at 250MW for 365 days a year. Further, the company will be required to purchase 547,500MWh of off peak electricity per annum, as explained above.

FY20E	(\$ (m))
Revenue (PHSP & Solar Expansion)	94.9
Less Cost of Sales	10.4
Total Revenue	84.5
OPEX	-4.9
EBITDA	79.6

We apply an 11.6x target EV / EBITDA multiple¹ to our aggregate EBITDA forecast for FY20. We assume that the Solar Project and PSHP & Solar Expansion will be funded by borrowings of \$106m and \$650m respectively for the purposes of our modelling. Although actual funding of these projects will necessarily include equity funding. Capex for the Solar Project and Solar Expansion may be lower than the above estimate if the trend towards reduced panel and material costs continues.

FY20E	(\$) (m)
EBITDA (Solar Project) \$(m)	12.3
EBITDA (PHSP & Solar Expansion) \$(m)	79.6
Total	91.9
Less Corporate Expenses	-4.2
Total EBITDA	87.7
Applied Multiple (x)	11.6
Enterprise Valuation (\$m)	1017.6
Less debt / GNX Share (\$)	3.37
Plus cash (inc. all Grants) / GNX Share (\$)	0.30
Equity Value / GNX Share (\$)	1.44

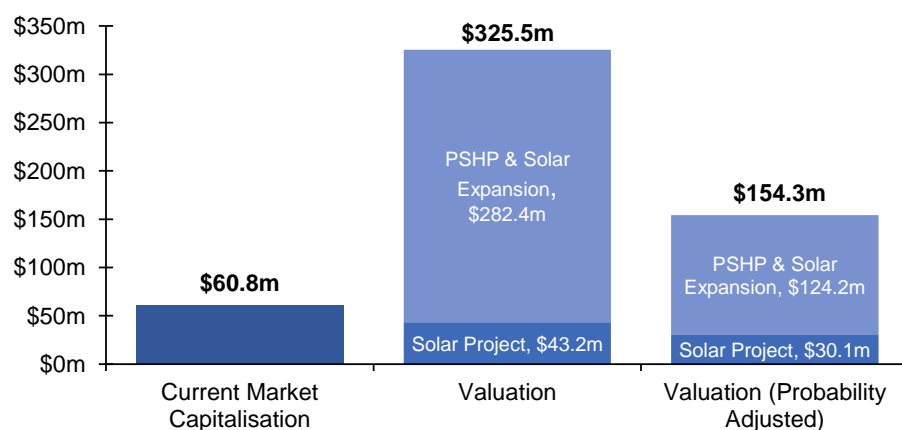
Adjustments

To account for the completion risk associated with each project and our forecasts being for FY20, we have applied a probability and PV adjustment to our valuation. Given the PSHP & Solar Expansion are in the early stage of development we have applied a probability of 0.62.

Equity Value / GNX Share	FY20 (\$)	PV (\$)	Probability	Probability & PV Adjusted (\$)
Solar Project	0.19	0.14	0.98	0.13
PHSP & Solar Expansion	1.25	0.89	0.62	0.55
Derived equity value / GNX Share	1.44			0.68

Potential upside exists for the company as milestones in respect to the PSHP and Solar Expansion are completed.

MARKET CAPITALISATION & VALUATION



Source: Select Equities Research

¹ Damodaran, A, New York University. The average EV / EBITDA of 28 globally listed 'Green & Renewable Energy' sector companies at Jan 2016 was 11.6x.

BOARD & MANAGEMENT

- Management is well suited to advancing ASX listed companies from concept through feasibility into approval.
- Michael Addison (Managing Director) is a water engineer with broad financial experience most recently with ASX listed Carabella Resources and EndoCoal, both of which were acquired.
- Simon Kidston (Executive Director), former investment banker with HSBC, Macquarie and Helmec has worked with Michael Addison at Carabella Resources and EndoCoal.
- The board is well credentialed combining electricity generation and operations. Non-Exec Chairman, Dr Ralph Craven is former CEO and Chairman of Ergon Energy and CEO of Transpower NZ, Chairman and Stanwell Corporation and N.E.Ds at Senex Energy and AusNet Services. He is joined by Alan du Mee former CEO of Tarong Power (now part of Stanwell Corporation) with experience in specific Pumped Storage Hydro Power Station at the Wivenhoe Dam. Representing GNXs major shareholder, Zhefu Power is Yongqing Yu. Zhefu power is the largest supplier of Hydro Power turbines and generators in China.

BUSINESS DESCRIPTION

- Genex Power Ltd, is a renewable generation and power storage development company seeking to advance two projects co-located at the “Kidston Renewable Energy Hub” site in Far North Queensland. Their flagship project is the PSHP and also on the site is the Solar Project.
- The company listed in July 2015 and raised capital to advance the Feasibility Study for the PSHP. Since listing, GNX has added the Solar Project to the company’s portfolio of assets and has quickly advanced this project to the point where it is fully approved and at the bankable stage.
- The State has recognised the Solar Project and the PSHP as a “State Prescribed Project”, which gives the Coordinator-General power to intervene to ensure timely decision making by the State.

Solar Project

- A number of major milestones for the Solar Project have occurred in quick succession over the past three quarters. Soon after receiving DA approval from the Qld Government, the Feasibility Study for the first 50MW stage of the Solar Project was released and this preceded the receipt of environmental approval for the site. A significant milestone was the signing of a connection agreement with Ergon Energy to utilise the installed 132kV power line and on-site sub-station. The need to raise additional capital to fund an initial payment to Ergon Energy saw GNX raise a further \$3.5m in June 2016.
- A major catalyst for the project was announced in September 2016 with the receipt of an \$8.9m funding package awarded in the form of a grant from the Australian Renewable Energy Agency (ARENA), announced concurrently with the signing of a 20 year Qld government power support deed. These announcements significantly de-risked the project and have enabled GNX to progress to finalising the delivery team and awarding contracts to major contractors and equipment suppliers. A Debt Funding Mandate has also been signed with Société Générale.

PSHP

- Whilst the PSHP remains GNX’s flagship project, due to its size and intricacy, its advancement remains a longer and more complex process than the Solar Project.
- Since listing with the plan of converting what was Australia’s largest gold mine into a 330MW power storage “battery”, GNX has advanced the project through asset acquisition with TFS successfully completed and released on 8 November 2016 recommending 250MW generation capacity and 1,500MWh of total storage capacity. To develop the project, significant CAPEX to upgrade the site and installed infrastructure will be required.
- In advancing the proof of concept, GNX received an ARENA grant of \$4m for the advancement of the Feasibility study. This grant is separate to the \$8.9m for the Solar PV project.

RISK FACTORS

- The company will need to obtain access to capital in the form of debt finance and/or equity capital.
- Numerous regulatory approvals will be required to be obtained for the construction of the PSHP which may result in delays and increased costs.
- The PSHP project uses off peak power to pump the water to the upper reservoir and then generates power during the daily peak periods. Industry disruption whereby participants are 'off grid' using solar PV and battery storage could lead to there being less variation between peak and non-peak usage which may impact on the viability of the project.
- It is likely to be many years until the company reaches profitability.
- The renewal energy sector is subject to changes in government policy.
- Delays and cost increases may occur during construction of the Solar Project and the PSHP affecting project economics.
- The company may not be able to obtain the remaining easements required to complete the construction of the transmission line between Kidston and Mt Fox.
- Key management personnel may depart the company.

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