



Infratil Market Update

August 2017

The first third of the financial year (to the end of July) saw Infratil benefit from its diversification of activities and opportunities. A becalming period in Australia and New Zealand reduced the generation of Tilt Renewables, while the unusual rainfall pattern in New Zealand was positive for Trustpower's hydro output. Canberra Data Centres secured a major new customer, while RetireAustralia continues to benefit from strong residential valuations in its regions.

On the investment front, Tilt has started construction of a new wind farm in Victoria, the Longroad team are unearthing exciting opportunities, Wellington Airport started construction of a hotel, and Canberra Data Centres committed to the construction of a fifth centre in its Canberra campuses. As previously indicated NZ Bus' loss of certain public transport contracts means that it will be reducing to about two thirds of its original scale.

Infratil continues to maintain considerable capital resources to support these initiatives. Since 31 March 2017 proceeds of \$238 million were received from selling its 20% stake in Metlifecare, \$143 million of bonds were issued and \$66 million were repaid. At the end of July Infratil had \$465 million on deposit and unutilised bank facilities amounting to approximately \$250 million.

NZ\$ millions	31 July 2017	31 March 2017
Dated bonds	\$851m	\$774m
Perpetual bonds	\$232m	\$232m
Bank borrowing	\$50m	\$53m
Bank deposits	(\$465m)	(\$145m)
Net debt	\$668m	\$913m
Perth Energy Holdings Group Guarantee*	\$45m	\$48m

* Infratil has guaranteed A\$66.5 million of bank facilities for PEH and its subsidiaries, which as at 31 July 2017 were drawn to A\$42.4 million (about A\$1.2 million less than on 31 March 2017).

Interesting developments

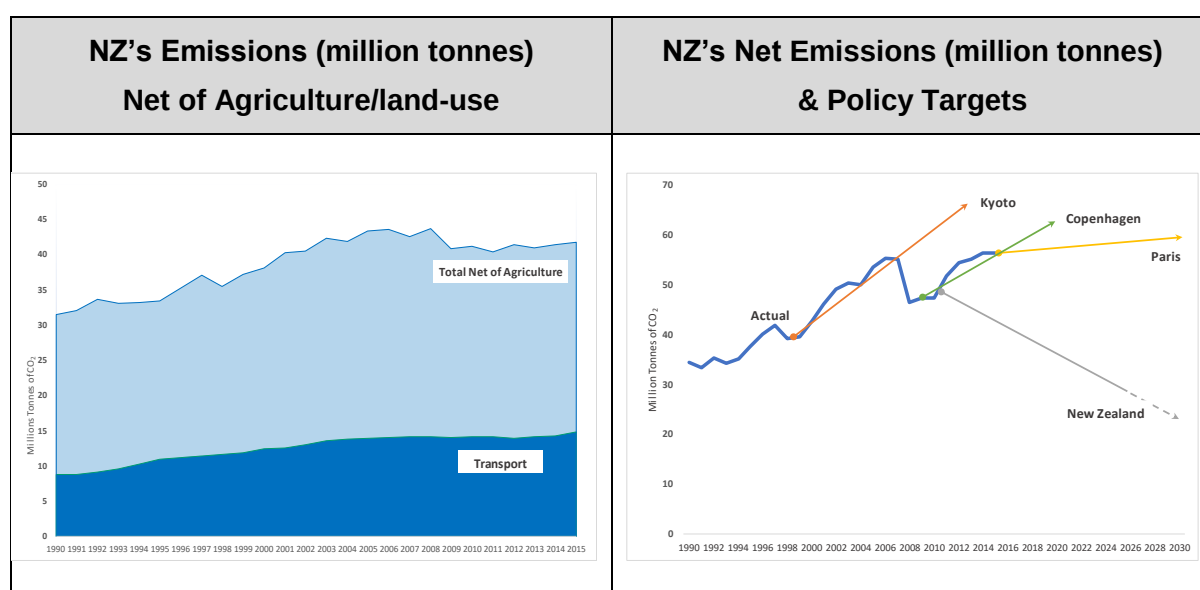
While politics has dominated the front pages of the world's newspapers in recent years, the period is also characterised by major developments in technology. One example is the significant initiatives relating to electric vehicles. The UK joined France in announcing that from 2040 no new petrol and diesel cars will be sold in that country. Volvo announced that from 2019 it will start replacing the cars it sells with electric ones. Tesla started delivery of its affordable Model 3 which by December will amount to 20,000 cars per month.

New Zealand had 2,890 plug-in electric cars on its roads as at end of July. Over the year second hand imported electric cars rose 1,349 to 1,973 and new vehicles rose 565 to 917. It seems that Kiwis are more attracted to a second-hand Nissan Leaf at \$20,000 than a new Tesla Model 3 at \$50,000.

An electric car travelling 10,000 kilometres a year requires about 2,000kWh of electricity (a cost of about \$500, versus about \$1,000 for the fuel of a petrol car covering the same distance). The entirety of this existing electric car fleet will only consume about 4GWh of electricity a year, about the same as 600 households and roughly half the output of one large wind turbine. While it will take a much larger fleet of electric vehicles to influence the energy market, one reason this is imperative is so New Zealand can reduce CO₂ emissions.

The graph on the left shows New Zealand's annual CO₂ emissions 1990 to 2015 excluding the emissions and sequestrations attributed to agriculture and land use. In 1990 emissions totalled 31,451 million tonnes and in 2015 41,735 million tonnes. Of the increase 6,017 million tonnes arose from transport and 4,267 million tonnes from everything else.

Transport contributed 35% of non-agriculture net emissions, up from 28% in 1990.



The graph on the right shows New Zealand's total net emissions since 2015 (the blue line) and the four targets Governments have set. In 1997 as a part of the Kyoto Accord government indicated a net target of 65 million tonnes by 2012 which doesn't seem very onerous given a starting point of 42 million tonnes. The actual net output in 2012 was 54 million tonnes. The 2009 Copenhagen target was 61 million tonnes by 2020. But things have subsequently got tougher. In 2011 Government set a target of 32 million tonnes in 2050 and in the 2015 Paris Accord the 2030 New Zealand target was set at 58 million tonnes.

Electric vehicles are a necessary part of delivering on these goals.

Infratil's shareholders

Infratil undertook its annual round of shareholder presentations to audiences in Invercargill, Dunedin, Christchurch, Nelson, Wellington, Waikanae, Palmerston North, New Plymouth, Napier, Rotorua, Hamilton, Tauranga and Auckland. In several of these centres the local branch of the NZ Shareholders' Association supported the presentation by inviting their members.

Regrettably, it seems that many shareholders who have their shares held by broker nominees do not get to hear about these events. This impediment to communications between company and owners will again be raised with the FMA and NZX.

After a disappointing performance last year, Infratil's share market returns were positive over the year to date. A fully imputed dividend of 10cps was paid in May and the share price rose 24cps, giving an all up gain of 11.7% to 22 August 2017.

Over the year to 31 July 2017 Infratil delivered 5.6% after tax while the NZX50 returned 4.7% per annum.

Wellington Airport: 66% Infratil

The Airport management followed with interest the announcements by Auckland and Christchurch airports of their five-year traffic, pricing and investment forecasts and look forward to the Commerce Commission's reviews as to whether the other airports delivering on the goals set out in the Commerce Act, being to promote the long-term benefit of consumers by innovating and investing, improving efficiency, providing services that reflect consumer demands, and sharing with consumers the benefits of efficiency gains. Next year Wellington Airport undergoes the same process in respect of the five years starting 1 April 2019.

Auckland Airport's forecast is dominated by its capital spending plans, which includes about \$1.8 billion on aeronautical facilities and about \$230 million on the initial stages of a second runway. It is forecast to be commissioned in about 2030 at a total cost of approximately \$1 billion.

Wellington is also seeking to expand its runway capacity, with the goal of bringing long-haul airline services to central New Zealand. Unfortunately, this is on hold while the Supreme Court determines the definition of the word "practicable".

The need for central New Zealand to have long-haul services continues to be underlined by MBIE statistics of where visitors to New Zealand travel and spend. For instance, last year 400,000 Chinese visitors came to New Zealand via Auckland and Christchurch. While here they spent \$1.7 billion of which 83% was in Auckland/Canterbury/Otago.

8% of their spending occurred across Hawkes Bay, Taranaki, Wanganui, Manawatu, Wellington, Tasman, Marlborough, Nelson, and the West Coast. Government's goal is to attract 1,000,000 Chinese visitors per year by 2022. There is next to zero chance of their travel and spending patterns within New Zealand changing unless Wellington becomes long-haul capable. More dispersed tourists mean regional development and less of an infrastructure deficit for government to fix in congested areas.

Over the first third of the financial year Wellington Airport hosted 2,024,000 passengers (86% domestic and 14% international), slightly ahead of budget as airline capacity reductions were more than offset by higher loadings.

The Airport's capital investment is expected to be over \$100 million this year and work conspicuously continues on the transport centre (completion anticipated mid 2018) and is underway on the hotel (completion late 2018). A number of additional initiatives will start later this year including the next stage of the main terminal development and an upgrade of the runway.

To refinance maturing bonds Wellington Airport issued two \$50 million bonds of 10 and 12 year terms. This was arranged by ANZ and means that the Company's debt profile minimises refinancing pressures as shown by the following table.

Jun '19	Jun '20	May '21	May '23	Aug '24	Jun '25	Jul '27	Jul '29
\$25m	\$25m	\$75m	\$75m	\$60m	\$70m	\$50m	\$50m

NZ Bus: 100% Infratil

With the conclusion of the tender stage of public transport re-contracting in Auckland and Wellington, NZ Bus is negotiating the terms of the routes it has been awarded. NZ Bus expects to conclude terms for these negotiated contracts over the next two months, with the new services commencing in 2017 and 2018. The reduced scale of the business will result in some restructuring of the business with excess fleet being either scrapped where it is at the end of its economic life or re-deployed to other options. NZ Bus will continue to work on mitigating the people issues associated with the changes resulting from the re-contracting process.

It is likely that the new contracts in Auckland and Wellington will see deployment of mainly diesel buses. Battery-powered buses are undergoing trials in many jurisdictions, but cost, weight and reliability challenges are yet to be fully addressed, and the focus on lowest cost by procurers in tendered contracts means that the economics for electric buses are not sustainable for operators at this stage. This approach leads to the locking in of diesel drive trains for buses for the next 6 -12 years, the term of the current public transport contracts.

The scale of effort going into developing electric technology indicates that the industry may only be a few years away from being able to deliver a public transport drive train solution that significantly improves environmental outcomes. NZ Bus' experiment with batteries is progressing with the testing of Wrightspeed electric vehicles about to undergo road trials. NZ Bus' intention, if it can prove the technology, is to deploy these vehicles to replace the Wellington trolley fleet and other new vehicles required for new contracts. Achieving this will require collaboration with Local Authorities on new fleet requirements and contract start dates to enable a phased introduction of electric fleet options.

Trustpower: 51% Infratil

Since 1 April 2017 Trustpower has delivered an excellent operating performance and a fillip for its shareholders. Infratil's 51% stake in Trustpower rose in value by \$172 million and provided \$27 million of dividends.

Trustpower continues to expand and improve its multi-utility retail offering. While customer accounts rose only slightly over the first quarter, almost all new customers took more than one utility product. The quarter's 4,000 increase in multi-utility customers was consistent with trend.

While this was a satisfactory result from retail, 75% of Trustpower's earnings come from generation so the financial performance for the period was more influenced by what happened to the weather and how that impacted wholesale prices and Trustpower's generation output. New Zealand experienced the trifecta of cold and still days and a dry period in the crucial South Island hydro catchments yet good rain elsewhere. The average wholesale spot-market price of Trustpower's own generation was 7.9c/kwh up from last year's 6.3c/kwh. Generation at 598GWh was up by a significant 38% on the same period last year.

To the extent this energy wasn't sold to retail customers on normal fixed price terms, it was on-sold into the higher wholesale market increasing earnings.

The longer-term effect of this period is hard to gauge. Elevated wholesale market prices are seen to be mainly a consequence of unusual weather rather than anything structural. 2018 hedge prices have risen by less than 1c/kwh and 2019 prices by even less. Contact Energy which owns thermal peaker generation as back up for periods of low hydro capacity noted that the cost of maintaining this generation is still not being covered by revenue, even with higher prices.

MBIE figures for New Zealand's generation of electricity shows essentially flat demand over the decade (generation is GWh, the % shows the renewable share). The figures also show the increasing share of generation coming from renewable sources as low electricity prices have resulted in the closure of more expensive thermal power stations.

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Generation (GWh)	42,345	42,075	43,440	43,069	42,863	41,921	42,287	42,990	42,591	42,517
Percentage Renewable	65%	73%	74%	77%	73%	75%	80%	81%	85%	86%

In Australia, Trustpower did just as well with its hydro generation. Output was up 25% and average prices of 10.3c/kwh were 32% higher than last year's average of 7.8c/kwh.

Tilt Renewables: 51% Infratil

While the weather benefitted Trustpower, it did Tilt no favours, reducing earnings for the first quarter by about A\$12 million. New Zealand wind generation was 18% below long-run averages and Australia's was 35% below.

The June winds in South Australia have been called a "once in one hundred years" event. Time will tell if that is the case or if an unanticipated feature of the climate change is less breeze.

While the weather impacted short term earnings, Tilt is progressing with its portfolio of development initiatives. Construction has commenced on the Salt Creek wind farm (in Victoria) which is expected to take about a year (the work to identify, secure and consent the site took over five years) and cost A\$105 million. This wind farm is forecast to generate 172GWh in a year of average wind and the EBITDAF contribution is projected to be A\$16-A\$20 million per annum.

At present Tilt has indicated that it intends to operate Salt Creek as a merchant facility, i.e. effectively accepting market (rather than contract) prices for its generation. Tilt has other wind development projects which are expected to receive consents in the near term and come up for construction decisions.

As with Salt Creek the key decision will be on what mechanisms are available to de-risk the generation output of new developments. Long-term fixed-price contracts are currently being struck at relatively low price levels in the Australian market so Tilt is likely to examine different combinations of merchant exposure, shorter-term contracts, and financial hedge arrangements to manage the overall portfolio. Ultimately, the various risk management tools will impact the amount of debt funding available to support the construction of a project.

The following table shows Tilt's portfolio of operational power stations and the status of its Australian initiatives

Power station		Annual Production ¹	Status
Tararua I	NZ	245GWh	Output is sold to Trustpower at a base price fixed for five years. Thereafter the price adjusts to reflect forward market electricity prices.
Tararua II	NZ	318GWh	
Mahinerangi	NZ	101GWh	
Snowtown I	SA	357GWh	89% of output sold to Origin Energy until 2018
Snowtown II	SA	875GWh	Output sold to Origin to 2030. Price fixed with escalation
Blayney	NSW	18GWh	Output sold to Origin to 2021. Price fixed with escalation
Crookwell ²	NSW	8GWh	Output sold to Origin to 2019. Price fixed with escalation
Developments			
Salt Creek	Vic	170GWh	Under construction
Waddi wind	WA	300GWh	Consented
Waddi solar	WA	40GWh	Consenting in its final stage
Palmer	SA	1,150GWh	Consented. Appeal underway
Dundonnell	Vic	1,000GWh	Consenting in its final stage
NSW Project	NSW	1,700GWh	Consent applications underway
Rye Park	NSW	1,000GWh	Consent applications underway

1 Forecast average for existing power stations and estimates for developments

2 80% owned by Tilt

The Australian energy market continues to struggle with the challenge of setting the right regulatory framework to ensure a smooth transition from ageing coal-powered generators to new wind and solar farms. The complexity is exacerbated by recent rises in power prices (resulting from large cheap coal plants reaching end-of-life) and clashes between State and Federal political objectives. While the existing Federal Renewable Energy Target will drive investment through to 2020, and the long-term switch to renewables is clear, it is important that the detail of post-2020 policy is settled soon to give investors more certainty. If regulatory certainty is provided, generation capacity will rise and wholesale prices will subside towards more palatable long-term levels.

Longroad Energy: 45% Infratil

Longroad is progressing two avenues to build a portfolio of development and generation projects. It is investing in greenfield projects (in the same manner as Tilt) and it is seeking to acquire operational assets where new ownership and active management can enhance future performance and value. The latter is intriguing from a New Zealand perspective because such activities don't really happen here.

In the US, the scale and dynamics of the market are of a different order. Some developers start projects fully anticipating a sell-down to extract a developer margin; there are speculative or leveraged owners who are occasionally obliged to sell to maintain development momentum. The availability of long-term offtake contracts, size and general stability of the US market are more likely to see assets held for only a part of their operational lives.

While Longroad is still in its formative stages, it seems likely that both types of investment will occur, but new-build transactions will involve more capital. Two specific projects under consideration at present involve a total of approximately 480MW of wind and solar generation with a total cost approaching NZ\$1 billion, although the equity call on Infratil (if they progress and ownership is retained) will be only a fraction of this.

Unlike Tilt's developments, it seems likely that Longroad will not take a material level of risk associated with government support mechanisms. It should be noted that policy towards renewables is generally driven at a state rather than federal level. Its generation is likely to be mainly sold on a long-term fixed price basis.

What is also becoming obvious is that in parts of the USA, wholesale electricity prices are lower than seen, or likely to be seen in New Zealand or Australia - but renewable projects can achieve a similar return on capital. There are more innovative financing structures available and more opportunities to secure partially or fully consented sites, substantially de-risking the greenfield development phase.

In April, the US Energy Information Administration released the following estimation of wind and solar break even prices. What Longroad's investigations show is that there can be a lot of variation around such averages. But even these relatively "rich" estimates indicate a lower US cost for such generation than pertains in Australia or New Zealand, thanks to the US regulatory and tax regimes. The US EIA's figures for the breakeven energy price required by new coal fired generation are roughly twice the cost of renewables.

Prices are shown in NZ\$ using an exchange rate of NZ\$/US\$ 0.7500.

c/kwh	Capacity	Capital	Operations	Transmission	Tax	Total
Wind	41%	5.3	1.7	0.4	(1.5)	5.9c/kwh
Solar	25%	8.0	1.3	0.5	(2.1)	7.7c/kwh

As at 31 March 2017 Infratil had provided Longroad with \$33 million of the initial \$65 million capital commitment.

It is possible that further capital commitments will be made shortly once the shareholders have concluded evaluation of projects now under consideration, and at that time it is likely that the commitment ceiling will also be lifted.

Perth Energy Holdings (PEH): 80% Infratil

Last year was very difficult for PEH's energy retailing subsidiary, Perth Energy, which required financial and operational restructuring. While the new team are delivering positive improvements, difficult retail trading conditions have continued this year.

In FY2017 PEH's EBITDAF loss was \$10 million in the first half and \$4 million in the second. PEH expects that FY2018 will see improvements of approximately \$3 million in each period, with a breakeven trading position occurring towards the end of the year.

The Western Australian energy market is in a period of change; demand is weak, and both generation and retailing are dominated by government-owned Synergy in a structure undergoing comprehensive review. In addition, the main private gentailer, Alinta, has just been acquired by Hong Kong's Chow Tai Fook Enterprises for A\$4 billion.

For Perth Energy, the competition for market share between Synergy, Alinta and new retailers has resulted in decreased sales with very tight margins. A disciplined approach to contract pricing and wholesale risk management has been put in place to better manage the company's position in the thinly traded and highly competitive WA market.

PEH's generation subsidiary, Western Energy, has been relatively insulated from these changes and it continues to provide reasonable earnings, which are underpinned by the capacity charge it receives for its Kwinana 120MW dual-fuel power station. This also operates profitably when spot prices are high.

Infratil has guaranteed A\$66.5 million of bank facilities for PEH and its subsidiaries, which as at 31 July 2017 were drawn to A\$42.4 million (about A\$1.2 million less than on 31 March 2017).

Canberra Data Centres: 48% Infratil

Canberra Data Centres announced its first contract with Azure, the Microsoft subsidiary often described as a "hyper-scale cloud" provider. In a nutshell, Azure provides data storage on a massive scale and its efficient utilisation of capacity reduces costs. It also provides a platform for its customers to be able to use a wide range of Microsoft and other software providers' tools.

Azure has contracted to use CDC's Canberra data centres because they are the only private data centre facilities in Australia with the security controls and accreditations required for the handling of up to Top Secret government data. In addition, CDC's centres have secure connections with the government owned Intra Government Communications Network (ICON) which provides Australian government agencies with highly cost-effective network access and communications.

While Azure operates globally and uses data centres around the world, CDC is able to offer unique security and connectivity features. It means that when an Australian client of Azure requires such security or connectivity, then Azure can make it available through CDC.

As the Australian Federal Minister for Digital Transformation said "The Australian Government has embarked on a sweeping program of change, bringing digital innovation to the transformation of the Australian public sector. Global innovation in areas such as cloud technology is an essential foundation for this transformation".

As Azure grows its business using this new capability, it will utilise CDC capacity and help provide a return on CDC's capital.

Following the contracting of Azure, CDC's EBITDAF is will lift to a "run rate" of A\$65 million and is forecast to improve to A\$70 million run rate by 31 March 2018.

Completing the agreement with Azure has enabled CDC to commit to the construction of a fifth data centre which, subject to building consents, will get underway in September 2017. The development of the new data centre is expected to be funded by a combination of CDC operating cash flows and bank funding.

This additional 20MW of capacity will give CDC a total of 59MW at two Canberra campuses.

RetireAustralia: 50% Infratil

RetireAustralia's business strategy is seeking to bring about change in three distinct areas:

- **Contracts:** While New Zealand has seen the evolution of a reasonably standardised occupancy contract for residents, in Australia there have been a plethora of alternatives. RetireAustralia is seeking to introduce simpler, New Zealand style, contracts which are being well received by new residents.

- *Care:* RetireAustralia is introducing a range of care services to its villages with the aim of improving the wellbeing of residents and to enable people to age in place. Initial trials of the services being provided are positive.
- *Development:* This has two aspects, a move to provide higher density apartments on balance land in existing villages, rather than free-standing units, and the acquisition of greenfield sites in order to develop purpose-built villages catering for the current and future needs of an ageing consumer.

On each of these initiatives RetireAustralia is making good progress.

Last year construction slowed as changes in the type of new accommodation went through design and consenting. This is likely to result in something of a catch up now and a build rate of over 300 units per annum by FY21 is contemplated, up from about 200 units in the past.

This increase in development pace will require shareholders to provide additional capital, at least on a bridging basis, to maintain RetireAustralia's capital structure at an appropriate level. This is estimated to be in the order of A\$100 million in total (Infratil's share A\$50 million) over the next 18 months. This estimated capital requirement is over and above the reinvestment of RetireAustralia's profits for the period.

A 1 July 2017 review of the value of RetireAustralia's villages indicated a 4% lift over 1 January 2017 which will underpin the period's earnings.

Sales of new units over the quarter were at an average price of A\$685,000 (A\$571,500 average last year) while resales of older units averaged A\$361,000 with an average resale collect of A\$130,000 (A\$113,000 last year).

ANU Student Accommodation: 50% Infratil

ANU experienced 100% occupancy at the start of the university year, with a number of students missing out.

This has brought forward plans to build further units. This is under consultation with the University.

Amongst other things, the decline in the Australian dollar has seen a surge in demand for education in Australia from foreign students.

Infratil AGM

Infratil held its Annual Meeting in Auckland today. The presentation is available at www.infratil.com