



**Infradebt Ethical Investment Fund 1**  
**Quarterly Report – December 2020**



Photo: Trundle Solar Farm (IEF investment)

## KEY DEVELOPMENTS

The Infradebt Ethical Investment Fund 1 (IEIF1) returned 1.4% (after fees) in the December 2020 quarter, the benchmark (50% Bloomberg Composite Index and 50% Bloomberg Bank Bill Index) returned -0.03% over the same period.

	Return this quarter (%)	FYTD (%)	1 Year IRR (% p.a.)	2 Year IRR (% p.a.)	Since Inception IRR (% p.a.)*
IEIF1 Return/IRR	1.4	2.7	3.7	5.2	5.1
Benchmark	0.0	0.5	2.4	3.4	3.4
Outperformance	1.4	2.2	1.3	1.8	1.7

\* Inception January 2018.

### Update on the Infradebt Ethical Fund (IEF)

IEIF1 invests in the Infradebt Ethical Fund (IEF) and holds the undrawn capital in cash and term deposits. As of December 2020, IEF has committed \$74 million to underlying loans, with \$68 million drawn and \$6 million to be drawn. The prospective yield to maturity of the portfolio is 3.3% or a spread of 3.1% above the 3-year Commonwealth Government bond (an historically low 0.11%).

For the most part financial markets have been relatively stable this quarter with risk assets of all forms performing well. Within fixed income markets the yield curve is steeper with short-term rates anchored at or near zero and longer term rates rising. Broadly, credit spreads have narrowed, but within the sectors Infradebt participates in we have not seen any substantive movement.

From a borrower perspective, this quarter has seen relatively limited action in respect of the portfolio with all positions performing within expectation. Within the SAF portfolio, Brigalow is in the final stages of testing/commissioning and operating at around 80% of maximum capacity. The project just needs to pass the final round of testing to allow it to operate at full capacity. It has been frustrating for Brigalow that the commissioning process has been so drawn out, however, for lenders, it should be noted that the project has been operating at 80% of nameplate capacity for some time now providing coverage in respect of debt service (together with all other protections afforded to lenders under loan documents).

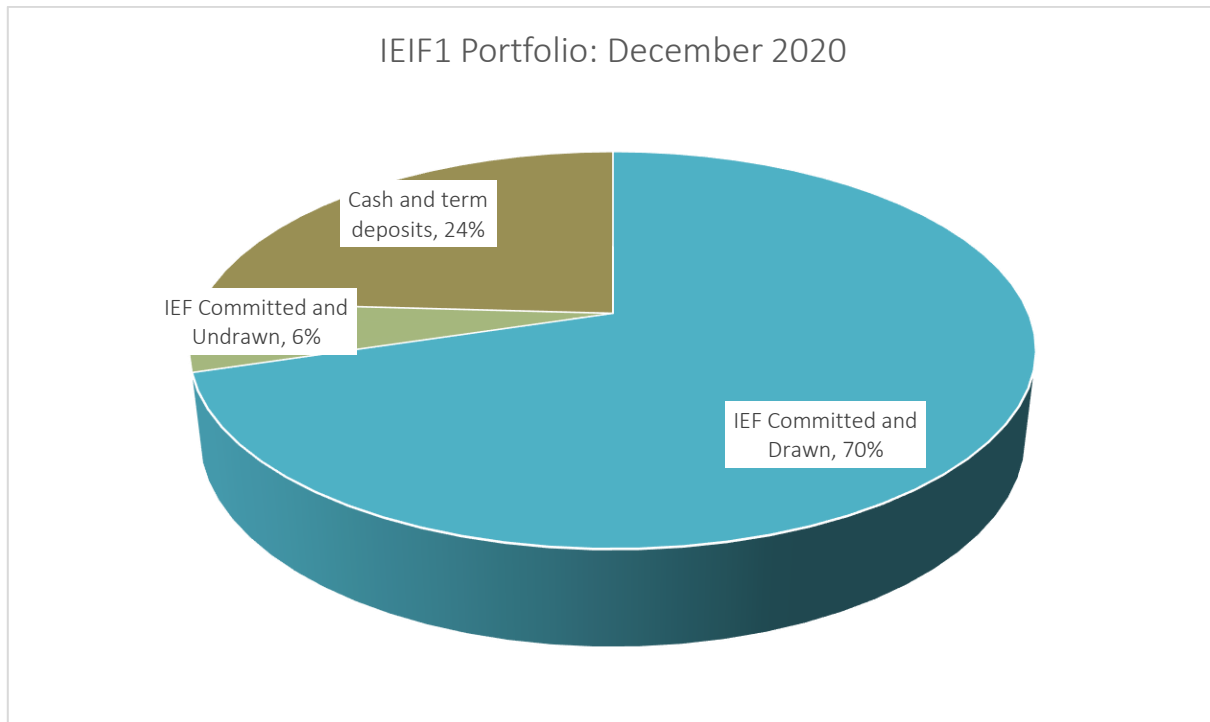
The Photon and Enerparc projects are also nearing completion with full commissioning to occur next quarter. Whilst there have been a few slight delays, all four projects have progressed well through the construction phase and in line with expectations.

Finally, we are working with Savant to extend their facility. The facility will be modified in particular to allow Savant to exploit larger solar opportunities within the embedded electricity network market.

There were no new transactions completed last quarter, this wasn't due to a lack of activity, rather the opportunities reviewed did not meet the risk/return expectations Infradebt is targeting for the portfolio. The deal pipeline remains active with a number of opportunities carrying over from last quarter. In an unusual manner for what is typically a quitter time of year – the first three weeks of January have seen several counterparties approach Infradebt regarding financing.

**IEIF1 Portfolio Snapshot**

The composition of the IEIF1 portfolio as at reporting date is detailed in the chart below.



In the above chart we have broken the portfolio into three buckets – described below:

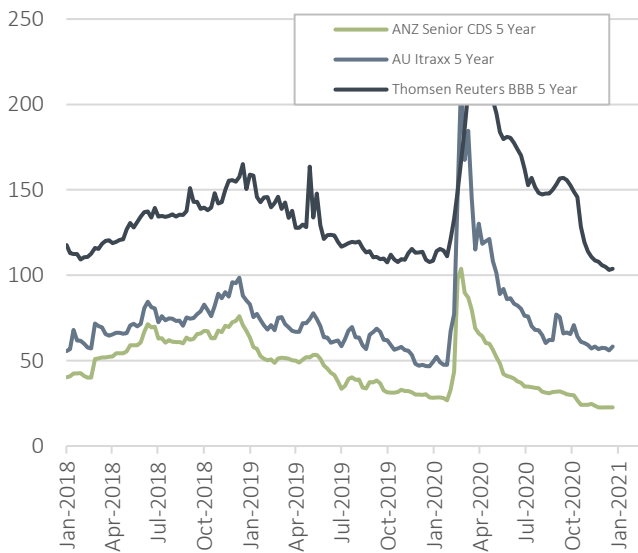
	Bucket	Description	Return characteristics
1	IEF Committed and Drawn	Capital which has been invested in IEF and has been fully drawn by borrowers	<ul style="list-style-type: none"> <li>Earns interest as well as upfront fees – which we pro rate over the expected life of the loan.</li> <li>Returns on this portion are currently 3.0-4.0%.</li> </ul>
2	IEF Committed and Undrawn	Capital which has been committed to borrowers, but as yet has not been drawn down. This typically occurs with construction projects – money is earmarked but has not been used by the project	<ul style="list-style-type: none"> <li>Earns commitment fees. These are usually around 1-2% per annum and compensate the lender for reserving capital for a loan.</li> <li>Upfront fees – which we pro rate over the expected life of the loan.</li> <li>Earns cash/term deposit interest (see below).</li> <li>Returns on this portion are currently 2-3%.</li> </ul>
3	Cash and term deposits	Capital committed by IEIF1 investors that, as yet, has not been committed/invested by IEF in underlying loans.	<ul style="list-style-type: none"> <li>Infradebt runs a rolling term deposit program seeking to optimise the return on cash.</li> <li>Returns on this portion are currently around 0.25%.</li> </ul>

## MARKETS UPDATE

### Interest rate observations

The most significant news that moved markets this quarter was the announcement of trial results for the Covid-19 vaccine by the major drug manufacturers. The realisation that effective vaccines would be available, provided markets with confidence regarding a rebound in the global economy. In response to the vaccine news, interest rates have started to rise. The yield curve has twisted with the long end moving up and the short end staying locked at zero for now. Interest rate markets appear to be pricing in an increased probability of inflation in the medium to long term. The 10-year Government bond yield increased from 0.75% to 1.00% over the quarter. As of writing, the current yield is 1.11%. Despite the positive vaccine news, infection rates continue to rise with many jurisdictions going back into lockdown across Europe.

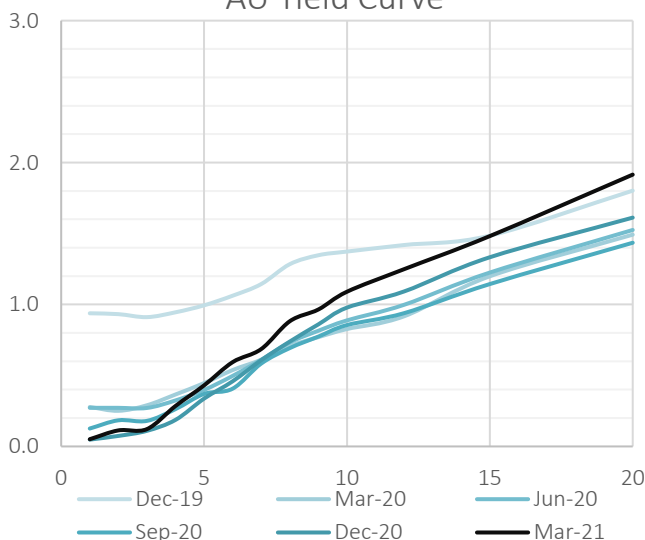
Spreads



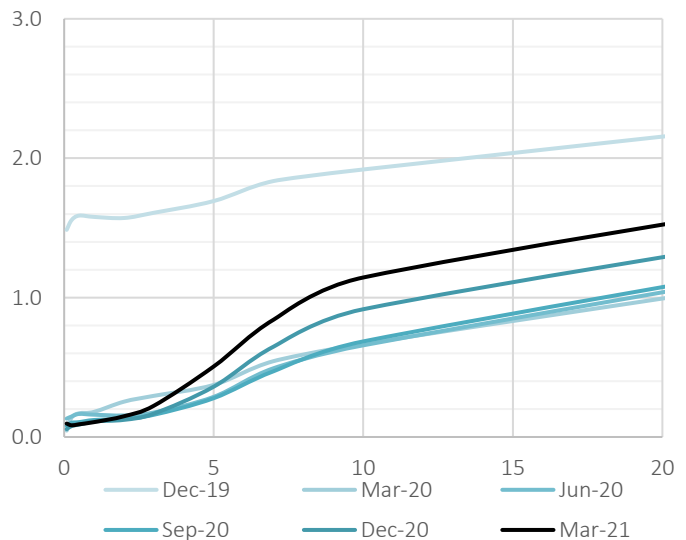
Domestic Rates



AU Yield Curve



US Yield Curve





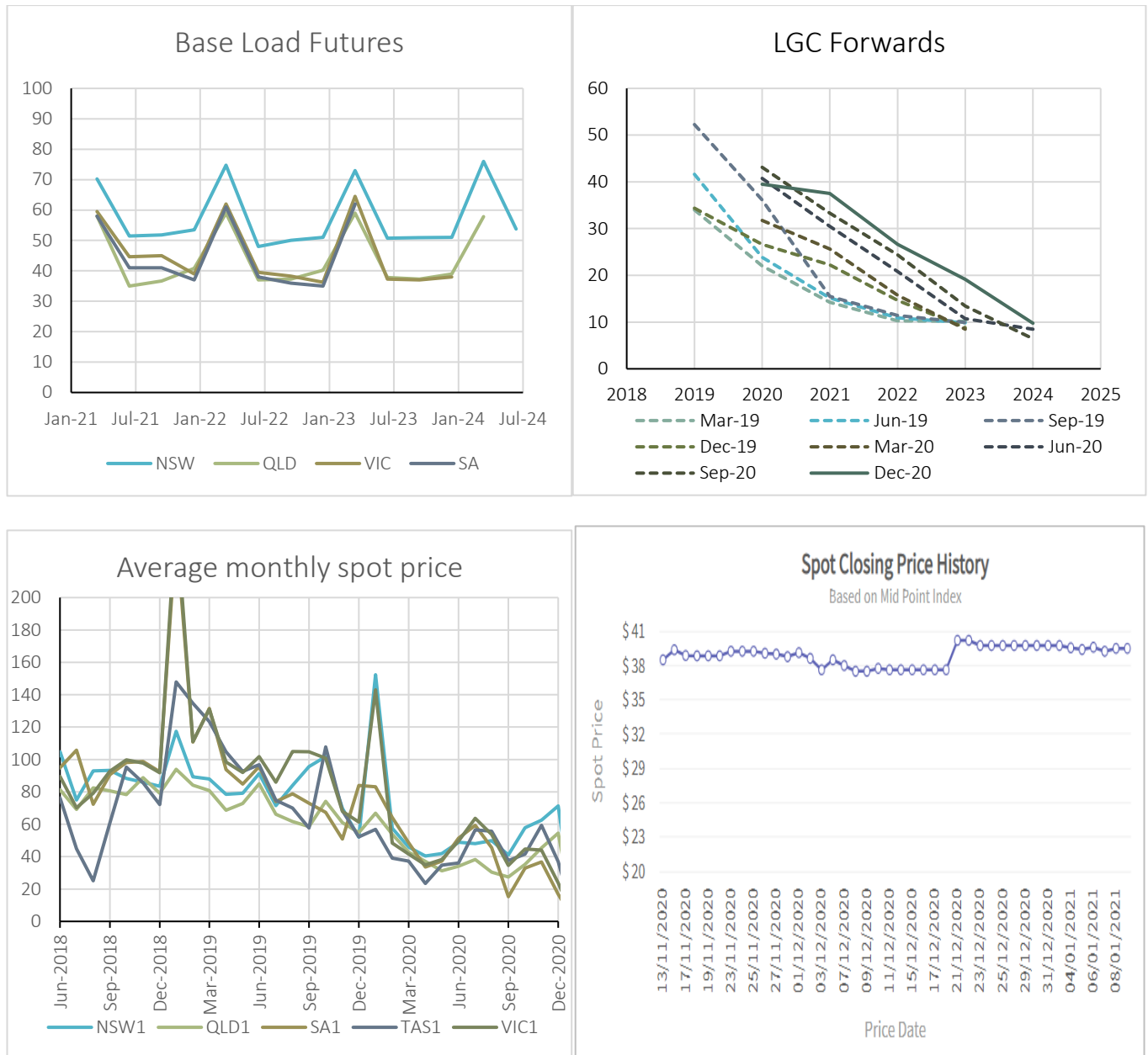
### Electricity markets

Electricity prices improved quarter on quarter as the higher seasonal demand of the summer months kicked in. However, prices are still well down in the NEM overall compared to 2019, reflecting the ever-increasing penetration of renewables. Across the NEM the average load weighted price in the quarter was \$51/MWh and the average solar weighted price achieved was \$46/MWh. The best state for solar generation was New South Wales with only a 5% discount for solar prices. The worst state was South Australia which achieved \$17/MWh for solar generators against a load weighted price of \$30/MWh, a 43% solar discount. SA is a difficult market for merchant renewables where total renewable generation is often greater than total demand! This is not a surprise to Infradebt, and our modelling accurately forecasted this outcome several years ago – as such our debt sizing approach to SA reflects the unique characteristics of this market.

LGC markets continue to surprise market participants as the forward curve continues to shift outwards and upwards by \$5/LGC across all time periods. This reflects the markets reassessment on the continued delays in commissioning of the existing fleet of generators connecting to the grid.

Volume Weighted Average Price	NSW1	QLD1	SA1	TAS1	VIC1	NEM
Q4 2019(\$/MWh)	65.89	71.65	75.88	66.75	77.95	72.12
Q3 2020(\$/MWh)	41.63	38.82	42.77	48.69	49.89	43.97
<b>Q4 2020(\$/MWh)</b>	<b>71.14</b>	<b>52.86</b>	<b>29.81</b>	<b>50.54</b>	<b>43.41</b>	<b>50.87</b>
Q4 2020 vs Q3 2020	71%	36%	-30%	4%	-13%	16%
Q4 2020 vs Q4 2019	8%	-26%	-61%	-24%	-44%	-29%

Solar Dispatch Weighted Average Price	NSW1	QLD1	SA1	TAS1	VIC1	NEM
Q4 2019(\$/MWh)	65.48	51.49	59.43	71.46	70.29	58.69
Q3 2020(\$/MWh)	36.90	15.58	22.66	51.23	41.07	26.09
<b>Q4 2020(\$/MWh)</b>	<b>67.79</b>	<b>37.90</b>	<b>17.01</b>	<b>47.15</b>	<b>28.83</b>	<b>45.77</b>
Q4 2020 vs Q3 2020	84%	143%	-25%	-8%	-30%	75%
Q4 2020 vs Q4 2019	4%	-26%	-71%	-34%	-59%	-22%



## ASSET UPDATE

### IIG SAF

As previously advised in our last report, Brigalow Solar Farm is mechanically complete and has been going through the commissioning process. The project is now in the final of three progressive commissioning stages. Throughout the last quarter the project has been operating at around 80% of nameplate capacity, the final commissioning stage will allow it to operate at 100%. IIG has submitted testing results for the final stage to the Network Operator and is awaiting its approval (or whether more testing is required). Brigalow is not the only project to suffer grid commissioning delays – many projects in a range of states have suffered similar delays.

Given that Brigalow only represents around half of the SAF portfolio and it is operating at 80%, the delay in finalising commissioning has not affected the portfolio’s capacity to service IEF’s debt facility. Swan Hill and Chinchilla solar plant performed within expectations this quarter. Generation was 5% below forecast but the reduction in generation was offset by relatively high electricity and LGC prices. In particular, IIG has secured short-term offtakes for a portion

of the output of both the Chinchilla and Brigalow projects which significantly boosted revenues compared to merchant prices. IIG have also engaged in an active forward selling program for the LGC production of the projects – looking to lock in the benefit of the current high LGC prices.

### **Photon Energy - Leeton and Fivebough Solar Farm**

There has been significant construction progress this quarter. Pile ramming is complete, trackers have been assembled and all modules have been mounted on trackers. All inverters and combiner boxes have been mounted on their respective strings. The construction timetable is currently 2-3 weeks behind the original construction program. Practical completion is expected to occur in late February.



### ***Epuron NT Portfolio – TKLN, Uterne and Yulara***

The Epuron's remote solar assets have performed well this quarter. The better performing battery system at Ti Tree, Kalkarindji and Lake Nash ensures the yield of the sites is closer to the maximum potential. The reduction in power demand continues this quarter, particularly at Uterne and Voyagers Resort due to the lack of tourists. However, the projects (and, hence, lenders) are protected from volatility in electricity demand by the long-term offtakes in place for each of the Epuron NT projects.

### ***Savant Energy***

Savant's embedded network business has performed well throughout 2020. Savant, in seeking to expand their business, is seeking to amend their facility agreement with IEF. The amendment would allow Savant to exploit larger embedded solar and storage strategies. We expect to reach agreement on the amendment to the facility shortly.

### ***Mobilong Solar Farm – Terregra Renewables***

Mobilong Solar Farm continues to be in forbearance. The malfunctioning reactor was replaced this quarter and removes the limitation on export. However, generation performance was disappointing as the plant is required to shut down frequently during negative pool price events. Infradebt continues to closely monitor and manage the situation with Terregra. Whilst performance of the project has been poor, Terregra continues to meet all obligations under the forbearance deed. IEF investors should note that the IEF debt position remains small and conservative relative to the project, likewise it is small within the IEF portfolio.

***Trundle and Peak Hill Solar Farm***

The two 5MWdc solar farms in NSW have reached mechanical completion last quarter. Both solar farms are now connected to the grid and have commenced grid commissioning in this quarter. The Trundle Solar Farm is 95% through its hold point testings and Peak Hill Solar farm is three to four weeks behind Trundle. Both projects are expected to be in full commercial operation in the first quarter of the 2021. As mentioned in the previous report, both solar farms would operate under a Transformer Over-load Scheme (TOLS) until their respective transformers have been upgraded at the Trundle and Peak Hill substations. The upgrade is expected to occur late 2021. During this period, the projects will operate at lower output levels (4MW in Summer and 4.5mw in Winter) during full operation.

***Murra Warra Wind Farm 2***

This Murra Warra 2 facility involves the construction of a 38 turbine/209 MW capacity wind farm in Victoria. There has been substantial construction progress on site this quarter. The first bulk of construction activities involved road-works to establish of access tracks to the planned tower locations. This allows the access of heavy vehicles to the planned turbine locations to commence foundation work. This stage involves the excavation of a 4-5 metre deep hole. The ground is smoothed out and reinforced by concrete. An Anchor cage is then installed and reinforced with metal caging to support the weight and balance of the turbine towers. As at end of this quarter, foundation work of twelve turbines have commenced and four completed. The towers and turbines are currently being manufactured to be installed on site Q3 this calendar year.





## PORTFOLIO

The IEF has committed \$74 million to underlying loans with a current yield to maturity of 3.3 %, and a spread of 3.1% above the 3-year Commonwealth Government bond. As at 31 December 2020, interest rate duration is 1.8 years. The following table provides a summary as at 31 December 2020:

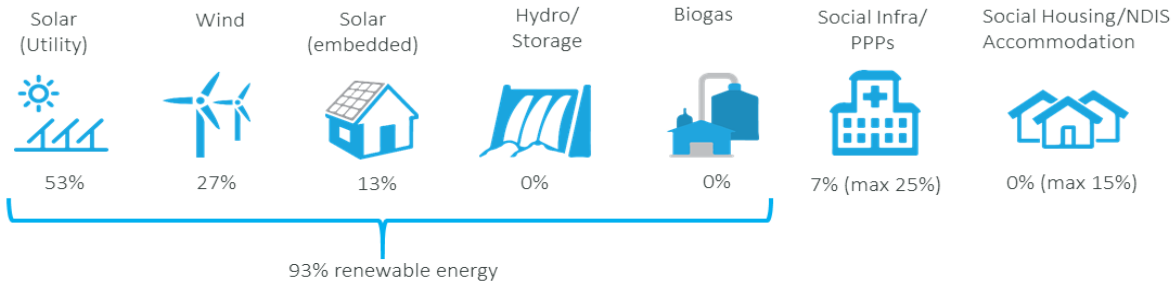
Investment	Weight (%)	Committed/ Drawn (\$m)	YTM (% p.a.)*	Maturity	Status
Murra Warra Wind	27%	\$20.00	2-3%	2025	Drawing
Brigalow Solar Farm	11%	\$8.50	6-7%	2024	Invested
Uterne Solar Farm	9%	\$6.50	5-6%	2025	Invested
Swan Hill Solar Farm	8%	\$6.00	6-7%	2023	Invested
Savant Energy Networks	7%	\$5.00	9-10%	2023	Drawing
Chinchilla Solar Farm	6%	\$4.10	6-7%	2024	Invested
Darwin Cove Convention Centre	5%	\$3.50	4-5%	2033	Invested
Yulara Solar	4%	\$3.00	5-6%	2025	Invested
Leeton Solar Farm	4%	\$3.00	4-5%	2025	Invested
Fivebough Solar Farm	4%	\$3.00	4-5%	2025	Invested
Mobilong Solar Farm	4%	\$2.90	6-7%	2025	Invested
Trundle Solar Farm	4%	\$2.70	6-7%	2025	Invested
Peak Hill Solar Farm	3%	\$2.50	6-7%	2025	Invested
TKLN Solar	2%	\$1.70	5-6%	2025	Invested
Royal Womens' Hospital	1%	\$1.10	4-5%	2033	Invested
NSW Schools 2	1%	\$0.90	4-5%	2035	Invested

\* Yield to maturity at financial close.

## PIPELINE

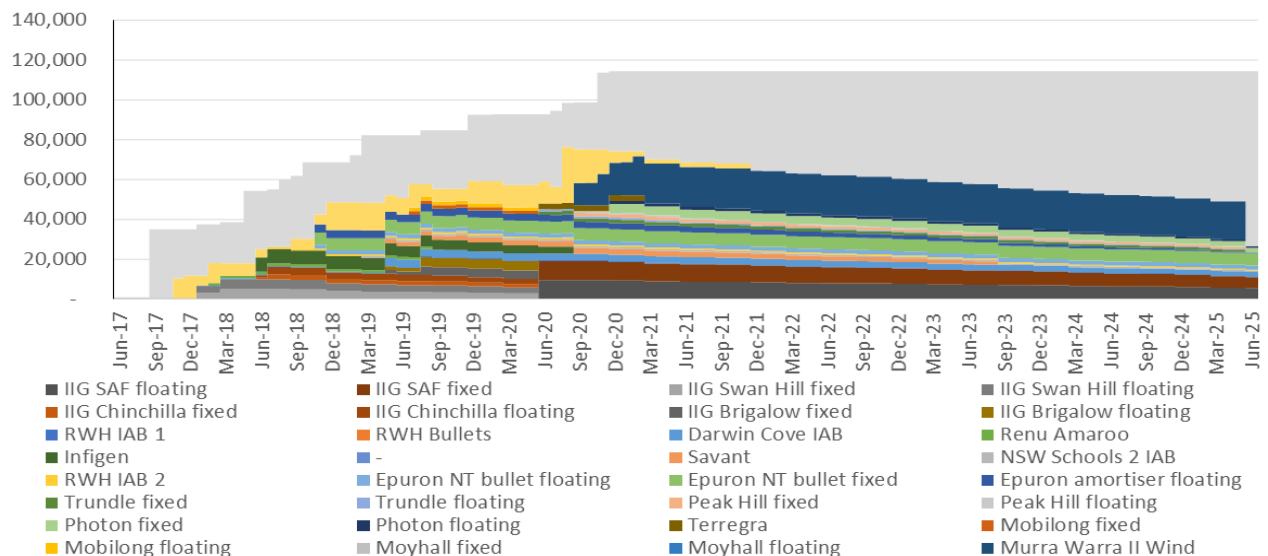
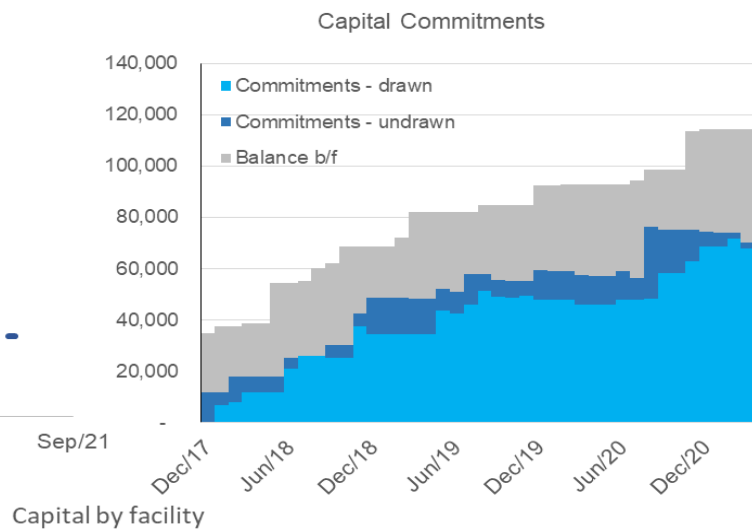
We are closely monitoring primary and secondary market deals. We expect greenfield deals to increase as we exit the Covid-19 era. The current transaction pipeline includes an interesting mix of operating and new construction projects including both merchant and fully contracted opportunities.

## PORTFOLIO DASHBOARD



Portfolio loans	14
Projects funded	18
% under construction/operating	54/46%
% contracted/merchant/other	48/38/14%
Portfolio leverage	49%

Returns	YTM	Spread
Current Portfolio	3.3%	3.1%
Portfolio + Pipeline	3.3%	3.1%



*Portfolio Environmental and/or Social benefit characteristics*

Investment	Project Description	Positive Social and/or Environmental Characteristics
Royal Womens Hospital PPP	RWH was redeveloped in 2005 under a Public Private Partnership (PPP) model. Under this model the private section builds and operates the hospital in exchange for an availability payment (effectively a rent) from the government. Clinical and administrative staff continue to be employed by the Victorian government	<ul style="list-style-type: none"> <li>• Australia’s first and largest specialist public hospital dedicated to improving the health and wellbeing of women and newborns.</li> <li>• In 2018                             <ul style="list-style-type: none"> <li>○ 9,365 babies were born at RWH</li> <li>○ RWH provided over 249,000 episodes of care</li> </ul> </li> </ul>
Swan Hill Solar Farm	Located in Swan Hill Victoria, the project involves the construction of a 19.3 MWdc/ 14.4 MWac single axis tracking solar farm. The project is being developed by IIG as part of their Solar Assets Fund.	<ul style="list-style-type: none"> <li>• The solar farm has an energy yield of 38 GWh per annum, displacing 45,000 tonnes per annum of CO2 emissions from the Victorian electricity grid.</li> <li>• The project created 60 jobs during construction.</li> </ul>
Chinchilla Solar Farm	Located in Chinchilla Queensland, the project involves the construction of a 19.9 MWdc/ 14.7 MWac single axis tracking solar farm.	<ul style="list-style-type: none"> <li>• The farm has an energy yield of 42 GWh per annum, displacing 33,000 tonnes per annum of CO2 emissions from the Queensland electricity grid.</li> <li>• The project will directly create over 60 jobs during construction.</li> </ul>
Savant	Embedded electricity and gas networks	<ul style="list-style-type: none"> <li>• Renewable benefits of behind the meter solar bought to apartment owners and renters.</li> <li>• Significant reduction in carbon emissions from bulk hot water usage.</li> </ul>
Epuron NT Solar	Portfolio of NT solar assets at Uterne, Yulara and TKLN	<ul style="list-style-type: none"> <li>• Supplying power to remote aboriginal communities.</li> <li>• Displacement of highly polluting diesel generators both at the remote communities and at the Alice Springs grid with total renewable generation of approximately 13 GWh a year.</li> </ul>
Brigalow Solar	Located in Yarranlea Queensland, the project involves the construction of a 34.6 MWdc/ 27.2 MWac single axis tracking solar farm. The project is being developed by IIG as part of their Solar Assets Fund.	<ul style="list-style-type: none"> <li>• The farm will have an expected yield of 71 GWh per annum, displacing 56,000 tonnes per annum of CO2 emissions from the Queensland electricity grid.</li> <li>• The project will directly create over 80 jobs during construction.</li> </ul>
New South Wales Schools 2 PPP	Construction and ongoing operation of 10 schools in NSW. The schools include seven primary schools, two high school and one special needs school	<ul style="list-style-type: none"> <li>• 10 NSW schools including primary, high school and special needs schools.</li> <li>• The schools serve 5,840 students (myschool statistics for the 2018 school year) include 5% indigenous students and 2% special needs students.</li> </ul>
Darwin Cove Convention Centre	Construction and operations of a convention centre.	<ul style="list-style-type: none"> <li>• Supporting local community infrastructure critical to NT businesses and tourism.</li> </ul>

<b>Mobilong Solar Farm</b>	Located in Murray Bridge SA, the project involves the construction of a 5 MWac/6 MWdc single axis tracking solar farm.	<ul style="list-style-type: none"> <li>• 11.1 GWh of generation displacing 3,885 tonnes of CO2 emissions per annum from the South Australian grid.</li> <li>• The Project will create 40 jobs during construction</li> </ul>
<b>Trundle Solar Farm</b>	Located near Parkes NSW, the project involves the construction of a 5 MWac/7 MWdc single axis tracking solar farm.	<ul style="list-style-type: none"> <li>• 14 GWh of generation displacing 11,480 tonnes of CO2 emissions per annum from the NSW grid.</li> <li>• The Project will create 40 jobs during construction</li> </ul>
<b>Peak Hill Solar Farm</b>	Located near Parkes NSW, the project involves the construction of a 5 MWac/7 MWdc single axis tracking solar farm.	<ul style="list-style-type: none"> <li>• 14 GWh of generation displacing 11,480 tonnes of CO2 emissions per annum from the NSW grid.</li> <li>• The Project will create 40 jobs during construction</li> </ul>
<b>Leeton Solar Farm</b>	Located near Leeton NSW, the project involves the construction of a 5 MWac/7 MWdc single axis tracking solar farm.	<ul style="list-style-type: none"> <li>• 14 GWh of generation displacing 11,480 tonnes of CO2 emissions per annum from the NSW grid.</li> <li>• The Project will create approximately 40 jobs during construction</li> </ul>
<b>Fivebough Solar Farm</b>	Located near Leeton NSW, the project involves the construction of a 5 MWac/7 MWdc single axis tracking solar farm.	<ul style="list-style-type: none"> <li>• 14 GWh of generation displacing 11,480 tonnes of CO2 emissions per annum from the NSW grid.</li> <li>• The Project will create approximately 40 jobs during construction</li> </ul>
<b>Murra Warra Wind Farm Stage 2</b>	Located near Horsham and Warracknabeal VIC, the project involves the construction of a 38-turbine wind farm with a total capacity of 209MW.	<ul style="list-style-type: none"> <li>• 800 GWh of generation displacing 850,000 tonnes of CO2 emissions per annum from the VIC grid</li> </ul>