



# ASX RELEASE

## Infigen Energy

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28 August 2019

## INFIGEN ADDS SOUTH AUSTRALIA GAS TURBINES

Infigen (ASX: IFN) is pleased to announce that it has agreed to lease 120MW of open cycle gas turbine equipment (the "SAGTs") from the South Australian Government for 25 years, commencing May 2020.

Together with the 123MW Smithfield OCGT facility in NSW and the 25MW/52MWh SA Battery at Lake Bonney, the SAGTs mark the delivery of Infigen's firming platform. These assets enable Infigen to substantially increase firm electricity sales to Commercial and Industrial ("C&I") customers in the National Electricity Market ("NEM") and enable Infigen to grow its renewable energy capacity in the future.

Chairman, Len Gill, commented: "Infigen has operated renewable energy assets in South Australia since 2005. We are pleased to be partnering with the South Australian Government as we lead Australia's transition to a clean energy future. Our strategy is focused on providing commercial and industrial customers with reliable and competitively priced clean energy."

### SAGT transaction highlights:

- Four independent aero-derivative units (4x30MW) with 6-8 minute start time.
- Two year old General Electric equipment with 25+ years of remaining useful life.
- Lease and estimated capex cost of ~\$900/kW is significantly less than new build plant (e.g. OCGT at ~\$1050/kW or reciprocating engine ~\$1400/kW).
- Lease of existing equipment, as required by South Australian Government, lowers capital intensity.
- Option to operate on existing site for up to five years, mitigating risk of development or connection delays at the relocation site.
- Balanced allocation of risk between the State and Infigen over the 25 year life of lease.
- Units are expected to be relocated to a site at Bolivar with a 66kV connection, allowing Infigen to utilise substantial existing balance of plant (thereby reducing overall capital costs).
- Once relocated, the units will be transitioned to gas fuel, lowering the short run marginal cost and lowering emissions intensity.
- The SAGTs provide firming for Infigen's existing SA renewable portfolio (279MW) and enable an additional 300MW of renewable capacity growth.
- At 120MW, the SAGTs are the right size for Infigen's existing portfolio and growth ambitions.

The 25 year lease is expected to begin May 2020 with annual lease payments of \$5.02m, escalating with inflation (CPI). The capital expenditure associated with the relocation, including, civil works, gas connection, electricity connection and equipment installation is budgeted at \$55m.

Managing Director and Chief Executive Officer, Ross Rolfe, said: "Alongside the Smithfield OCGT and the SA Battery, the South Australian Gas Turbines lease marks another significant milestone in the strategic transformation of Infigen into an active energy market participant. Infigen has been growing its commercial and industrial customer base in SA since 2017 and is pleased to have added important new customers in SA, including a medium term electricity supply agreement with 64 councils, administered by the Local Government Association of South Australia, beginning January 2020."

**ENDS**

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## About Infigen

Infigen is leading Australia's transition to a clean energy future. Infigen generates and sources renewable energy, increases the value of intermittent renewables by firming, and provides customers with clean, reliable and competitively priced energy solutions.

Infigen generates renewable energy from its owned wind farms in New South Wales (NSW), South Australia (SA) and Western Australia (WA). Infigen also sources renewable energy from third party renewable projects under its 'Capital Lite' strategy. Infigen increases the value of intermittent renewables by firming them from the Smithfield Open Cycle Gas Turbine facility in Western Sydney, NSW, and its 25MW/52MWh Battery at Lake Bonney, SA, where commercial operations are expected to commence in H1FY20.

Infigen's energy retailing licences are held in the National Electricity Market (NEM) regions of Queensland, New South Wales (including the Australian Capital Territory), Victoria and South Australia. Infigen is a proud and active supporter of the communities in which it operates.

For further information, please visit: [www.infigenenergy.com](http://www.infigenenergy.com)

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# Infigen adds South Australia Gas Turbines

28 August 2019



Image: South Australia Gas Turbines, Lonsdale, SA.



# Infigen continues to deliver its strategy

- Infigen's business strategy is to combine renewable energy and firming capacity to provide Commercial and Industrial customers with reliable clean energy.

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Infigen agrees to lease 120MW of Open Cycle Gas Turbine (OCGT) equipment in South Australia (the SAGTs).

The SAGTs provide firming for Infigen's existing SA renewable portfolio (279MW) and enable an additional 300MW of renewable energy capacity.

Together with Smithfield OCGT and the SA Battery, the SAGTs position Infigen for a total of 600-700MW of renewable capacity growth with up to 75% of the expanded renewable energy generation contracted.

The foundation of Infigen's firming platform is now delivered.



South Australia Gas Turbines, Lonsdale, SA

# SAGT transaction summary

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## Transaction

- Infigen has agreed to lease 120MW of OCGT equipment from the South Australian Government for 25 years, with the lease expected to commence in May 2020.

## Transaction economics

- The acquisition is expected to exceed Infigen's post tax levered equity return hurdle of 12%.
- Significant additional value will be created by delivery of an additional 300MW of low cost intermittent renewables on a Capital Lite basis.
- Lease and estimated capex cost of ~\$900/kW is significantly less than new build plant (e.g. OCGT at ~\$1050/kW or reciprocating engine ~\$1400/kW).
- Capex funded on Balance Sheet as incurred over FY20 and FY21.

## Equipment lease

- \$5.02m pa for 25 years with annual CPI escalation.
- Lease expected to begin 1 May 2020.

## Project plan

- Units will be operated at Lonsdale, SA, until they are relocated to a new site where they can be operated on natural gas.
- Option to operate on existing site for up to five years, mitigating risk of development or connection delays at the relocation site.
- Infigen has identified a preferred relocation site at Bolivar, with a secondary site also available.
- Final site selection expected in H1FY20.
- Relocation must occur during non-peak season, between 1 May and 31 October.
- Units expected to be operational on new site by November 2021.

# Firming platform delivered

- Infigen's portfolio of flexible, fast-start firming assets allows an additional 600-700MW of renewable energy capacity with up to 75% of the expanded generation able to be contracted.

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South Australia Gas Turbines



- 120MW (4x30MW units).
- 6-8 minute start time.
- Firms Infigen's existing SA renewable energy assets (279MW) plus enables an additional 300MW of renewable energy capacity.

South Australia Battery



- 25MW/52MWh battery.
- <1 second start time.
- Revenue opportunities from FCAS markets, energy arbitrage and firming of Infigen's SA renewable energy assets.

Smithfield OCGT, NSW



- 123MW facility (3 units).
- 12-13 minute start time.
- Firms Infigen's existing NSW renewable energy assets (302MW) plus enables an additional 300-400MW of renewable energy capacity.

# Infigen's asset portfolio

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- Infigen's business strategy is to combine renewable energy and firming capacity to provide Commercial and Industrial customers with reliable clean energy.



## Renewable Energy Assets

- 7 owned wind farms with 670MW capacity.
- 2 contracted wind farms with 89MW capacity once Cherry Tree WF is completed.
- Development portfolio across Australia.



## Firming Assets

- Smithfield OCGT, a 123MW fast-start generator in NSW.
- SA Gas Turbines, a 120MW fast-start generator in SA.
- SA Battery, 25MW/52MWh firming capacity in SA.

## Commercial and Industrial customers

- Serving our customers well is critical to our success.
- We provide our C&I customers with reliable and competitively priced clean energy.



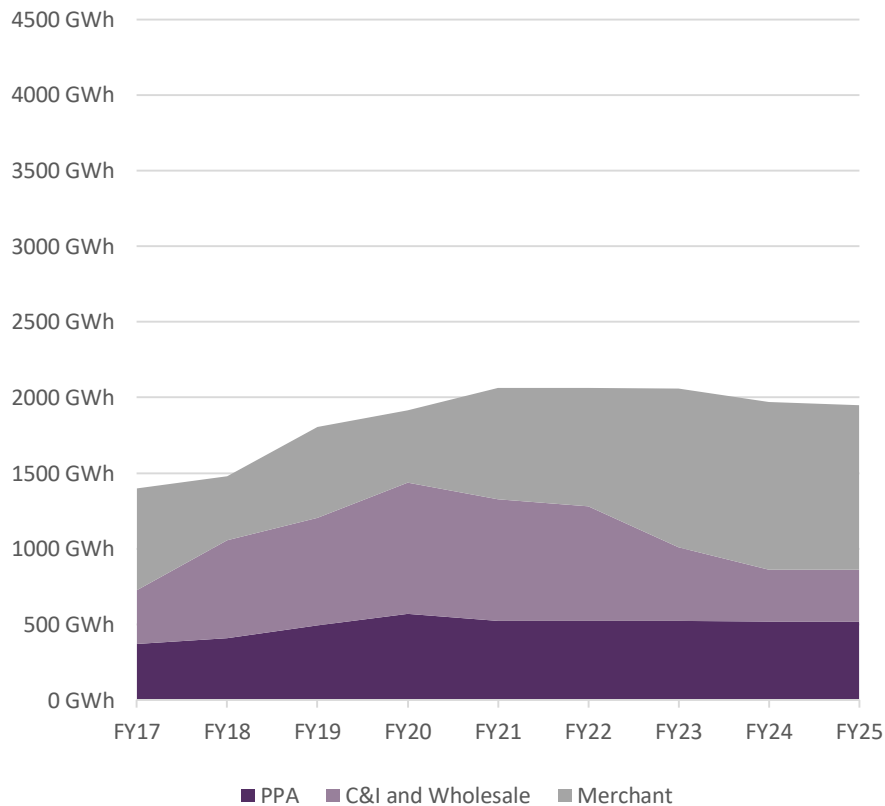
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# The volume and growth opportunity is transformative for Infigen

- Together with Smithfield OCGT and the SA Battery, the SAGTs position Infigen for a total of 600-700MW renewable growth with up to 75% of the expanded renewable energy generation to be contracted.

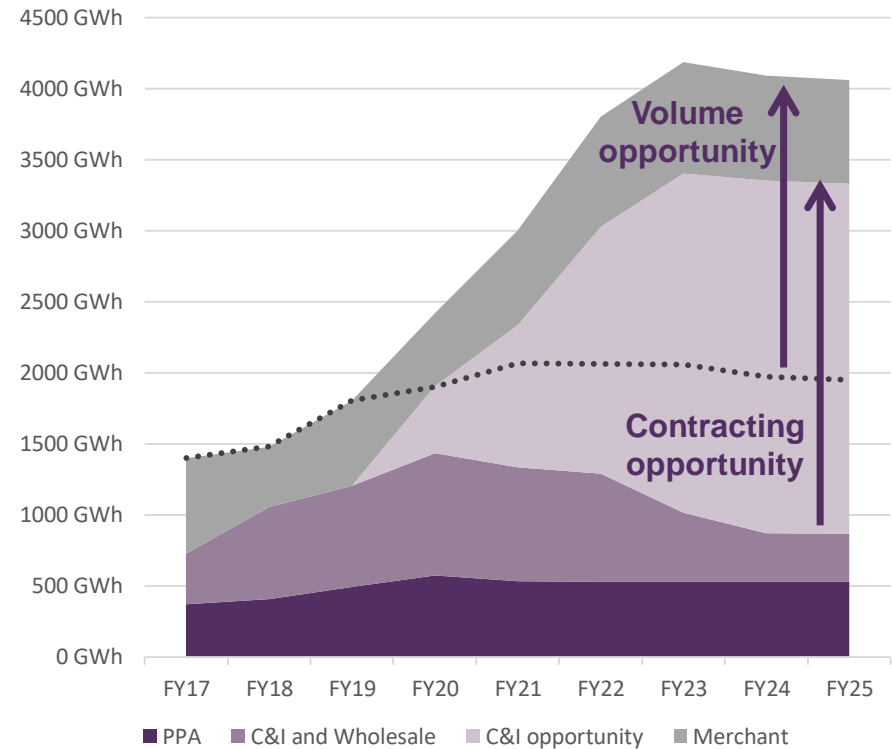
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**Infigen's current contracting position**



Note: Based on expected Renewable Energy Generation adjusted for FY20 Marginal Loss Factors; includes contracted supply from Kiata WF, includes Cherry Tree WF from FY21; excludes firming assets; statistical simulation basis.

**The opportunity**



Note: Chart shows indicative volume growth and indicative contracting levels enabled by Infigen's firming strategy. Actual outcomes are dependent on timing of additional Capital Lite generation and execution of C&I contracting. Chart illustrative of the opportunity and is not guidance. Based on expected Renewable Energy Generation adjusted for FY20 Marginal Loss Factors; includes contracted supply from Kiata WF; includes Cherry Tree WF from FY21; excludes firming assets; statistical simulation basis. Actual outcomes will be dependent on timing of additional Capital Lite generation and execution of C&I contracting.



# The SAGTs are the right asset for Infigen

- Modern, flexible, fast-start generators with the right output capacity for Infigen's business strategy.

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- Four independent units, with a total of 120MW capacity.
- At 120MW, the SAGTs are the right size for Infigen's existing portfolio and growth ambitions.
- 25 year equipment lease of the existing generators, as proposed by the SA Government, lowers capital intensity.
- 2 year old GE equipment (TM2500) with 25+ year remaining useful life.
- Dual fuel capability provides operational flexibility.
- Capital cost plus NPV of lease payments (at 10% discount rate) implies ~\$900/kW. Similar new equipment costs \$1050-1400/kW.



SAGTs, Lonsdale, SA

# Aero-derivatives provide fast, reliable and flexible power

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6-8 minute start  
time

Dual fuel (gas and  
diesel)

Low  
maintenance

Transportable  
modules



# Site and infrastructure

- SAGTs will be moved to a site where they can operate on gas.

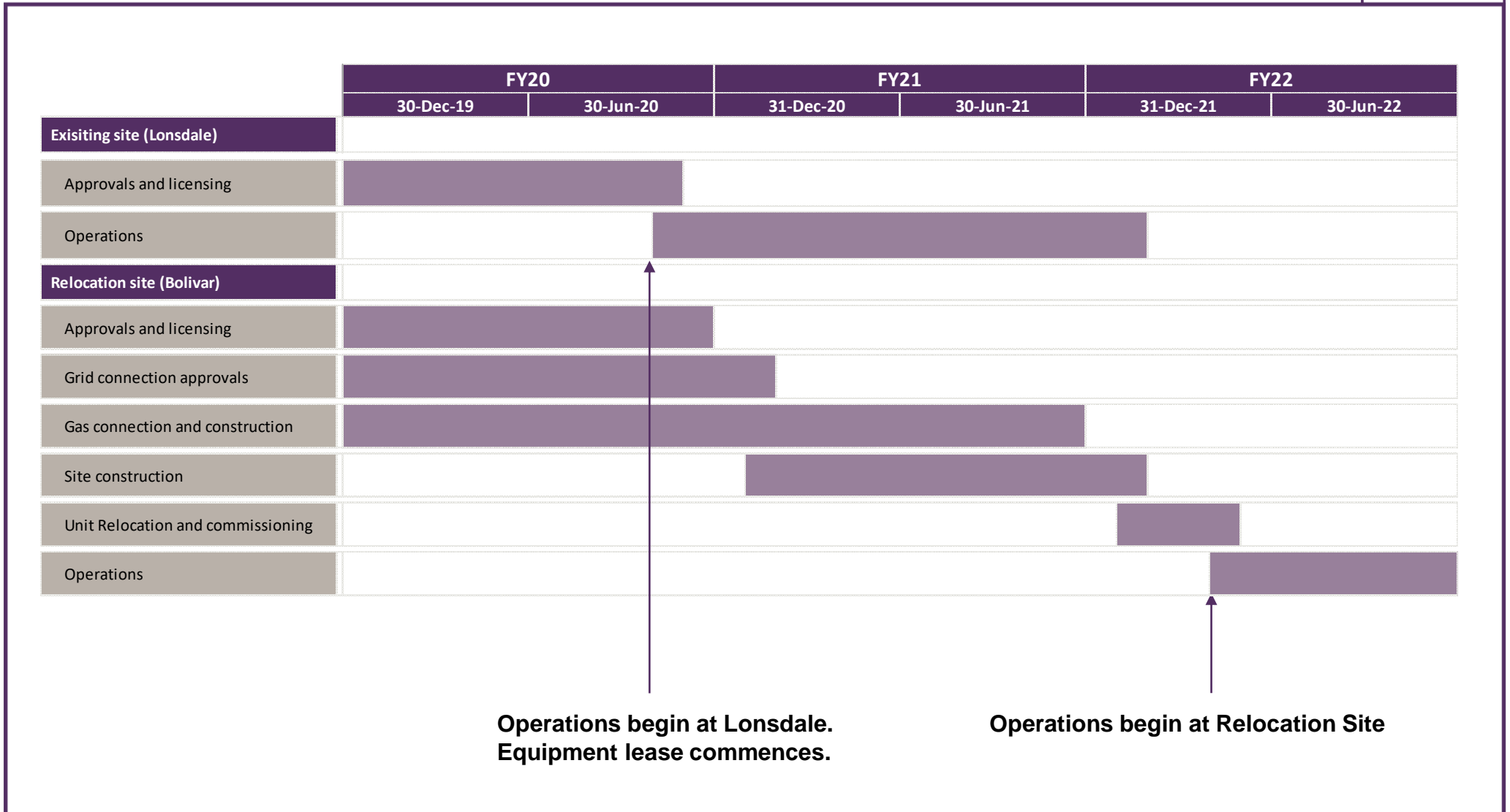
- The SAGT units are currently located at Lonsdale, Adelaide, and operated on an emergency only basis using diesel fuel.
- Relocation must occur no later than FY25.
- Infigen is in the advanced stages of negotiating a 25 year land lease with SA Water at Bolivar.
- Site is located within an industrial complex at Bolivar, proximate to both SEAgas and Epic (MAPS) gas pipelines.
- 66kV grid connection available within 1.8km of site.
- Secondary site also available.



# Development timeline

- Infigen plans to relocate the SAGTs in FY22.

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# Capital Expenditure and Fixed Costs

## Capital Expenditure:

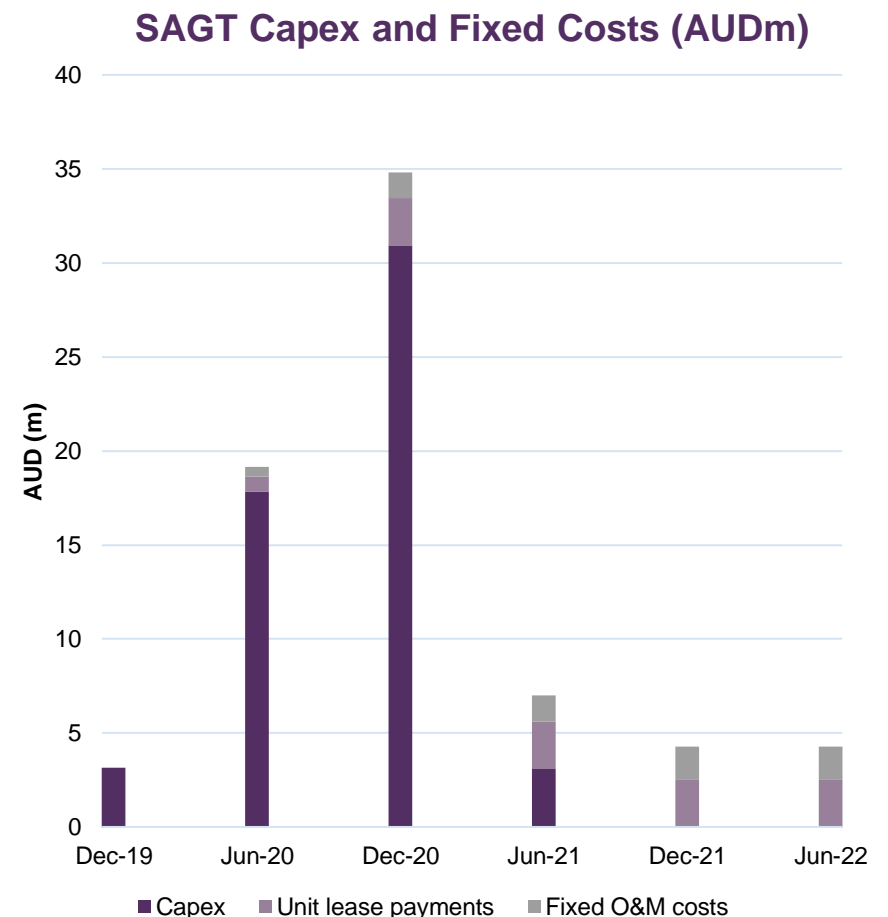
- Budgeted capex of \$55m including contingency.
- Capital expenditure includes civil and electrical works at site, gas connection, electricity connection and asset relocation.
- Capital expenditure staged over 30 months and can be financed from free cash flow.

## Operations and Maintenance:

- An experienced service contractor will be engaged to carry out the operations and maintenance activities through an Operations and Maintenance (O&M) agreement.
- Aero-derivative units have low maintenance costs which are not linked to unit starts.

## Dispatch of SAGTs:

- 6-8 minute start time. Idling capacity offers additional flexibility with ramp rate of up to 30MW per minute.
- Dispatch will be managed by Infigen's existing 24 hour operational control centre.



Note: timeline of capex incursion reflects Infigen estimates as at August 2019. Timing of capex may vary.

# Progress in delivering Infigen's strategy

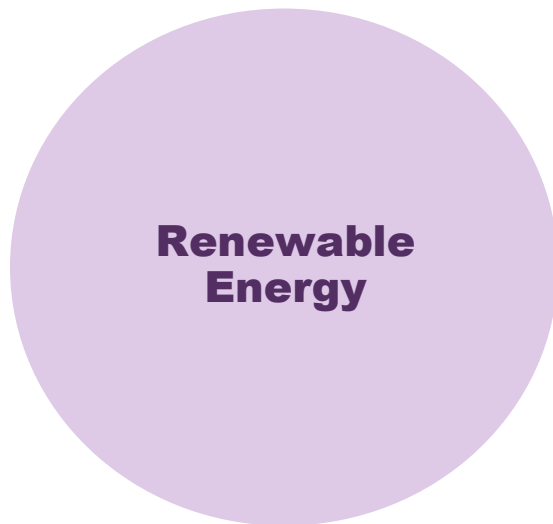
- Infigen has made significant progress in its strategic transformation, but there are still important milestones to deliver.

✓	De-levered and refinanced	Substantial deleveraging and refinancing of previous debt facilities.
✓	Agreed Capital Lite contracts	Agreed offtake contracts with Kiata WF and Cherry Tree WF enabling expansion into VIC. Cherry Tree WF transaction demonstrated value of development pipeline.
✓	Diversified customer base	Established an energy markets platform with an experienced team allowing customer contracting.
✓	Commissioned Bodangora WF	Delivered Bodangora WF renewable energy growth in NSW.
✓	Constructed SA Battery	Constructed Battery Energy Storage System at Lake Bonney, to deliver physical firming in SA.
✓	Acquired Smithfield OCGT	Smithfield OCGT acquisition delivering physical firming in NSW.
✓	Reintroduced Distributions	Reintroduced sustainable half-yearly Distributions at 1 cent per Security paid from free cash flow.
✓	C&I systems upgrade	Implemented new customer billing system with advanced analytics and multi-site functionality.
✓	<b>Deliver SA physical firming</b>	SAGTs provide 120MW of physical firming in SA.
	Grow renewable volumes	Introduce new accretive Capital Lite renewable capacity of 600-700MW.
	Increase contracting levels	Increase contracting to approximately 75% of expanding Renewable Energy Generation.
	Continued deleveraging	Scheduled amortisation of \$152m by FY23 vs 30 June 2019.
	Targeting carbon neutrality	Infigen targets carbon neutrality on a Scope 1 and Scope 2 basis by FY25.

# Infigen's strategy

**We are leading Australia's transition to a clean energy future**

**We generate and source renewable energy**



**We add value by firming**



**We provide our customers with reliable clean energy**



# Infigen is leading Australia's transition to a clean energy future

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- 
- Established portfolio of long life renewable energy assets with 670MW of owned capacity.
  - Growing portfolio of Capital Lite renewable energy assets.
  - Portfolio of flexible, fast-start firming assets.
  - Proven Commercial and Industrial (C&I) customer capability.
  - Long dated Operations and Maintenance agreements for wind assets guaranteeing high availability.
  - Experienced leadership and high performance team.
  - Track record of delivering wide EBITDA margins.



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# Appendix



Image: SAGTs site, Lonsdale, SA

# SAGT economics

## Purchase Price comparables:

- NPV of equipment lease payments (at 10%) plus estimated capital cost ~\$900/kW.
- This is significantly less than a new entrant OCGT at ~\$1050/kW or a reciprocating engine at ~\$1400/kW.

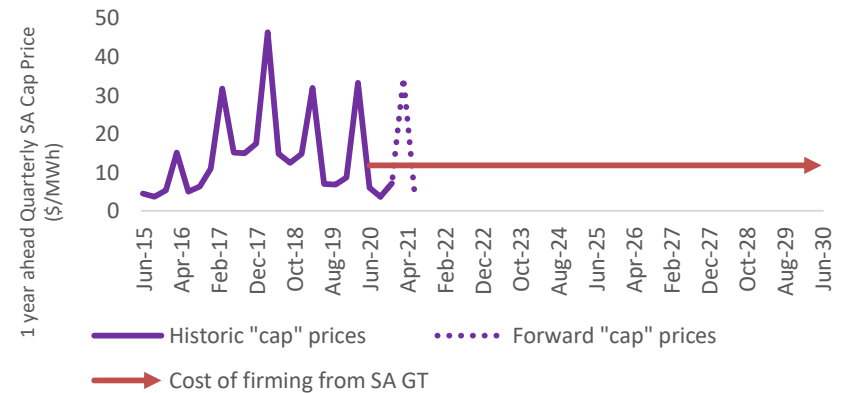
## Value considerations:

- **Heat Rate:** c10.7 GJ/MWh at full load.
- **Capacity Factor:** modelled P50 capacity factor of 7%, with higher electricity prices resulting in increasing utilisation, for an expected annual range of 2-20%.
- **Remaining useful life:** 25+ years. 2 year old equipment with no major overhauls expected during 25 year lease period.
- **Equipment lease:** \$5.02m per annum escalating at CPI.
- **Budgeted remediation:** unless otherwise agreed, Infigen will remove the plant from the site at the end of the lease.
- **Equipment and land lease costs:** to be recognised in line with AASB 16.

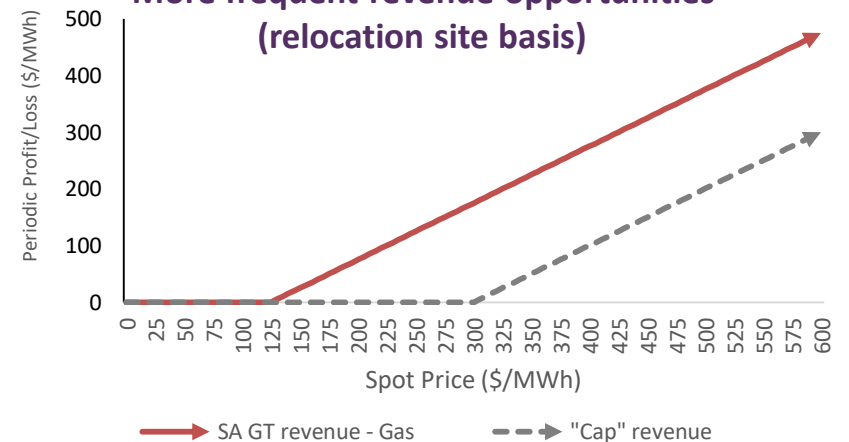
## Revenue Considerations:

- The SAGTs provide firming for Infigen's existing SA renewable portfolio (279MW) and enable an additional 300MW of renewable capacity growth.
- If used solely for \$300/MWh Cap Contract sales (i.e. the 'always available' option), the SAGT acquisition is expected to exceed Infigen's post tax levered equity return hurdle of 12%.
- Positions Infigen to comply with Retailer Reliability Obligation (1 July 2019).

## More predictable firming costs



## More frequent revenue opportunities (relocation site basis)



# Gas supply and transport

## Correlation between average gas prices and base electricity prices:

- STTM gas prices are not significantly correlated to electricity prices on critical electricity event days.
- However, over the medium term, gas prices have fed into electricity market prices.
- Average gas prices correlate (0.88 correlation coefficient) with base load electricity prices, providing a natural hedge for Infigen.

## Gas Supply:

- Gas will be purchased from the Adelaide Short Term Trading Market (STTM) on an as used basis.

## Gas Transport:

- Bolivar can be connected to either SEAGas or EPIC (MAPS) gas pipelines.
- Transportation tariffs anticipated at market rates (indicatively, ~\$1/GJ)

## Correlation between NEM electricity price and NEM region gas price

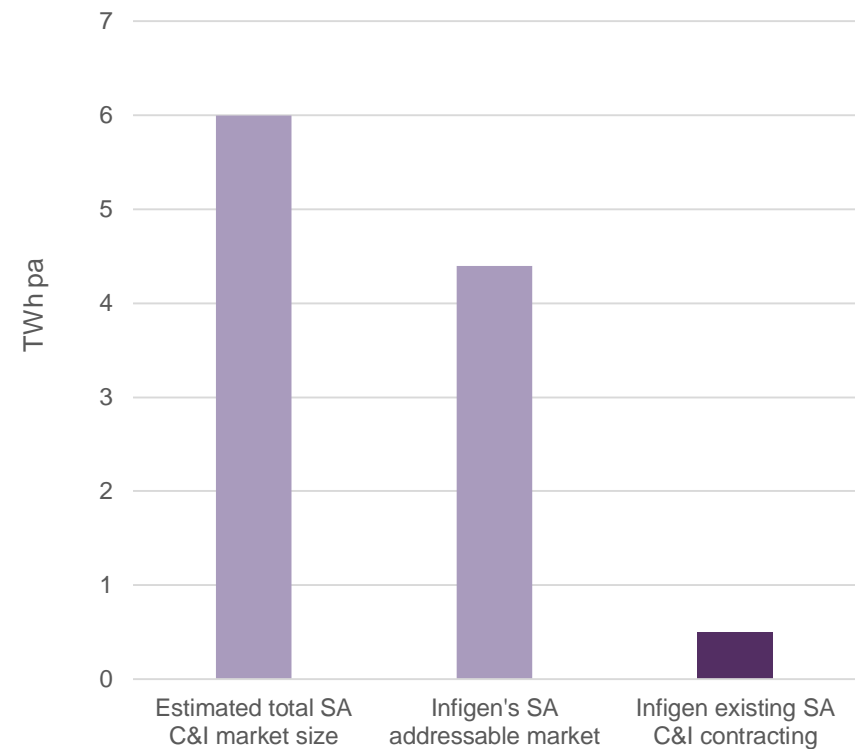


Source: AEMO, AER, Infigen analysis, correlation co-efficient 0.88.

# There is a substantial market for new C&I contracts in SA

- C&I customers are increasingly looking to contract outside of the large retailers.
- Increasing sustainability awareness is driving a customer trend towards renewable energy.
- Infigen has successfully grown its C&I business over the last two years.
- Infigen has invested in enhanced customer service and risk management systems.

**Infigen has a significant growth opportunity for C&I sales in SA**

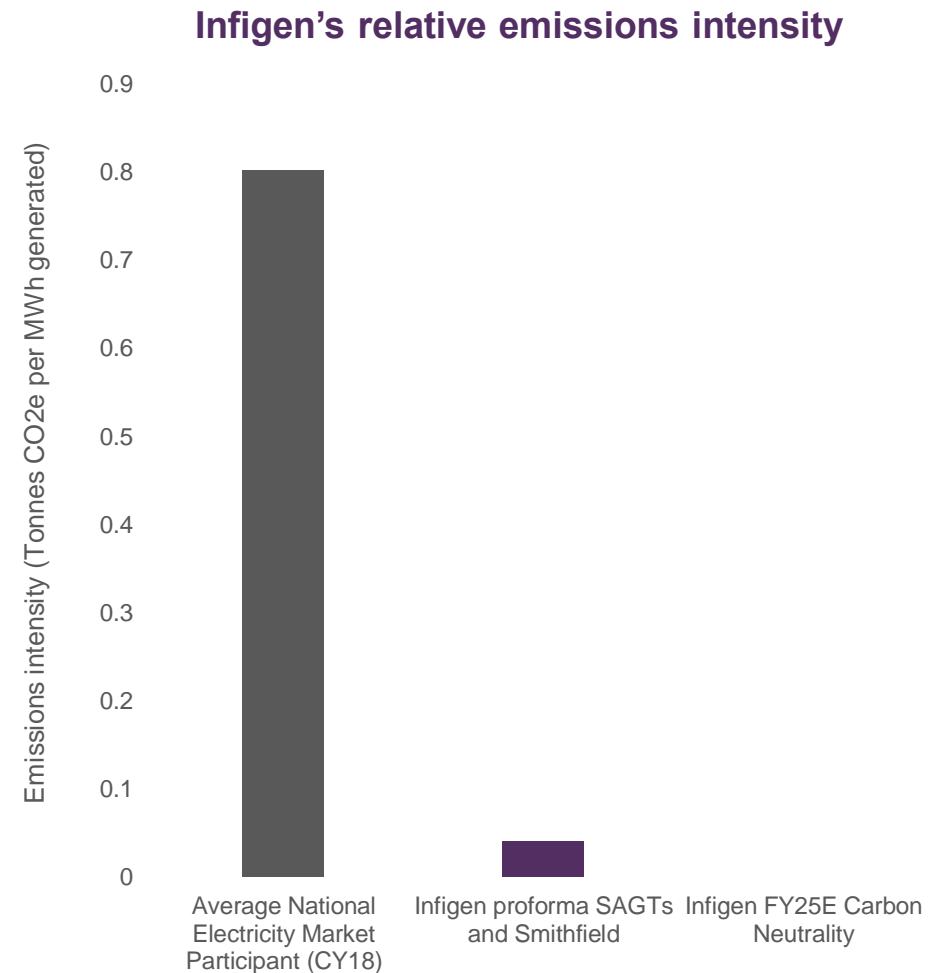


Source: Infigen Estimates



# Infigen is leading Australia's transition to a clean energy future

- Infigen is targeting the offset of all its Scope 1 and Scope 2 carbon emissions by FY25.
- Infigen sources 100% of its office and wind farm electricity from renewables.
- Gas peaking plant (Smithfield and SAGTs) operate infrequently, ensuring continued low emissions.
- Firming capacity is the enabler for significant growth in renewable energy generation capacity.



# Infigen's renewable energy assets



	Alinta WF	Lake Bonney 1 WF	Lake Bonney 2 WF	Lake Bonney 3 WF	Capital WF	Woodlawn WF	Bodangora WF	Kiata PPA	Cherry Tree PPA
<b>Asset type</b>	Wind Farm	Wind Farm	Wind Farm	Wind Farm	Wind Farm	Wind Farm	Wind Farm	Offtake (PPA), electricity only, from third party wind farm	Offtake (PPA), electricity and LGCs, from third party wind farm
<b>Ownership Structure</b>	100%	100%	100%	100%	100%	100%	100%	0%, Capital Lite	0%, Capital Lite
<b>Location</b>	Geraldton, WA	Millicent, SA	Millicent, SA	Millicent, SA	Bungendore, NSW	Tarago, NSW	Wellington, NSW	Horsham, Victoria	Seymour, Victoria
<b>Capacity (MW)</b>	89.1	80.5	159.0	39.0	140.7	48.3	113.2	31.0	57.6
<b>Expected (P50) Capacity Factor</b>	41.1%	26.2%	27.1%	27.0%	28.3%	34.3%	35.6%	47.3%	36.3%
<b>FY19 Marginal Loss Factor</b>	0.9475	0.9144	0.9144	0.9144	1.0100	1.0100	0.9819	0.9911	NA
<b>FY20 Marginal Loss Factor</b>	0.9447*	0.9777	0.9777	0.9777	0.9701	0.9701	0.9495	0.9066	NA
<b>Expected (P50) Generation Sold (based on FY20 MLF)</b>	321	181	369	90	338	141	335	116	177
<b>Commenced operation</b>	Jul-06	Mar-05	Sep-08	Jul-10	Jan-10	Oct-11	Feb-19	NA	~2020
<b>Depreciable life end date</b>	Jul-31	Mar-30	Sep-33	Jul-35	Jan-35	Oct-36	Feb-49	-	-
<b>Contract end date</b>	-	-	-	-	-	-	-	31-Aug-23	15 years from completion
<b>O&amp;M contract end date</b>	Dec-25	Dec-24	Dec-27	Dec-29	Dec-30	Dec-32	Feb-39	NA	NA
<b>Cost of supply</b>	Share of operating expenses							Confidential PPA price	Confidential PPA price

\*At Alinta WF Marginal Loss Factor is only applicable to LGCs. Electricity is sold before application of MLF.

# Glossary

<b>AEMO</b>	Australian Energy Market Operator
<b>C&amp;I</b>	Commercial and Industrial
<b>Capacity</b>	The maximum power that a generator was designed to produce
<b>Capacity factor</b>	A measure of the productivity of a generator, calculated by the amount of power that a generator produces over a set time period, divided by the amount of power that would have been produced if the generator had been running at full capacity during that same time period.
<b>CCGT</b>	Combined Cycle Gas Turbines
<b>Contracted Assets</b>	Generation assets owned by third parties, from which Infigen has entered into a contract to acquire some or all of the energy generated by those assets
<b>DWGM</b>	Declared Wholesale Gas Market
<b>Firming</b>	The acquisition or generation of alternate energy, or dispatch of energy from storage, for when renewable energy generation output is less than required to meet contracted supply requirements
<b>Firm Contracts</b>	Either Commercial and Industrial or Wholesale markets contracts with a fixed price for firm delivery of electricity.
<b>GW / GWh</b>	Gigawatt / Gigawatt hour
<b>Infigen</b>	Infigen Energy, comprising IEL and IET and their respective subsidiary entities from time to time
<b>LGC</b>	Large-scale Generation Certificate. The certificates are created by large-scale renewable energy generators and each certificate represents 1 MWh of generation from renewable resources.
<b>MW / MWh</b>	Megawatt / Megawatt hour
<b>NEM</b>	National Electricity Market
<b>O&amp;M</b>	Operations and maintenance
<b>OCGT</b>	Open Cycle Gas Turbines
<b>Owned Assets</b>	The generation assets 100% owned by Infigen
<b>Relocation Site</b>	Preferred site in SA Water industrial complex at Bolivar, with secondary site also available.
<b>SA Battery</b>	25 MW/52 MWh Lake Bonney Battery Energy Storage System.
<b>SAGTs</b>	South Australia Gas Turbines, 120MW (4x30MW) of open cycle gas turbine equipment
<b>WF</b>	Wind Farm

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